

**GMA CASE STUDY ON DEPOSIT COLLECTION AND  
MOBILIZATION OF KUMARI BANK LIMITED**

By:  
Huma Devi Gurung  
Prithvi Narayan Campus  
Roll No.: 24/064  
T.U. Registration Number: **7-2-48-843-2003**

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## ***RECOMMENDATION***

This is to certify that the

*Thesis submitted by:*

**Huma Devi Gurung**

*Entitled*

### **A CASE STUDY ON DEPOSIT COLLECTION AND MOBILIZATION OF KUMARI BANK LIMITED**

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

Supervisor

**Name:** Mr. Surendra Bahadur Bharijoo

**Signature:**

**Signature:**

**Date:**

Head of Department

**Signature:**

Campus Chief

## VIVA-VOCE SHEET

*We have conducted the viva-voce examination of the*

Thesis submitted by:

**Huma Devi Gurung**

Entitled

### **A CASE STUDY ON DEPOSIT COLLECTION AND MOBILIZATION OF KUMARI BANK LIMITED**

*and found the thesis to be the original work of the student and  
written according to the prescribed format. We recommend  
the thesis to be accepted as partial fulfillment of the  
requirements for degree of*

**Master of Business Studies (M.B.S.)**

Viva-Voce Committee

Chairperson, Research Committee: .....

Member (Thesis supervisor): .....

Member (External expert): .....

Date:

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## ABBREVIATION/ACRONYMS

%	:	Percentage
ADB	:	Agriculture Development Bank
ALM	:	Assets Liabilities Management
ATM	:	Automatic Teller Machine
ATS	:	Automatic Transfer Service
B.S.	:	Bikram Sambat
BOD	:	Board of Director
CRR	:	Cash Reserve Ratio
CV	:	Coefficient of Variation
D/C	:	Documentary Credit (L/C)
DI	:	Depository Institution
EBL	:	Everest Bank Limited
FCY	:	Foreign Currency
FDIC	:	Federal Deposit Insurance Corporation, USA.
FI	:	Financial Institution
Fig.	:	Figure
FY	:	Fiscal Year
HBL	:	Himalayan Bank Limited
ICC	:	International Chamber of Commerce
KBL	:	Kumari Bank Limited
L/C	:	Letter of Credit
MFI	:	Micro Finance Institutions
MMDA	:	Money Market Deposits Account
NIDC	:	Nepal Industrial and Development Corporation
NIM	:	Net Interest Margin
NOW	:	Negotiable Order of Withdrawal
NRB	:	Nepal Rastra Bank
P.E.	:	Probable Error
POS	:	Point of Sale
S.D	:	Standard Deviation
SMS	:	Short Message Service

# CHAPTER I

## 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 factor 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, financial institutions help the process of resources 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 provides savers highly liquid, divisible assets at a lower risk while the investors receive a larger pool of resources. Banking sector play an important role in the economic development of the 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 supposed 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 A.D 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 Nepal Rastra Bank was established in 1956 under the Nepal Rastra Bank Act 1955 to discharge the central banking responsibilities including guiding the development of the embryonic domestic financial sector. Since inception, there has been a significant growth in both the number and the activities of the domestic financial institutions. The new Nepal Rastra Bank Act was brought out in 2002 by replacing the erst while Act of 1955. The new Act has provided operational autonomy and independent to the Bank. Similarly government established Nepal Industrial Development Corporation(NIDC) which worked to provide financial assistance to establish modern industries in private sector. Later other commercial

banks like Rastriya Banijya Bank established in 1966 A.D 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 agricultural sector. Then in Chaitra 21<sup>st</sup> 2057 B.S (April 03,2001) Kumari Bank Ltd. Started its operation to collect deposit and to fulfill growing credit requirements.

Likewise 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 develop the banking activities of Nepal. The effort of commercial bank is to maximize its total net earnings (profit) by employing it's fund productively. Funds from surplus are being transferred to deficit sectors and by doing so it has contributed in economic development of the nation.

Today there exists 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 A.D.As per the macroeconomic indicators of Nepal January 2013, NRB research department statistics division, currently there are 31 commercial banks, 90 development banks, 67 finance companies and 25 micro finance development banks.

Commercial banks represent the largest group of depository institution. The banks are channels to collect the scattered savings 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 collect 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. Business lending of a bank represents financing of trade, letter of credit, procurement guarantee, current assets like inventories and receivables. Likewise personal lending of bank represent 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 example 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).

Kumari Bank Limited, came into existence as the fifteenth commercial bank of Nepal by starting its banking operations from Chaitra 21<sup>st</sup>, 2057 B.S. (April 3<sup>rd</sup>, 2001) with an objective of providing competitive and modern banking services in the Nepalese financial market. The bank has paid up capital of Rs 1,485,000,000 of which 70% is contributed from promoters and remaining from public. Kumari Bank Limited has been providing wide range of modern banking services through 28 points of representations located in various urban and semi urban part of the country, 19 outside and 9 inside the valley. The bank is pioneer in providing some of the latest lucrative banking services like E-Banking and SMS Banking services in Nepal. The bank always focus on building sound technology driven internal system to cater the changing needs of the customers that enhance high comfort and value. The adoption of modern Globus Software, developed by Temenous NV, Switzerland and arrangement of centralized data base system enables customer to make highly secured transactions in any branch regardless of having account with particular branch. Similarly the bank has been providing 365 days banking facilities, extended banking hours till 7 P.M. in the evening, Utility Bill Payment Services, Inward and Outward Remittance Services, Online Remit Services and various other banking services.

Visa Electron Debit card, which is accessible in entire visa linked ATMs (including 30 own ATMs) and POS (Point Of Sale) terminals both in Nepal and India, has also added convenience to the customers. The bank has been able to get recognition as an innovative and fast growing institution striving to enhance customer value and satisfaction by backing transparent business practice, professional management, corporate governance and total quantity management as the organizational mission.

The key focus of the bank is always center on serving unfulfilled needs of all classes of customers located in various parts of the country by offering modern and competitive banking products and services in their door step. The bank always prioritizes the priorities of the valued customers.

## **1.2 Focus of the Study**

The study aims at analysis of deposit collection and mobilization of Kumari Bank Limited by using descriptive and analytical research design. The research for selection of focus of study about Kumari Bank Limited, one of the leading 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 to 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 Kumari Bank's deposit collection and its mobilization. The study covers the period of past 5 years that is the period of 2007/08 to 2011/12.

### **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 and mobilized in different sectors for example offering loans in different profitable sectors. Credit extended by commercial banks is related to national interest of the country. Almost every commercial bank is 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.

The fundamental problem of this study is to deposit collection and investment pattern of Kumari Bank Ltd. So the study has tried to address the following research questions.

- i) What is the current deposit collection position and its composition?
- ii) What is the trend of deposit collection in the past five years?
- iii) What is the volume of interest payment to the depositors?
- iv) What are the sectors for mobilizing of collected deposit?
- v) What is the liquidity position of the bank?

## **1.4 Objective of the Study**

The objective of the study is to analyze the deposit collection and its mobilization of Kumari Bank Ltd. The specific objectives are:

- i) To analyze the current deposit collection and its composition.
- ii) To measure the trend of deposit collection.
- iii) To access the interest payment to depositors.
- iv) To access the sectors for mobilizing of collected deposit.
- v) To measure the liquidity position of the bank.

## **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 fund in Kumari Bank Limited. Further, it can be used as reference by the researchers, and students regarding the study of deposit collection and mobilization of fund in Kumari Bank Ltd. It will also be beneficial for the other financial institutions regarding proper deposit collection and its mobilization.

## **1.6 Limitation of the Study**

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

- i) The study is focused only on deposits aspects (i.e. its collection and utilization) of Kumari bank Ltd.
- ii) The study covers the data of last five years only.
- iii) The study principally has been based on secondary data like annual report and other publication of the bank.
- iv) Study is carried on within framework of deposit aspects of Kumari Bank Ltd., may not be able to represent the 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 is presented in the first chapter which includes 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.

The second chapter deals with the review of available literature. It includes conceptual review and review of related studies.

The third chapter is related to research methodology which is concerned with the methodology adopted in the research work. It consist of research design, sample and population, sources of data, methods of analysis and financial tools to measure financial performance.

The fourth chapter deals with the presentation and analysis of data and major findings of research work.

The final chapter is giving the summary of the research report, with conclusions and recommendations. At last bibliography and appendix are also presented.

## **CHAPTER II**

### **REVIEW OF LITERATURE**

This chapter 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 literature 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 commercial banks, 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 another. 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 set 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

financial intermediary in collection and disbursement of funds from surplus unit to deficit unit (Wisniwski, Sylvia, 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 Britanic, USA (1991), has defined commercial bank as “Commercial bank was first used to indicate that the loans 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 investments and creating money by extension of credit. Similarly, upadhya and Tiwar (2037) have argued that there are three major functions of commercial bank. They are primary functions ( accept deposits and provide loan 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 compilation of trade information and statistics.)

#### **2.1.2.1 Primary Functions**

The primary functions of commercial banks are accepting deposits, providing loans and advances and creating credit.

##### **i. Accepting Deposits**

Accepting deposits 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. Nowadays bank accepts three kinds of deposits from its customers. The first is the ‘saving deposits’ on which the bank pays interest relatively at low 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 as well. A bank accepts fixed or time period from 6 months to longer periods ranging upto 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 deposit.

## **ii. Advance and Loans**

One of the primary functions of a commercial bank is to advance loans to its customers. A bank lends a certain percentage of the cash lying in deposits at a higher interest rate than it's pays on such deposits. This is how it earns profits and carries on its business. The bank advances loans in the following ways;

### **Cash Credit**

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

### **Call loans**

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 cheque for a sum greater than the balance lying in his current account. Bank provides the overdraft facility upto a specific amount to the businessman. But bank charges interest only on the overdrawn amount.

### **Discounting Bills of Exchange:**

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 loans, which is not more than 90 days. When the bill of exchange matures, the bank gets its payments from the bank 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, it's aim at earning profits. For this purpose, it accept 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 number of agency functions. A bank acts as an agent of its customers in collecting and paying cheques, bills of exchange, drafts, dividends, etc. It also buys and sells shares, securities, debentures, etc. for the 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 the customers. Moreover , the bank acts as consultants to its clients. It also remits 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 jewellery and valuable documents. It issues various forms of credit instruments, such as cheque, drafts and travellers cheque, etc., which facilitate transactions. The bank also issues letters of credit and 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 money market and business trends of the economy.

A commercial bank finances foreign trade of its customers by accepting foreign banks. It also transacts other foreign exchange business-buying and selling of foreign currency.

### **2.1.3 Concept of Deposits**

The bulk of the 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 loanable 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 the central bank may occasion a growth in deposits, since claims on the government that are equivalent to cash will be paid into the commercial banks as deposits. In the first instance, with the increase in bank deposits goes a related increase in the potential liability to pay out cash, in the 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 deposits account(MMDA), time deposits, 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 States, all of these deposits that are smaller than \$100,000 are insured by the FDIC (Federal Deposit Insurance Corporation). FDIC insure each depositor upto a certain amount , therefore the depositors ‘savings’ are protected even if the bank fails. This removes the incentive to withdraw deposits simply because others are withdrawing theirs. In banking, confidence on the part of the depositors is the true basis of stability. 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 or investment of deposits of money from the public, repayable on demand as otherwise and withdrawal by cheque, draft, and order or otherwise. Demand liabilities mean liabilities which must be met on demand, and time liabilities mean liabilities which are not demand liabilities. The main categories of deposits are

- i. Demand Deposits
- ii. Saving Deposits
- iii. Term Deposits
- iv. Call Deposits
- v. Margin Deposits
- vi. Provident Fund Deposits
- vii. Other 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 nonprofit making entities. Such deposits earn more rate of interest although the holders of such accounts enjoy tremendous flexibility in terms of depositing and withdrawal. Currently, the rate of interest on saving bank deposits is 3.5 percent in Kumari Bank Limited. 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 deposit 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 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 periods and various interest rates. Traditional term deposit accounts are the recurring deposit accounts and plain fixed deposit accounts. Of late, banks are offering certain hybrid term deposit accounts, which combine the features of recurring deposits, savings bank deposits and term deposits. The deposit amount, along with interest accrue, is paid on the date of maturity. Term deposit holders can avail of loans against the term deposit, subject to a 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, letter of credit 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 Dollar, 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 foreign currency earnings from export and tourism sector. Opening and operation of foreign currency accounts is regulated by NRB.

#### **vi. Provident Fund Deposits**

The employee of any organization, who is certain percentage of the salary deposit monthly, bimonthly or trimonthly in continuously and get back the total amount with interest only after the retirement is known as employee provident deposit. It is similar to recurring deposit but defense between then is get back the amount. After certain fixed period the total amount with interest will get back in recurring deposit where as only after retirement of job the total amount with interest will get back in employee provident fund deposit.

#### **vii. Other Deposits**

There are various deposits as well. The KBL introduce various types of deposit schemes like as stated as follows:

Kumari Smart Bachat Khata

Twinkle Star Saving

Shuva Laxmi Bachat

50 Plus Saving

Kumari Saving

Kumari Salary Saving A/C

Shareholders Saving A/C

Kumari Big Saving Khata

### **2.1.5 Meaning of Deposit Mobilization**

Vogel(1984), Adam(1985) and others have pointed out that a financial institution mobilizing savings must respond to the depositor's request for safety, efficiency and stability. In addition, it also need 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.

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 client's financial behaviour. 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 institutional liquidity, depository institutions try to attract saving with limited withdrawals, which is often counter to customers preferences. Because customers prefer liquid deposit facilities, liquidity management must cope with sudden changes in depositor's 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 saving 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 countries like Nepal face major problems for economic development like low national income, low per capita income, and lack of technical knowhow, poverty, pressure of population growth, geographical situation etc. For the economic development of the nation these aspect are to be taken into 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 do 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 in form 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 deprived 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 deprived 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 and financial institutions in form 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. Deposit 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 banks inherently 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. (Wisniewski, Sylvia, 1999)

### **2.1.6.1 Cash Holding / Cash at Vault**

Commercial banks are to regulate to hold certain minimum cash position in their vault ignored to maintain its liquidity. To ensure that funds are available to meet the liquidity needs at the lower cost, the treasury manager of the banks and financial institutions 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 i.e. 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 an inflow or outflow of cash during a day continually change the cash position of the banks and financial institutions. Because cash yields no income, cash holdings must be limited to a minimum. The treasury/fund manager may invest any excess cash or may acquire additional cash sources from interbank loans or from discount window at the central bank.

Once the liquidity needs of the banks and financial institutions have been estimated, the treasury manager must decide how these needs are to be funded. The banks and financial institutions must choose between two general liquidity management strategies namely, asset management, assets are sold 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 when managing the liquidity position of the banks and financial institutions:

- ) The treasury manager must co-ordinate and keeps track of the activities and strategies of the fund-raising and funds-using departments within the banks and financial institutions.
- ) The treasury managers should know the timing of large withdrawal from big credit clients or depositors in order to plan.
- ) The priorities and objectives of liquidity management should be clear and properly communicated.
- ) The needs and decisions must be evaluated on a continuous basis to invest access liquidity and avoid liquidity shortages.

A financial institution must always be liquid to meet depositor's and creditor's demand in order to maintain public confidence. There needs to be an effective asset and liability 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 depositor's balances banks must have on hand as cash. This is a requirement determined by the country's central bank, which in the U.S. is the Federal Reserve. The reserve ratio affects the money supply in a country.

This is also referred to as the "cash reserve ratio" (CRR). For example, if the reserve ratio in the U.S. is determined by the fed to be 10%, this means all banks must have 10% of their depositor's money on reserve in the bank. So, if a bank has deposit of \$1 billion, it is required to have \$100 million on reserve.

Liquid assets as defined by commercial Banking Act includes Cash in Vault, Balance held in current account with other banks, Balance held with Nepal Rastra Bank and others as specified by NRB. In order to ensure adequate liquidity in the commercial banks, to meet the depositor's demand for cash at anytime to inject the confidence in depositors regarding the safety of their deposited funds arrangement for 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 account shall not be included for the purpose. Likewise total deposit of the bank means current, saving and fixed deposit accounts as well as call money deposit and certificate of deposit. For the purpose of deposit held in convertible foreign currency, employee guarantee amount and margin account shall not be included.

### **NRB Directives Related to Liquidity**

NRB has given the instruction to the commercial banks since 2023 B.S. to deposit the amount ratio of 8 percent 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 percent. So, high liquidity appeared in economy, hence, control of the negative effect that may fall on economy to improve the growth of price rate an improvement of the position of loss of running account and control the capacity of flowing the loan of the commercial banks was necessary and the NRB second time prescribed liquidity ratio. 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.

Controlling Liquidity Risk: To assess how well the banks and FIs are managing its liquidity position, the management should be cautions 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 the interest rate forecast. It is revealed that the large banks have better access to liability liquidity sources due to the better quality asset 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 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).

### **2.1.6.3 Loan and Advances**

Deposits accepted by commercial banks are to be mobilized and so loan and advances is one of the sectors for utilizing the deposits collected. The deposit of public collected are granted form of loan and 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. Kumari Bank ltd. do offer variety of loan and advances.

**a. Personal Loan**

Kumari Bank limited grants personal loan in the following sectors

**i. Vehicle loans**

The bank provides loan up to 80 % of the cost of the vehicle. Depending upon the type of the vehicle a loan of NPR 3 lakhs to NPR 50 lakhs is availed at equal monthly installment for minimum 12 months or maximum 60 months at the interest of 9 % to 11%.

**ii. Home Loan**

The bank provides home loan to the salaried individuals and entrepreneur upto 60 % of the cost of the purchase/construction/renovation of land/house within municipal boundaries. The loan is provided for NPR 5 lakh to NPR 40 Lakhs depending upon the income of the borrower at the interest rate of 9% to 10.50 % for the tenor of minimum 12 months to maximum 120 months.

**iii. Consumer Product Financing**

KBL finances for the purpose of durable and household equipments like televisions, furniture, computers, refrigerators etc. the loan amount is availed upto 70 % of the cost of the product for the amount of NPR1 lakh to NPR5 lakh depending upon the income of the borrower. The tenor of the loan is between 12 months to 24 months at the rate of 12%.

**iv. Travel Loans**

This loan is provided to the salaried individual, professional and entrepreneurs for the purpose of traveling. The loan is provided upto 70% of the ticket and tour expenses. The loan can be repaid over the period of 12 months. The rate of interest is 12%.

**v. Education Loan**

KBL provides education loan for the education of the children.60 % of the cost of tuition fees and admission is financed by the bank. Depending upon the income of the parents a loan of NPR 1.5 lakh to NPR 8 lakhs for the tenor of 12 ,months to a maximum of 60 months at the rate of 10.50%.

**b. Business Loan**

KBL provides loans to the business sectors for their operation in different forms. The business loan is provided in the following headings:

**i. Working Capital Financing**

KBL finances against stocks and accounts receivables to meet the short term cash requirement in the form of credits (overdrafts) and demand loans.

**ii. Term Loan**

KBL finances the capital expenditure of small, medium and large scale companies in the form of term loan for periods in excess of 1 year. All loans for tenors above one year are generally secured by first charge on fixed assets or current assets of the borrower with an acceptable asset cover. The interest rate in these types of loan is 10 % to 14 %.

**iii. Hire Purchase**

Purchase of equipment, vehicles, machinery etc is possible through the hire purchase schemes of the bank. The interest rate is 9% to 11%.

**iv. Short Term Loan**

KBL finances capital expenditure of small, medium, and large scale companies in the form of term loans for periods less than one year at the interest rate of 10% to 12%.

**v. Bills Discounting/Purchase**

KBL purchase discount the outstation cheques and provide instant cash.

**vi. Export/Import financing**

Preshipment credit is offered to exporters by way of packing credit to enable them to finance purchase/import of raw materials, processing and packing of the goods meant for exports. Also the post shipment loan is provided to exporters to finance export sales receivables after the date of shipment of goods till the date of realization of export proceeds. Similarly import credit facility is offered to importers to meet the funding requirement from the port of discharge to either custom point or warehouse of importer.

**2.1.6.4 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 equipment and

software and structures (including, by convection, owner-occupied housing), but exclude consumer durables. All assets of 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 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.

#### **2.1.6.5 Investments**

A commercial bank is 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 financial institutions, 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:**

#### **A. Investment on Government Securities, Shares and Debentures**

Though a commercial Bank can earn some interest and dividend from the investment of government securities, share and debenture, it is not the major portion of income but it is treated as a second source of banking business. A Commercial bank may extend credit by treating it as a second source of banking business. A commercial bank may extend credit by purchasing government securities bonds and shares for several reasons.

Some of them are given as:

- ) It may want to space it maturates so that the inflow of cash coincide with expect withdrawals by depositors or large loan demands of its customers
- ) It may wish to have high-grade marketable securities to liquidate if its primary reserve becomes inadequate.
- ) It may also be forced to invest because the demand for loans has decreased or is not sufficient to absorb its excess reserves

However, investment portfolio of commercial bank is established and maintained primarily with a view of nature of banks liabilities that is since depositors may demand fund in great volume without previous notice to banks. The investment must be of a type that can be marketed quickly with little or no shrinkage in value.

#### **B. Investment on Other Company's share and Debentures**

Most of commercial banks invest their excess fund to the share and debenture of the other financial and non-financial companies. Due to excess funds but least opportunity to invest those funds in much more profitable sector and to meet the requirement of NRB directives, the commercial banks purchase shares and debentures of regional development bank, NIDC and other development banks.

### **C. Sector Wise Investment**

Sector wise investment refer to the investment in various sectors as agriculture, productions, construction, transportation, communications, wholesalers & retailers, Consumable loan that are considered essential for overall economic growth of the nation. They constitute the basic infrastructures that provide the logistics support for the growth and prosperity of the economy. By investing in such sectors banks can help the entire nation in pacing up the economic growth and the prosperity of the nation.

### **D. Priority & Deprived Sector Investment**

Priority sector includes micro and small enterprises, which help to increase production, employment and income as prioritized under the national development plans with an objective to uplift living standard of general public. Many directives have been introduced and amended as per the requirement by NRB. Commercial banks are directed to invest 5% in priority sector with inclusive of 3% in deprived sector. The credit limits in the priority sectors has been raised to Rs. 2.0 million from Rs 1.0 million on agricultural and service sector and from Rs 1.5 million to Rs 2.5 million on cottage and small-scale industry.

Likewise deprived sector credit includes low income and particularly socially backward women, tribes, physically impaired groups etc. Deprived sector investment is advanced up to Rs 30000 per borrower of micro credit programs and projects. However, priority sector credit programmed is being phased out by NRB.

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 and 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**

Investments 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.

### **2.1.7 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 tradeoffs 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 its 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 and 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 to 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 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 leveraged 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 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 scenarios. 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. I 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 marker-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 liquidity 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 liquidity risk.

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 of 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.

- i. The cost and use of borrowed funds.
- ii. The volume of liquid assets required to provide for unanticipated needs.

- iii. The use of short term financial resources to provide for potential fluctuation in deposits in order to assist in providing adequate liquidity.
- iv. The volume of loan and off balance sheet transaction commitments and ensuring match with funding sources.
- v. Arrangement as to submitting regular reports on management of account by bank management to the BOD.
- vi. Regulation relating to timeframe for implementation of regulatory directives issued in connection with inspection and supervision of banks.

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

### **2.2.1 Review of Articles**

In this subject, effort has been made to examine and review some of the related articles published in different economic journals, Bulletin of World Bank, dissertation papers, newspapers, researchers view and findings towards fund mobilization and other related books.

Banks are that kind of institutions, which deals with money and substitutions for money. They deal with credit and credit instrument. Effective circulation of credit is more significant for the banks. Unsteady and unevenly flow of credit harms the economic situation of the nation. Because of this, collected funds or deposits should be invested and mobilized into the right sector. An investment of fund decides the life and death of the banks.

“An investment is a commitment of money that is expected to generate additional money. Every investment entails sacrifice for a future uncertain benefit”(Clark, 1991).

**Shrestha (1988)** in his article, “A Study on Deposit and Credit of Commercial Banks in Nepal” concluded that the credit deposit ratio would be 51.30%, other things remaining the same in Nepal, which was the lowest under the period of review. Therefore, he had strongly recommended that the joint venture banks should try to give more credit entering new field as far as possible, otherwise, they might not be able to absorb even the total expenses.

**Bajracharya (1990)**, in his article, “Monetary Policy and Deposit Mobilization in Nepal” that the mobilization of domestic saving is one of the prime objectives of monetary policy in Nepal. For this purpose, commercial banks stood as the active and vital financial intermediary for generating resources in form of deposit of the investors in different aspects of the economy.

He has explained that commercial banks only can play an important role to mobilize the national savings. Now a day other financial institutions like finance companies, cooperative societies have been established actively to mobilize deposits in the proper sectors so that return can be ensured from the investment.

**Gittman and Jochnk (1990)**, “Investment is any vehicle into which funds can be placed with the expectation that will preserve or increase in value and generate positive returns.”

**Cheney and Moses (1995)** are concerned with the objective of investment and indicate that the risk is in proportion with the degree of returns. They write, “The investment objective is to increase systematically the individual’s wealth, defined as assets minus liabilities. The higher the level of the desired wealth, the higher must be received. An investor seeking higher return must be willing to face higher level of risk.”

**Pradhan (1996)** presented a short glimpse on investment in different sectors, its problems and prospects, through his article "Deposit Mobilization, it's Problem and Prospects". The articles expressed that deposit is the life blood of any financial institution, be it commercial bank finance company, co-operative or non government organization. Further added, in consideration of 10 commercial banks and nearly three dozen of finance companies, the latest figure does produce a strong feelings 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 = following problems of deposits mobilization in Nepalese perspective:

- i. Due to the lesser office hours of banking system people prefer for holding the cash in the personal possession.
- ii. Unavailability of the institutional services in the rural areas.
- iii. No more mobilization and improvement of the employment of deposits in the loan sectors.
- iv. 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 level 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 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.

**Baidya (1997)** has an elaborated definition on “Investment” which beseeches of sound investment policy and covers wider aspects. He writes, a sound investment policy of bank is such that its funds are distributed on different types of assets with good profitability on the one hand and provides maximum safety and security to the depositors and banks on the other hand. Moreover, risk in banking sector tends to be concentrated in the loan portfolio. When a bank gets into serious financial trouble its problem usually springs from significant amount of loans that have become uncollectible due to mismanagement, illegal economic downturn. Therefore, the bank's investment policy must be such that it ensures sound and prudent in order to protect public funds.

“Further in details he deals with what type of loan do banks make? And, how much of loan is to be invested? The banks make a variety of loans to a wide variety of customers from many different purposes from purchasing automobile to construct of homes and making trade with foreign countries. There, no uniform rules can be laid down to determine the portfolio of bank. The environment in which the bank operates influences its investment policy. The nature and availability of funds and assets also differ widely from region to region within a country or country to country. For example, the scope of operating a bank in Jumla will be different from the scope of a bank operating in Kathmandu. The investment policy to be applied in Kathmandu may not be applicable to the customer of Jumla because the demand for loans is less in rural areas whereas it is higher in urban areas.”

**Bhalla (1997)** has derived a three- pointer basic concept of investment. His view on investment cover:

- ) Economic investment that is an economics definition of investment.
- ) Investment in a more general or extended sense which is used by the man of street or ordinary people
- ) The sense in which we are going to be very much interested namely financial investment.

He says, “Banks are those institutions which accepts deposits from the public and in return provide credit to trade, business and industry that directly makes a remarkable impact on the economic development of a country. To collect fund and collect as a good investment is a very risky job. Ad-hoc investment decision leads the bank out of the business thereby

drawn the economic growth of a country. Hence sound investment policy is another secret of a successful bank.”

**Shrestha (1997)** has analyzed in her article, “Financial Performance of Commercial Banks Using Both Descriptive and Diagnostic Approach.” In her studies she has concluded the following points:

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

**Charles (1999)**, emphasizing on the proper management of an investor’s wealth says, “Investment is the commitment of funds to one or more assets that will be held over some future time period. Investment is concerned with the management of an investor’s wealth, which is the sum of current income and present value of all future income.”

**Sharma (2000)** has found same results that all the commercial banks are establishing and operating in urban areas, in this study, “Banking the Future on Competition.” His achievements are:

Commercial banks are establishing and providing their services in urban areas only. They do not have interest to establish in rural areas. Only the branch of Nepal Bank Ltd. and Rastriya Banijya Bank Ltd. are running in those sectors.

- Commercial banks are charging higher interest rate on lending
- They have maximum tax concession
- They do not properly analyze the system

According to him, “Due to the lack of investment avenues, banks are tempted to invest without proper credit appraisal and on personal guarantee, whose negative side effects would show colors only after four or five years.” He has further included that private commercial banks have mushroomed only in urban areas where large volume of banking transaction and activities are possible.

### 2.2.2 Review of Previous Thesis

Before this study, various studies regarding the various aspects of commercial banks such as deposit mobilizing policy, financial performance, investment policy, lending policy, interest rate structure, resource mobilization and capital structure have conducted several thesis works. Some of them, which are relevant for this study, are presented below:

**Bhandari (1998)**, in his study entitled “The Impact of Interest Rate Structure on Investment Portfolio of Commercial Banks of Nepal” has concluded followings:

- i. Rates of commercial banks have been fluctuating. Deposits and lending rates were increased immediately after liberalization of the interest rate on August 31, 1989 but however, started to decline which have helped in increasing the credit flow.
- ii. Interest rate structure has direct influence on profitability of commercial banks. Decreasing lending rate helps to increase the profitability through increasing the credit.
- iii. Deposits are more interest rate conscious and positively co-related.
- iv. Loans and advances of commercial banks have been found to be continuously increasing with the decline in interest rates.
- v. Effective interest rate structure helps in proper utilization of resources as measured by loan to deposit ratio.
- vi. Most of the banks are having similar interest rate structure which lessens the importance of liberalization of interest rate.

**Thapa (2001)**, in her thesis paper “A Comparative Study on Investment Policy of Nepal Bangladesh Bank Ltd. and other Joint Venture Bank of Nepal” she has compared the investment activities of NBBL with only two Joint Venture Bank i.e. Nepal Arab Bank Ltd. and Nepal Grindlays Bank Ltd. by taking five years data. She has recommended in two ways:

#### a. Statement Recommendation

She has suggested about investment in government securities, OBS operation loan recover act, sound credit collection policy, and project oriented approach, effective portfolio management, and innovative approach to bank marketing and banking facilities.

#### b. Theoretical Recommendation

She has suggested about liberal policy and coat management strategy.

**Sapkota (2002)**, in his thesis paper “A Study on Fund Mobilizing Policy of Standard Chartered Bank Ltd in Comparison to Nepal Bangladesh Bank Ltd and Himalayan Bank Ltd” having main objectives to examine the fund mobilizing policy adopted by three joint venture banks viz. SCBNL, NBBL and HBL and the way these banks mobilized their funds during five year study period i.e. from 1996/97 to 1999/2000.

He found the overall condition of SCBNL seems in satisfactory position in comparison to NBBL and HBL. In other words, he recommends that banks are strongly recommended to provide information about its services, facilities and extension of their services towards rural areas. These three banks are recommended to increase cash and bank balance to meet the need of investment and demand of loan and advances. And banks are to be investing its funds in the purchase of shares and debentures of other financial, non-financial companies, hotels and government companies.

Mr. Sapkota has not explained about the risk ratios which have to be faced by these joint venture banks. His study can not show the fund mobilizing policy of the selected banks for the succeeding years because of time limitation i.e. up to 1999/2000.

While reviewing the books and articles and previous studies, it is found that banks are not just the storehouse of the country's wealth but are the reservoirs of resources necessary for economic development and employment generation. There are still different obstacles in the effective operation of the commercial banks in Nepal. Therefore these obstacles should be eradicated for the economic development of Nepal.

**Dangol (2003)**, Studied on the "Impact of Interest Rate on Financial Performance of Commercial Banks" concludes:

- i. Most of the commercial banks contradict the general financial theories.
- ii. The relation between amount of deposits and interest rate on deposit, in general concept, must be positive. But deposits are increasing despite the decrease in the general level of interest. The result of such phenomenon is that there are fewer investment opportunities for the banking sectors as well as general investors.
- iii. The relation between total amount of loan and the lending rate is negative and significant. However, the change in the total amount of loan flow is not proportionate with the change in the lending rate.
- iv. Correlation between interest rate and inflation is not significant.
- v. Not only interest rate is responsible to shape the profitability of banks but also the operating efficiency also has major influence on it.

**Pokharel (2006)**, a study made on the topics "Determinants of Interest Rates in Nepalese Financial Markets" also give some ideas about the interest rates in Nepalese markets. Though, this thesis tried to identify the factors that shape the interest rates in Nepalese markets, it also tried to explore the relationship between the interest rate, deposits, credit rates and inflation. Among different objectives, some objectives that match to this study are:

- To show the relationship between the liquidity position and interest rate on deposit and lending.
- To identify the effect of inflation on interest rate charged and offered by various Nepalese financial institutions.
- To identify the different methods used by Nepalese financial institutions to calculate interest on lending.

**Manandhar (2008)** conducted a research work on "Consumer Loan Mobilization by selected Finance Companies of Pokhara". The main objective of this study is to analyze the consumer credit policy and to determine the consumer loan flow in comparison to the deposit of selected finance companies. He has taken POFIL, AFCL and OFL as sample for the studies. According to him all selected finance companies have diversified their loans and advances on four different sectors namely Hire Purchase Loan, Home Loan, Term Loan and Fixed Deposit Loan. He found that the lending activities of these institutions are in growth trend during his research period. The POFIL invested Rs 51079 million.

**Poudel (2009)** had conducted a research on impact of interest rate on funds mobilization of commercial bank. Her objectives were to analyze the impact of interest rate on the mobilization of funds, to access the relationship between total deposit and total credit of the bank, to analyze the interest spread and its impact on the profitability of the bank. She concluded that EBL and Nabil have aggressive lending policy which stayed above 60%. HBL has moderate lending policy which stayed between 55% to 63% where as SCBL has conservative lending policy which stayed below 50%. The sample banks have effective interest income rate between 5.61% to 7.65%. The interest spread rate of sample banks seem in similar figure. The coefficient of correlation between average lending interest rate and total lending for banks were negatively correlated. Interest income is still dominating income over total income composition of these banks over the period. Interest income covered more than 70% portion out of total income covered negligible portion. A high interest rate in deposit and low in lending is important to attract customer to the bank but facilities offered by the banks also plays an important role for the success of banks as the above sample banks did.

**Karmacharya (2010)**, in his thesis paper "A Study on the Deposit Mobilization by the Joint Venture Banks" has mentioned that the bank has successfully maintained its liquid asset position but could not mobilize its resources efficiently. He has concluded that Nepal Bank's utilization side is weak as compare to the collection of resources. He suggested for extending its branches, so NBL's deposit collection and also long-term as well as short-term

credit may increase. He has recommended not to consider security factor only but to provide loan to genuine projects without securing.

**Bhatta (2011)**, in the topic “Interest Rate and its effect on Deposit and Lending”, in this study, the disseminator tries to portrait the relation of interest rate with deposit and lending amount. Her findings and the findings made by Mr Chettri are seems to be different. According to Mr Chettri’s finding, all the relation matches with the theory but Mrs Bhatta’s finding on deposit was not as per theory. But other matters are same as Mr Chettri’s. The conclusions drawn by Mrs Bhatta are:

- Deposit rates of all sample banks under study are in decreasing trend; meaning that every year deposit rates of sample banks under study have decreased.
- Lending rates of all sample banks under study are also in decreasing trend; means that every year lending rates of sample banks under study have decreased.
- Analysis shows that interest rates on lending are far higher than deposit rates of sample banks. The correlation coefficient between these two variables, (deposit rate and lending rate) of sample banks comes highly positive.
- The simple correlation coefficient between deposit rate and deposit amount of sample banks were highly negative. But out of them, correlation coefficient analysis of one sample bank is found to be negative. It means that in that case the theory doesn’t match the analysis. So writer conclude that the result appears in that study was different than the theory.
- The correlation analysis between lending rate and lending amount of all sample banks under study comes highly negative. This relation between two variables (lending rate and lending amount) of sample banks matches with the theory which says with the increase in lending rate, lending amount decreases and vice-versa. So she concluded that lending rate is the most important determinant of loan and advances of all commercial banks. This makes clear that borrower’s seem more interest conscious.

Finally her conclusion about her study, in her own words, as follow: “There is significant relationship between deposit rate and deposit amount and lending rate and lending amount of almost all commercial banks except one. Test of significance for correlation coefficient between inflation rate and deposit and lending rate shows that these variables are not correlated.”

### **2.3 Research Gap**

Previous researcher could not cover all the aspect of the deposit and its mobilization, likewise many of the previous research is concentrated in the study of the total funds only including the equity capital fund. Present study concentrates on the deposit collection and its mobilization because collection deposit and its mobilization is one of the primary and important functions of commercial banks, without which banks cannot survive and run the business. Similarly the study also focuses on the composition of the deposit and the mobilization in the different sectors. The study also analyses the cost of deposit and the returns from the various sectors.

## CHAPTER III

### RESEARCH METHODOLOGY

Research methodology refers to the various sequential steps to be adopted by a research in studying a problem with certain objectives in view". (Kothari, 1989, p 30) Research methodology is the research method used to test the hypothesis. It sequentially refers to the various steps to be adopted by a researcher in studying a problem with certain objectives in view. In other words, research methodology describes the methods and process applied in the entire subject of the study.

Generally, it refers to the numerous processes adopted by the researchers during the research period. It is the technique to solve the research problem in systematic manner. It includes many techniques and is crucial for every research work. The main objective of this research work is to evaluate the deposit mobilizing procedure adopted by the kumari Bank ltd.

It helps to solve the research problem in a systematic way. This chapter has been designed and developed as a guideline or a plan for the achievement of objectives set and hypothesis developed as a guideline or a plan for the achievement of objectives and hypothesis developed for the purpose of the study. Reliability and validity of research work is facilitated by research methodology and the basic objective of this chapter is to guide next chapter for data presentation and analysis. So, suitable research methodology as demanded by the study has been followed. It is intended to use simple and lucid research methodology.

#### 3.1 Research Design

Research design indicates a plan of action to be carried out in connection with proposed research work. "A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure."(Kothari, 1992, p 25). The study is based on descriptive research design because the historical secondary data have been deployed for analysis.

The research examines the facts and postulates in certain frameworks on details and supplies the important information on subject matter, summary of the study, major findings

of the study, recommendations, conclusion etc. are the most significant information among them, they are derived with the help of some financial and statistical tools were adopted to evaluate the deposit mobilization of Kumari Bank Ltd.

### **3.2 Population and Sampling**

The term population for research means all the members of any well-defined class of objects or events. It refers to the industries of the same nature and its services and products in general (Wolf and Pant 1999, P.75). Similarly, the sample is only the portion or subset of the universe or population. Hence in real sense, all the groups, individuals and elements under study are the population and unbiased representation of the population is sample. For the study purpose, total number of commercial banks is considered as the population and the bank under study constitutes the sample. Kumari Bank Limited has been selected as the sample for the study even though there are 31 commercial banks functioning all over the country and their stocks are traded actively in the stock market.

For the sampling purpose, convenience sampling technique is used. Convenience sampling refers to samples selected not by judgment or profitability techniques but because the elements in a fraction of the population can be reached conveniently. There is no attempt made to have a representative sample. Selection of sampling units is totally based on the convenience of the researcher. When both time and money are seriously limited, convenience sampling technique is widely used. Although convenient sampling is not very scientific, it is perfectly valid in exploratory research or in the pre-test phase of a study where there is a need to get only an approximation of the value. This method is quick, convenient and less expensive.

### **3.3 Nature and Sources of Data**

The study is mainly based on secondary data. The secondary sources of data are those that have been used from published and used by someone previously. 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 from NRB publications and reports. Besides, following sources were used to collect required data for the study.

- ) NRB reports and bulletins and it's official website.

- ) Various publication related to the subject matter of the study.
- ) Various articles published in journals and financing magazines.
- ) Official Website of Kumari Bank Ltd.
- ) Various research papers and dissertations.

Additional information 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 information. The annual reports and other information of Kumari Bank Ltd. have been obtained from the Pokhara, New road 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 and Central Library (TU) Kirtipur. 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.) and Central Library(TU) kirtipur.

### **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 two numbers. There are different ratios to analyze 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. Furthermore, 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:

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

Where,

Total Liquid Funds=cash in hand + foreign currency in hand + balance with NRB + Balance with domestic bank + 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.

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

### **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:

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

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.

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

Where,

Loan and Advances = total long term loan + current liabilities

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

Total investment 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.

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

Where,

Total Investment = Government securities + NRB bonds + Foreign Government securities + Shares, Debentures and bonds + other investment

## **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

$$\text{Mean} = \frac{\sum_{i=1}^n X_i}{n}$$

where,

$\bar{X}$  = mean

$\sum x$  = Sum of the values of the variable x

n = number of values

### 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:

$$SD = \sqrt{\frac{\sum f(x - \bar{X})^2}{n}}$$

Where,

n = Number of observations

X = Individual value

$\bar{X}$  = 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:

$$CV = \frac{SD}{\bar{X}} \times 100$$

Here,

S.D. = Standard Deviation

$\bar{X}$  = Mean

CV = Coefficient of Variation

### Coefficient of Correlation

The study measure 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.

$$\text{Coefficient of correlation (r)} = \frac{\sum xy}{N}$$

Here,

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

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

$\Sigma_1$  = Standard Deviation of series x

$\Sigma_2$  = Standard Deviation of series y

N = Number of Paris of Observation

$$\text{Probable Error of r (P.Er.)} = 0.6745 \frac{\Sigma_1 \Sigma_2 r^2}{\sqrt{N}}$$

The Karl Pearson coefficient of Correlation r always falls between -1 to +1. The value of negative 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.

## **CHAPTER IV**

### **DATA PRESENTATION AND ANALYSIS**

The 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 Kumari bank Ltd.

#### **4.1 Analysis of Deposit Position and its Composition**

Deposit collection is one of the major functions of commercial banks as deposit is the primary source of fund. 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 is the sum of interest free deposits and interest bearing deposits, which are given below.

**Table 4.1**  
**Deposit Composition of Kumari**

(In million)

<b>Fiscal Year (as mid July)</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>	<b>Mean</b>
<b>Interest Free Deposits</b>	<b>711.36</b>	<b>877.99</b>	<b>821.38</b>	<b>928.59</b>	<b>1135.18</b>	<b>894.9</b>
Current Deposits	601.72	780.10	680.05	792.37	988.55	768.56
Margin Deposits	109.64	97.89	138.01	131.63	141.54	123.74
Other Deposits	-	-	3.32	4.59	5.09	2.6
<b>Interest Bearing Deposits</b>	<b>12,062.93</b>	<b>14,832.94</b>	<b>16,611.18</b>	<b>16,057.69</b>	<b>20,850.01</b>	<b>16,082.95</b>
Saving Deposits	4,138.81	4,170.32	5,192.44	6,551.42	5,887.12	5,176.02
Fixed Deposits	3,799.56	4,527.05	7,206.20	6,654.66	9,958.05	6,269.10
Call Deposits	4,124.56	6,135.57	4,272.54	2,851.61	5,804.84	4,637.82
<b>Total Deposits</b>	<b>12,780.15</b>	<b>15,710.93</b>	<b>17,432.25</b>	<b>16,986.28</b>	<b>21,985.19</b>	<b>16,978.96</b>

Source: Kumari Bank Annual Report.

As shown in the table 4.1 the total shows the volume of deposits is quite fluctuating over the study period of first four years and then it increased dramatically in last year 2011/12. The deposits volume is minimum with Rs 12,780 million in year 2007/08 and is maximum with Rs 21,985 million in the year 2011/12. The deposits volume were almost consistent from 2007-2011 as there were immerse of so many other commercial banks and financial institutions that diverted the customer deposit. But in the year 2012 it rose up as the bank has 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 2007 to 2011 and later increased in 2012. This indicates that Kumari bank ltd. has been successful in capturing the deposits from the market during the study period of 5 years.

**Fig.4.1**  
**Deposit Composition Of Kumari Bank Ltd.**

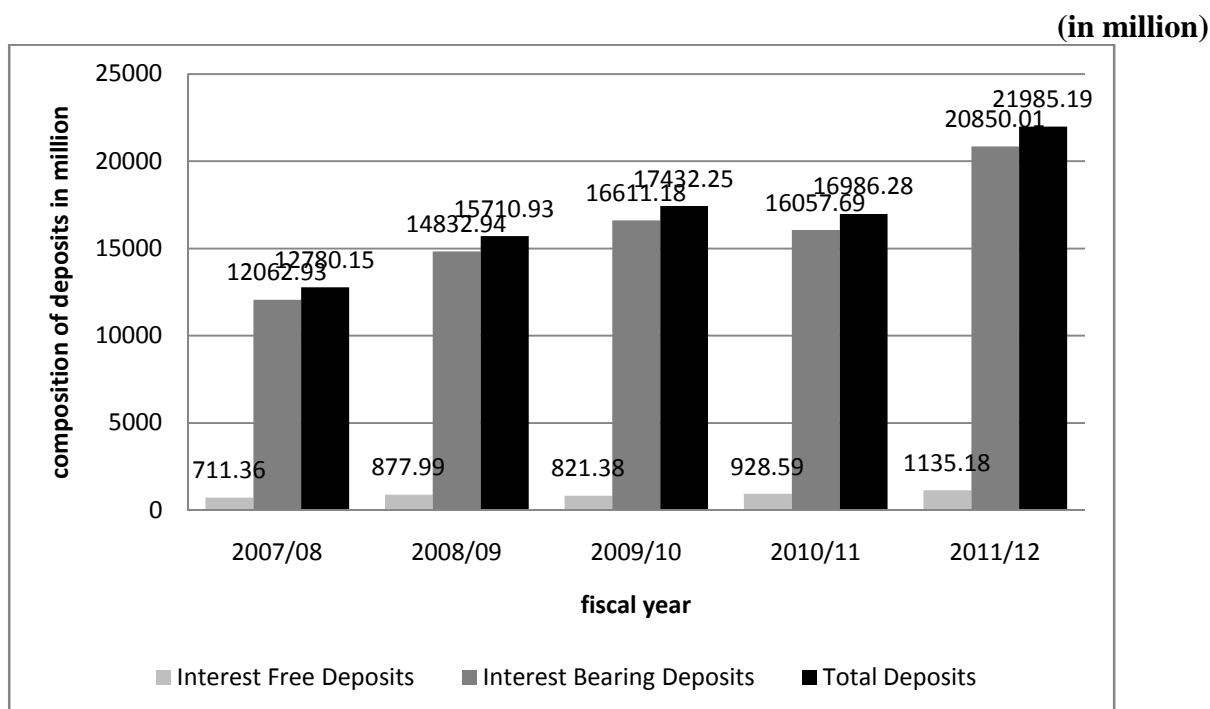


Fig.4.1 shows the observed total deposits of the Kumari Bank Ltd. within the study period of last five years. In the chart, the interest bearing deposits covers the major portion of the total deposit volume. The bar diagram of total deposit volume over the year 2007 to 2011 is quite at the consistent level where as in 2012 it is the highest. The interest bearing deposits trend over the 5 years is also observed to be same as the trend of total deposit volume. Whereas the interest free deposit volume is almost same over all the five 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 Kumari 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, interbank/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 spends on depositor's interest, staff salary, provident fund allowances and other operating expenses like rent, water and electricity, fuel expenses, audit fee 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)	2007/08	2008/09	2009/10	2010/11	2011/12
Interest Expense on Deposit (in million)	463.37	760.50	1088.33	1469.83	1576.49
Total Operating Revenue (in million)	1039.13	1474.69	2013.72	2405.77	2604.74
Total Interest Expense on Deposit to Total Operating Revenue (%)	44.59	31.23	54.05	61.10	60.52

*Source:* Kumari Bank Annual Report

As shown in Table 4.2. the total expense on total deposit volume to total operating revenue is in decreasing trend. The ratio in 2007/08 stood at 44.59%, which later decreased i.e. 31.23% in 2008/09 and finally in the year 2011/12 it increased to 60.52%. The ratio of 61.10% in the year 2010/11 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**

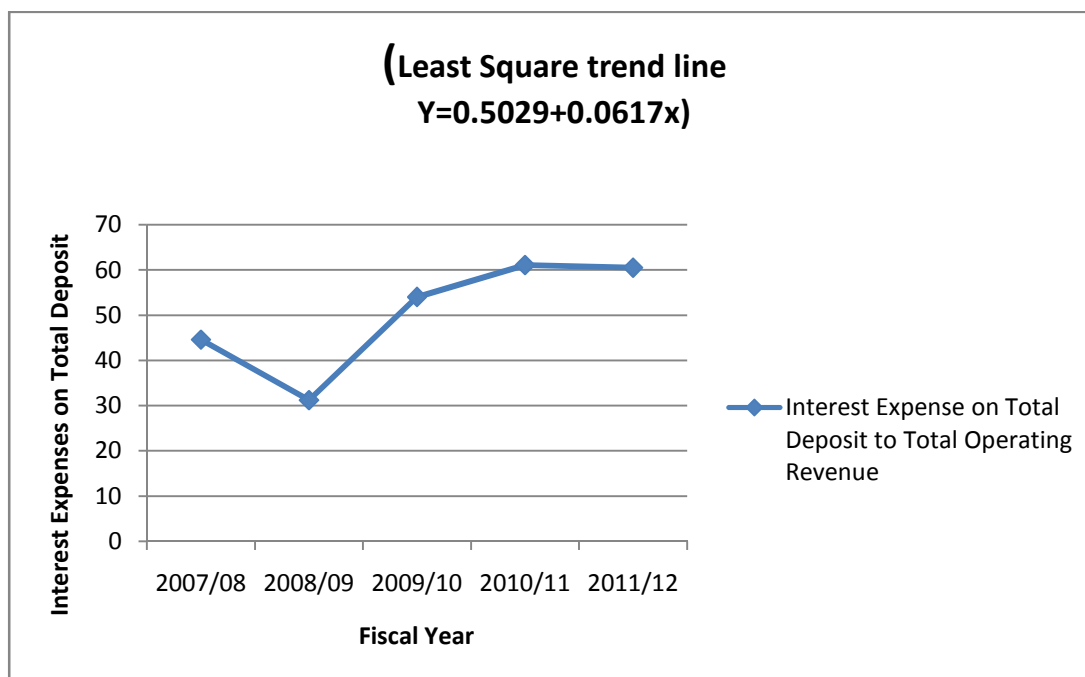


Fig.4.2 exhibits the observed total interest expense on deposit to total operating revenue ratio of Kumari bank Ltd. with least square trend line within the study period of last five years. As shown in the chart, the observed ratio declined downward on 2008/09 and later from 2009/10, the slope is upward and on 2011/12 the ratio slightly declined. The slope of the trend line determined by the least square method is positive i.e. 0.0617 which speaks the increasing trend of ratio. The positive slope thus indicates increasing interest expenses with respect to income, which is due to increase in deposit volume as well as increase 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 Kumari Bank Ltd.**

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 interbank loan and FCY placements. Interest expense incurs due to bank's deposit liability and borrowings from NRB or other interbank 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**

<b>FY (as at Mid July)</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>	<b>Mean</b>
Total Interest Income(in million)	957.25	1374.72	1871.07	2257.72	2441.58	1780.47
Total Interest Expense(in million)	498.73	816.20	1188.92	1566.55	1622.49	1138.58
Net Interest Income(in million)	458.52	558.52	682.15	691.71	819.09	641.99

Source: Kumari Bank Annual reports

In the past five years, the Net interest income of Kumari bank Ltd. was distributed over 458.52 million of 2007/08 and 819.09 million of 2011/12. The minimum volume was observed in 2007/08 with Rs 458.52 million and the maximum volume was found in the concluding year 2011/12 with Rs 819.09 million. Net interest income continuously increased over the study period of five years and is in increasing trend. The mean of net interest income is Rs 641.99 million for the study period. Throughout the review period the Net Interest Income ratio was found slightly above the generally accepted benchmark.

**Fig. 4.3**

**Trend of Net Interest Income of Kumari Bank Ltd.**

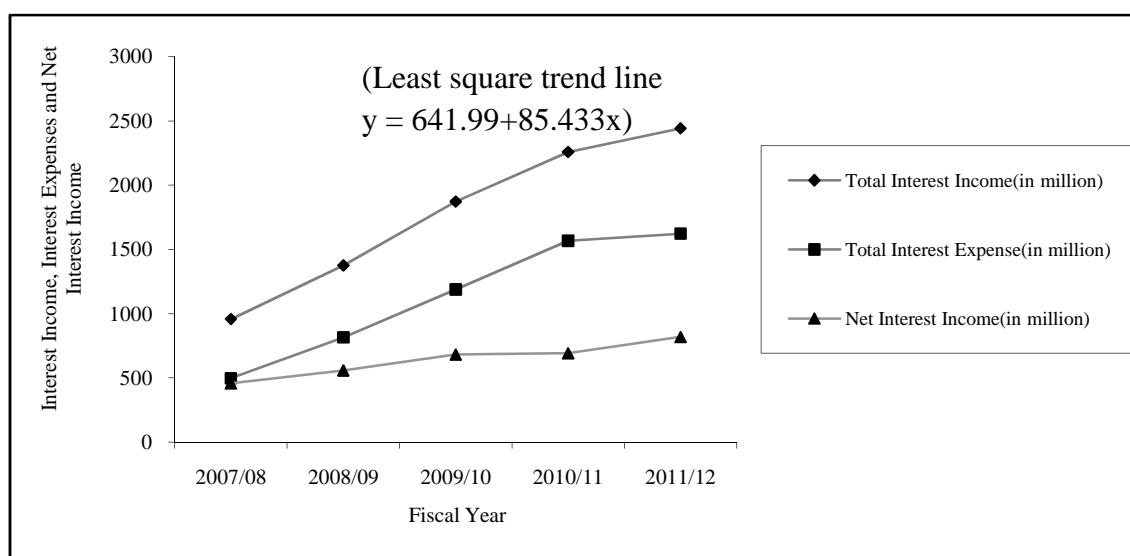


Fig.4.3 shows the trend of Net interest income and total interest

expense from 2007/08 to 2011/12. The slope of the trend line obtained from least square trend line is positive which shows increasing trend of Net interest income during the study

period. It was found increasing continuously over the years of study. The total interest income is also in the increasing trend through it remained constant for the three years i.e. 2008/09 to 2010/11. and it increased in final year. Likewise the interest expense is in increasing trend. The increase in net increase income over the years indicates bank's capacity to maintain higher interest margin than the benchmark.

#### **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 purpose that make up composition of assets.

The bank's 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 institution's borrowers, especially the non-financial corporation's 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)

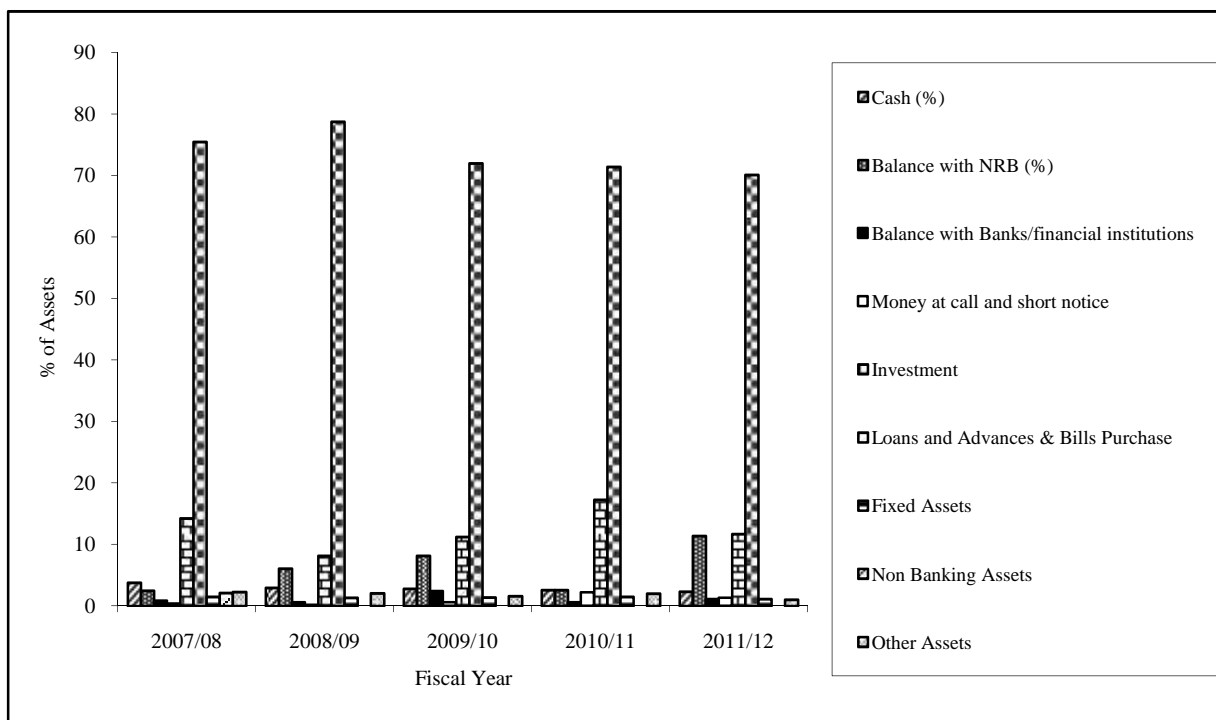
<b>Fiscal Year(as at mid July)</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>	<b>Mean</b>
Cash (%)	3.76	2.96	2.80	2.56	2.32	2.88
Balance with NRB (%)	2.45	6.05	8.12	2.57	11.39	1.22
Balance with Banks/financial institutions	0.82	0.57	2.37	0.57	1.10	1.09
Money at call and short notice	0.37	0.16	0.58	2.20	1.28	0.92
Investment	14.23	8.15	11.19	17.24	11.70	12.50
Loans and Advances & Bills Purchase	75.43	78.72	71.95	71.38	70.09	73.51
Fixed Assets	1.48	1.34	1.39	1.49	1.10	1.36
Non Banking Assets	2.09	-	-	-	-	0.42
Other Assets	2.25	2.05	1.61	1.98	1.02	1.78
Total Assets	100	100	100	100	100	100

Source: Kumari Bank Annual Report

Table 4.4 shows assets composition of Kumari bank ltd. over the period 2007/08 to 2011/12. As shown in the table, percentage of cash, bank balance with NRB and balance with banks/financial institutions (which form the most liquid of all assets) was in fluctuating trend throughout the five years. Cash, bank balance with NRB and balance with banks/financial institutions were 7.03%, 9.58%, 13.29%, 5.7% and 14.81% in the 5 years. The average cash, balance with NRB and balance with banks/financial institutions of 5years was 5.19%. Money at call was minimum in FY 2008/09 at 0.16% then increased rapidly for the next 2 years and decreased slightly in 2011/12. The investments composition of the total assets has shown steady decrease during the review period with 8.15% in 2008/09 and 11.19% in 2009/10. The investment proportion in the five years period is averaged 12.50%. While in general, the total proportion of investments showed steady decrease during the review period, the loan and advances proportion seemed increasing since 2007/08. This movement observed was a switch over of investment into loans and advances since 2007/08. The loan, advances and bills purchase was 75.43% in 2007/08 and 70.09% in 2011/12 with an average of 73.51%. 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 proportion increased steadily during the period with 1.48% in 2007/08 and 1.49% in 2010/11 and slightly decreased in 2011/12 to 1.10%.

Assets composition of the commercial banks remained largely same in last five financial years. As it can be seen from the table 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 Deposit of Kumari Bank Ltd.**



The fig 4.4 shows the areas where deposits collected by the bank has been mobilized during the study period. It can be said as assets composition of the bank. It reveals that asset composition of Kumari bank Ltd. like in every bank remained in loans and investment during the last five financial years. It is also observed that there was a switch over of investment into loans and advances since 2007/08.

**Table 4.5**  
**Investment Composition (%)**

<b>Particulars</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>
Government Treasury Bills	59.76	58.41	66.24	72.93	76.35
Government Saving Certificate	-	-	-	-	-
Government Other Bonds	8.93	13.08	9.10	6.48	11.21
Nepal Rastra Bank Bonds	-	-	-	-	-
Foreign Bonds	-	-	-	-	-
Local Licensed Institutions	8.18	13.24	10.66	12.27	2.64
Foreign Banks	22.28	14.06	13.05	7.66	9.00
Shares of Organized Institutions	0.06	0.09	0.21	0.18	0.22
Bonds and Debentures in Organized Institutions	0.79	1.12	0.74	0.48	0.58
<b>Other Investments</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Provision</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Net Investment</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

*Source:* Kumari Bank Annual Report

As shown in Table 4.5 of the total investments, FY 2007/08, maximum of 22.28% was invested in foreign banks followed by 59.765% in government treasury bills and remaining in other bonds and debentures. The proportion in foreign banks and bonds and debentures showed decrease through the period and conversely showed increase in government treasury bills.

**Fig.4.5**  
**Investment Composition (%)**

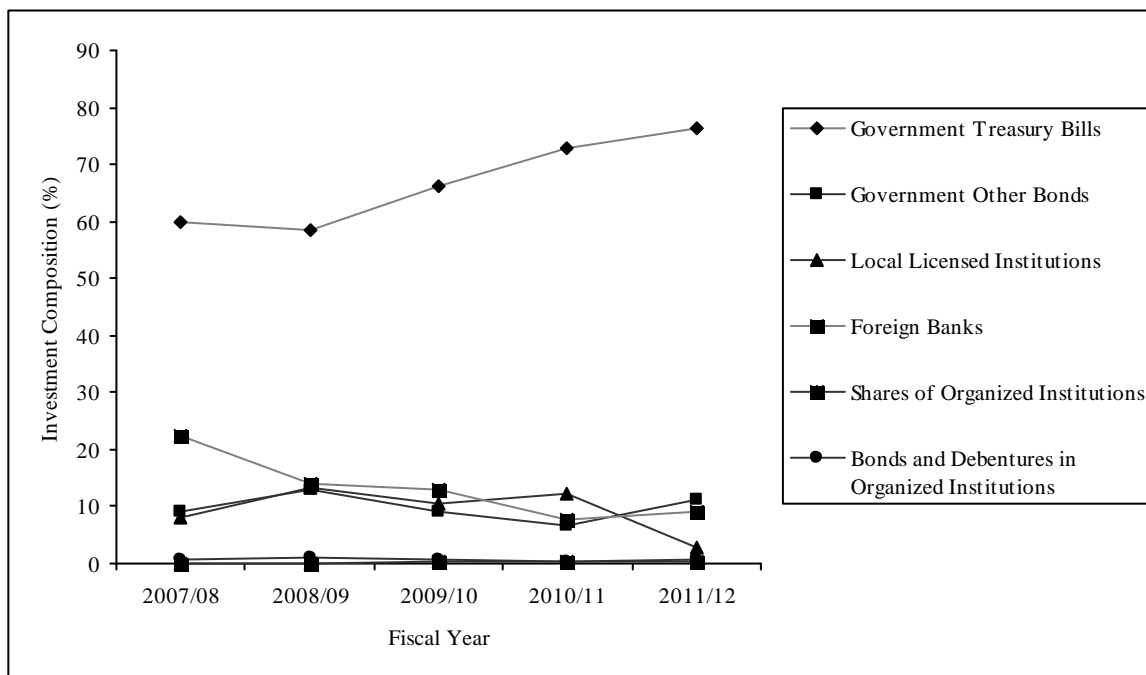


Fig.4.5 exhibits the investment composition in terms of percentage. Of the total investments it is composed of investment in government treasury bills, government other bonds, local licensed institutions and remaining in other shares, bonds and debentures followed by investment in foreign banks as well. The proportion in foreign banks decreased so showed decrease in overall investment while government securities increased so showed increase in overall investment. Investment in government securities is increased due to government instability.

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 Kumari bank ltd. during the study period has been presented by Table 4.6 as below.

**Table 4.6**  
**Composition of Loan, Advances and Bills Purchased & Provision**

**in million**

<b>Fiscal Year (as at mid July)</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>
1) Performing Loan	11,369.91	14,730.72	14,966.08	14,926.24	17,703.99
1.1. Pass	11,332.15	14,724.72	14,886.64	14,758.34	17,701.38
1.2. Restructured	37.76	6.00	79.44	167.90	2.61
2) Non-Performing Loan	152.48	64.54	75.51	164.23	397.35
2.1. Sub-Standard	58.32	13.08	10.15	9.91	43.20
2.2. Doubtful	78.97	31.74	34.18	9.36	110.61
2.3. Loss	15.19	19.72	31.18	144.96	243.54
<b>A. Total Loan (1+2)</b>	<b>11,522.38</b>	<b>14,795.26</b>	<b>15,041.59</b>	<b>15,090.47</b>	<b>18,101.34</b>
3. Loan Loss Provision					
3.1. Pass	113.32	147.25	148.87	147.58	177.01
3.2. Restructured	4.72	0.75	0.49	0.46	0.33
3.3. Sub-standard	14.58	3.27	2.54	2.48	10.80
3.4. Doubtful	39.48	30.92	17.09	4.68	55.31
3.5. Loss	15.19	19.72	31.18	144.96	243.54
<b>B. Total Provisioning</b>	<b>187.292</b>	<b>201.91</b>	<b>200.17</b>	<b>300.16</b>	<b>486.99</b>
4. Provisioning up to previous year					
4.1. Pass	89.58	113.32	147.25	148.87	147.58
4.2. Restructured	4.83	4.72	0.75	0.49	0.46
4.3 Sub-Standard	2.59	14.58	3.27	2.54	2.47
4.4. Doubtful	19.32	39.48	30.92	17.09	4.68
4.5. Loss	17.10	15.19	19.72	31.18	144.96
<b>C. Total provision till last year</b>	<b>133.42</b>	<b>187.29</b>	<b>201.91</b>	<b>200.17</b>	<b>300.16</b>
<b>D. Written Back from last year provision</b>	<b>(7.24)</b>	<b>(42.78)</b>	<b>(14.82)</b>	<b>(13.79)</b>	<b>(0.13)</b>
<b>E. Additional provision in this year</b>	<b>61.11</b>	<b>57.40</b>	<b>13.08</b>	<b>113.78</b>	<b>186.96</b>
<b>Change in this year</b>	<b>53.87</b>	<b>14.62</b>	<b>(1.75)</b>	<b>99.99</b>	<b>186.83</b>
<b>Net Loan (A-B)</b>	<b>11,335.09</b>	<b>14,593.35</b>	<b>14,841.42</b>	<b>14,790.31</b>	<b>17,614.35</b>

Source: Kumari Bank Annual Report

Table 4.6 exhibits the loan and advances composition over the five years. Of the total loan and advances its major composition are Performing loan and Non-Performing loan. Performing loan is increasing steadily throughout the five years i.e.2007/08 to 2011/12. Under performing loan, pass loan is increasing but there is fluctuation in restructured loan over the five years. In FY 2011/12, performing loan stood at highest of Rs 17,703.99 million and in FY 2007/08, performing loan stood at lowest at Rs 11,369.91 million.

Likewise, Non-performing loan is in fluctuation situation from 2007/08 to 2011/12. Under non-performing loan there exists sub-standard, doubtful and loss. The non-performing loan stood at highest of Rs 397.35 million in FY 2011/12 and in FY 2008/09 stood the lowest at Rs 64.54 million. This movement observed was a switch over of investment into loans and advances since 2007/08.

### **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 holder's demand 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 FI's liquidity problem into a solvency problem and causes it to fail. (Saunders and Cornett, 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 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**

<b>Fiscal Year (as at mid July)</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>
Liquid Funds (in million)	3,134.95	3,319.91	5,202.24	5,256.87	7,214.81
Total Deposits (in million)	12,780.15	15,710.93	17,432.25	16,986.28	21,985.20
Liquid Funds/Total Deposits(%)	24.53	21.13	29.84	30.95	32.82
Industrial Average(%)	13.16	12.71	12.78	14.96	10.75
Variance from Industrial average(%)	11.37	8.42	17.06	15.99	22.07

*Source:* Kumari Bank Annual Report

Table 4.7 shows that the liquid funds to total deposit ratio of Kumari bank during the period FY 2007/08 to 2011/12. The ratios are in fluctuation trend in first two years and there after it continuously increased for the next three years. The liquid assets to deposit ratio was minimum in 2008/09 was 21.13% when the deposit was Rs. 15,710. million. Likewise the ratio was maximum in 2011/12 with 32.82% when the deposit was Rs. 21,985.20 million. The extreme levels of the ratio are inversely proportional to the deposit level, in absolute terms. The ratios are in fluctuation trend in first two years and then after in increasing 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

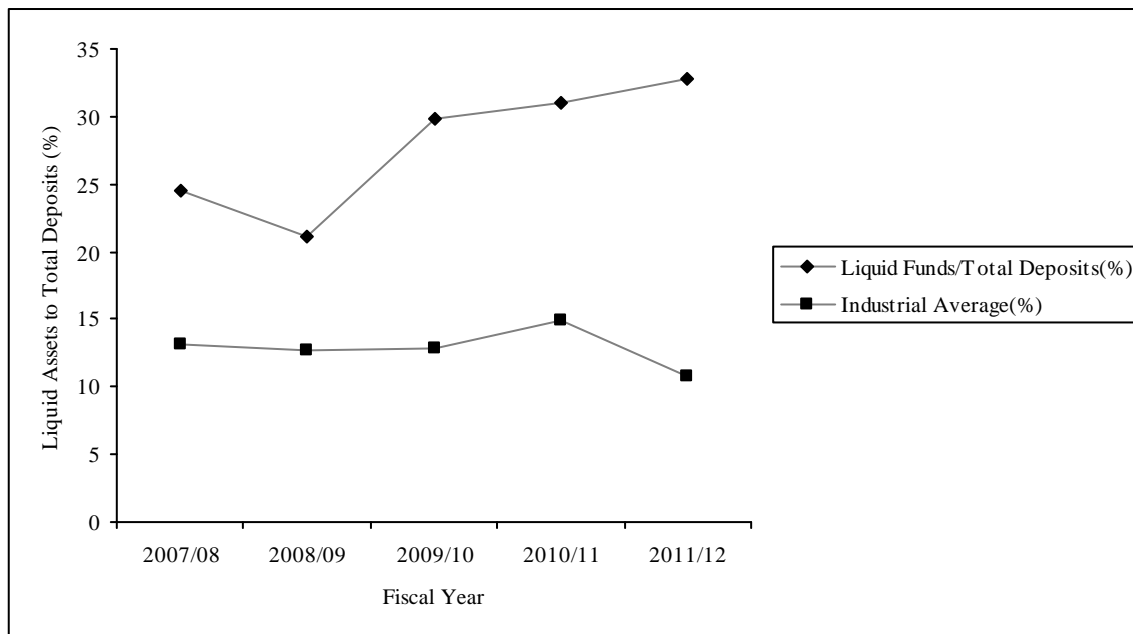


Fig.4.6 exhibits the liquid fund to total deposits ratio of the bank in comparison to the industrial average ratio within the study period of last five years. In the chart, the total liquid funds to total deposits curve of the bank is above the industry average curve in all observed fiscal years. This 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 depositor's 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**

<b>Fiscal Year (as at mid July)</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>
NRB Balance (in million)	244.58	1,120.76	1,663.99	526.95	2,862.92
Total Deposits Less margin & FCY (in million)	12,670.51	15,435.08	16,769.39	16,063.28	21,016.18
NRB Balance/Total Deposit (%)	1.93	7.07	9.92	3.28	13.62
Industrial Average (%)	7.23	9.85	7.85	7.09	12.74
Difference from industrial average(%)	-5.3	-2.78	2.07	-3.81	0.88

*Source:* Kumari Bank Annual Report

Table 4.8 shows that Kumari bank ltd. has maintained reserve with NRB sometime below and sometime above 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 is also in fluctuation trend. Likewise NRB balance also fluctuated, it was in increasing trend up to 2009/10 and then in decreasing trend and again it increased in 2011/12 with Rs. 2,862.92 million. NRB balance to total deposit ratio of the bank is increasing in earlier 3 years and then decreased in 2010/11 and again rose up in 2011/12. The NRB balance to deposit ratio showed maximum in 2011/12 with 12.074% when the deposit volume was also maximum. The ratios were some time less and sometime more than industrial average ratio in all observed years i.e. difference is negative and positive too. This implies that deposits of Kumari bank ltd. with NRB is sometime less and sometime more than that of industrial average.

Fig.4.7

### NRB Balance/Deposit ratio Vs Industrial Average

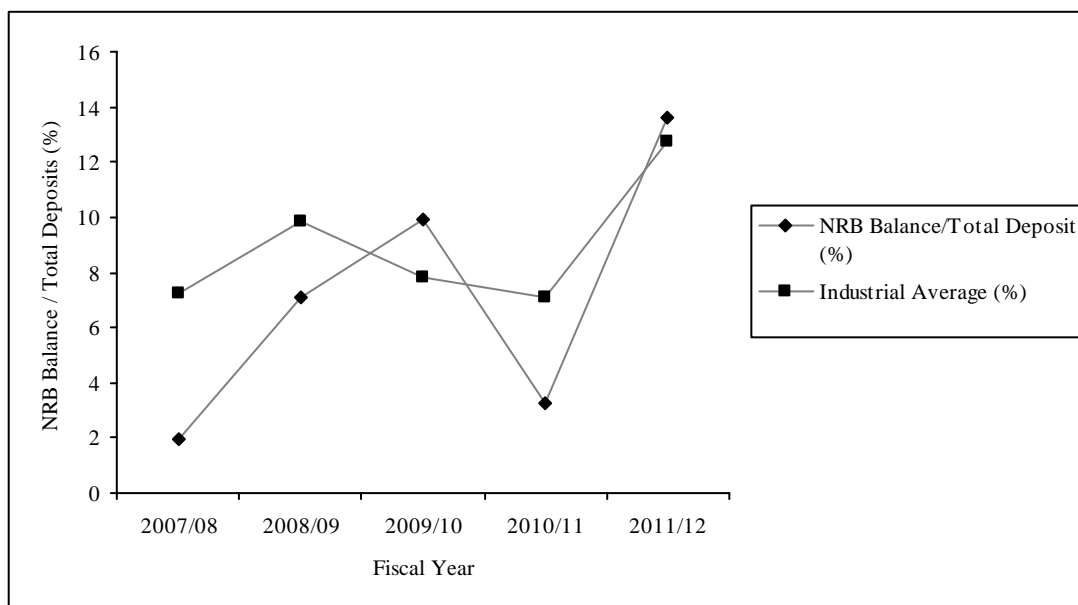


Fig. 4.7 shows the NRB Balance to total

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 Kumari bank Ltd. is sometime in below and sometime above the industrial average curve in all years during the study period. This fact implies that the balance with NRB balance to total deposit with the industry average shows that the bank has sometime maintained and sometime not maintained the balance wit NRB as per the directives over the study period. The gap was minimum in 2008/09 and maximum in 2007/08.

#### 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 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)

**Table 4.9****Cash at Vault to Total Deposit Ratio**

<b>Fiscal Year(as at mid July)</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>
Cash in vault (in million)	565.64	549.11	574.07	524.78	584.14
Total Deposit less margin & FCY Deposits (in million)	12,670.51	15,435.08	16,769.39	16,068.28	21,016.18
Cash at Vault/Total Deposits(%)	4.46	3.56	3.42	3.27	2.78
Industrial Average (%)	2.97	2.81	2.79	2.95	3.00
Difference from industrial average(%)	1.49	0.75	0.63	0.32	-0.22

*Source:* Kumari Bank Annual Report

Table 4.9 shows that volume of cash at vault is fluctuating while the volume of deposits is in rising trend. The ratio was maximum in 2007/08 with 4.68% and lowest in 2011/12 with 2.78%. The ratio has decreased throughout the five years. Cash in vaults have increased in early two years and decreased in 2009/10 and after that it again increased steadily for two years. So, increase in cash in vault (relatively lower rate) has fluctuating trend in the ratio for these years. But in year 2011/12, cash in vault is maximum, so the ratio is observed maximum. Ratio is more than in early four years than the industry average but in 2011/12 the ratio is less than the average.

Fig. 4.8

### Cash at Vault /Deposit ratio Vs Industrial Average

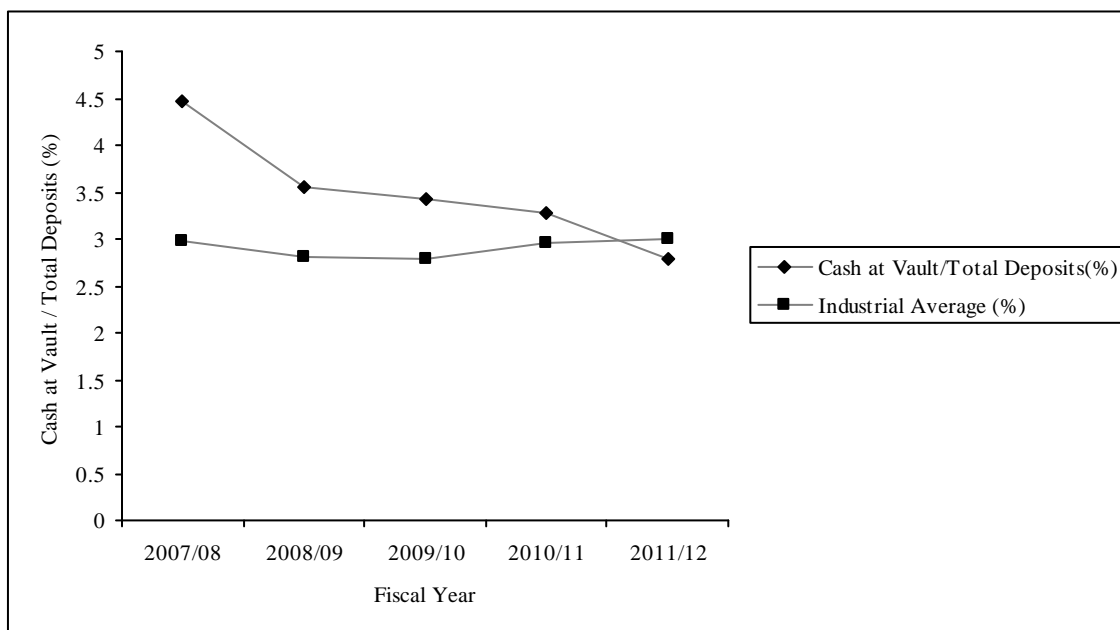


Fig. 4.8 exhibits the observed cash in vault ratio of the Kumari bank ltd. compared with industrial average ratio within the study period of last five years. In the chart, the ratio curve indicates fluctuation of ratio in alternative years. The ratio is observed above the industry average in all the review period excluding last year i.e. 2011/12. Overall it indicates banks capacity to keep cash position is smooth and sometime fluctuating.

#### 4.1.4 Analysis of Asset Management Position of the bank

The interest 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 tradeoffs among risk, return and liquidity.

Every commercial bank must be able to manage its 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 its assets in profitable way by mobilizing its 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 collect deposits from the individual and institutional depositors in form of different accounts offered. These funds collected are further extended in the form of loan and advances to different borrowers in the form of performing loan and non-performing loan. Bank in return make earning from interest on loans and 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 behavior 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 loans and advances by total deposits. This ratio measures the extent to which bank is successful to mobilize its 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

<b>Fiscal Year (as at mid July)</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>
Total Loan & advances (in million)	11,335.09	14,593.35	14,765.91	14,626.07	17,614.35
Total Deposits (in million)	12,780.15	15,710.93	17,432.25	16,986.28	21,985.19
Total Loan & advances to Total Deposit Ratio (%)	88.69	92.89	84.70	86.11	80.12
Industrial Average (%)	71.09	70.64	74.04	76.79	71.73
Difference from industrial average (%)	17.6	22.25	10.66	9.32	8.39

Source: Kumari Bank Annual Report

As shown in Table 4.10, the total loan and advances to total deposits is in increasing trend from 2007/08 to 2011/12. The ratio increased in 2007/08 from 88.94% to 92.89% in

2008/09 which is the maximum of all the review period. The ratio however decreased thereafter to 80.12% in 2011/12 which is the minimum ratio of the observed years. It can be concluded that as the ratios are satisfactorily consistent during the study period. Kumari bank ltd. is mobilizing efficiently the collected deposits. Ratio is more than the industrial average throughout the study period.

**Fig.4.9**

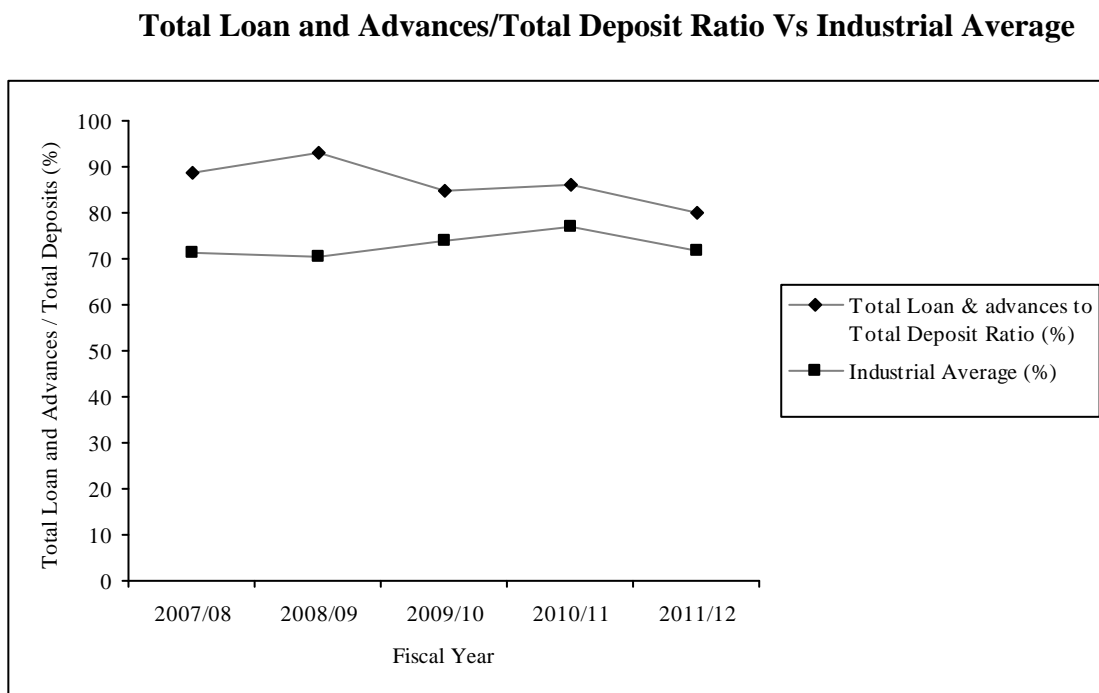


Fig. 4.9 exhibits the observed total loan and adva

nces to total deposits ratio of Kumari bank with industrial average ratio within the study period of last five years. As shown in the chart, the observed ratio increased upwards from 2007/08 to 2008/09 and reached the maximum of 92.89% and later it continuously decreased till 2011/12. The ratio is observed above the industrial average through the study period of last five years. 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.

#### 4.1.4.2 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 investment and so vice versa.

**Table 4.11**

**Total Investments to Total Deposits Ratio**

<b>Fiscal Year (as at mid July)</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>
Total Investment (in million)	2,138.80	1,510.83	2,298.35	3,533.62	2,940.56
Total Deposits (in million)	12,780.15	15,710.93	17,432.25	16,986.28	21,985.19
Total Investment to Total Deposits(%)	16.74	9.62	13.18	20.80	13.38
Industrial Average(%)	25.57	23.22	21.25	6.82	20.88
Difference from Industrial Average(%)	-8.83	-13.6	-8.07	13.98	-7.5

*Source:* Kumari Bank Annual Report

As shown in table 4.11, the total investments to total deposits has been in decreasing trend during the review period of 2007/08 to 2011/12. In FY 2008/09 the ratio of 9.62% is the minimum of all the review period. 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 five years. 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 almost lesser than the industrial average ratios in every observed year expect in the FY 2010/11.

Fig.4.10

### Total Investments to Total Deposit Ratio Vs Industry Average

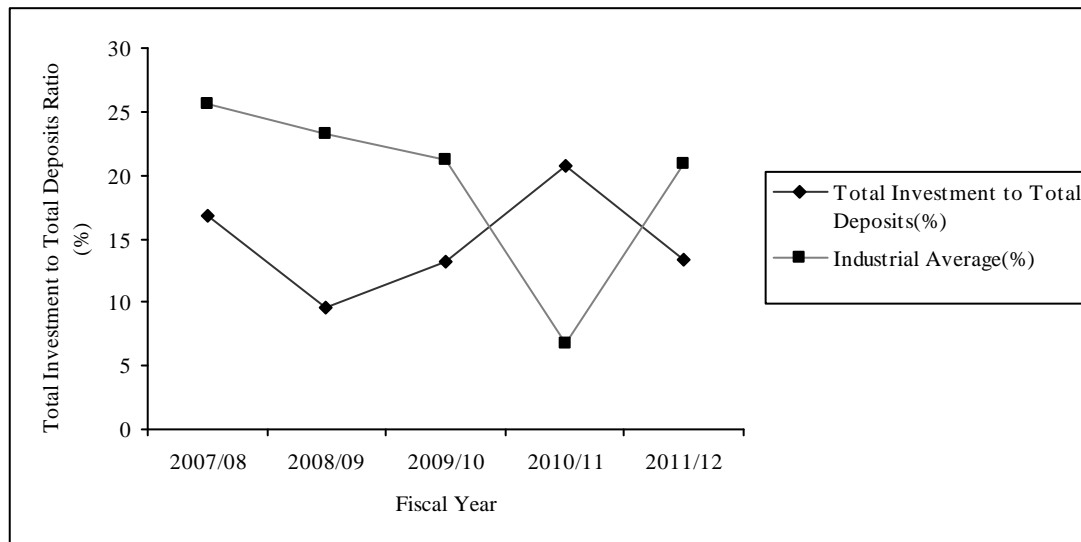


Fig. 4.10 exhibits the observed total investments

nts to total deposit ratio of Kumari 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 in fluctuation trend 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 investment 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 and advances as dependent variable.

**Table 4.12****Correlation between Deposits and Loan & Advances**

Correlation Coefficient(r)	P.E.	6P.E.r	Remarks
0.9747	0.0151	0.0906	$r > 6P.E.r$

As shown in Table 4.6.1 the correlation coefficient (r) between deposits and loan & advances of Kumari bank is 0.9747 and Probable Error times 6 is found 0.0906. 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 five 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.	6P.E.r	Remarks
0.7893	0.1140	0.684	$r > 6P.E.r$

As shown in Table 4.13 the correlation coefficient (r) between deposits and investments of Kumari Bank Ltd. is 0.7893 and Probable Error times 6 is found 0.684. As  $r > 6P.E.r$ , coefficient between deposits and investment is 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 Loans and 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 banks

give priority on loan and advances than to investment 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.	6P.E.r	Remarks
0.6828	0.1614	0.9684	$r < 6P.E.r$

As shown in Table 4.14 the correlation coefficient (r) between loan & advances and investments of Kumari bank ltd. is 0.6828 and Probable Error times 6 is found 0.9684. As  $r < 6P.E.r$ , coefficient between loan and advances and investment is not significant. As value of (r) is positive it clarifies that there is positive correlation between loan & advances and investments.

## 4.2 Major Findings

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

- Total deposits volume of Kumari bank ltd. remained largely in interest bearing deposits in the last five financial years. The deposit volume in interest free deposits are 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 is found in increasing trend though it is at lower rate.
- The cost of deposits i.e. the interest expense on total deposit volume to total operating revenue is in decreasing trend. With the increment in deposit volume the interest expense also has been increasing over period taken for study. However the deposit volume has been increasing trend as well as cost on deposits is in increasing trend which is due to bank offering higher interest rate as they had sufficient volume of deposits. Whereas the total operating revenue are in increasing trend.
- The Net interest income of Kumari bank ltd. is continuously increasing. The slope of the trend line obtained from least square trend line is positive which shows increasing trend of Net Interest Income during the study period. Throughout the review period bank has maintained higher interest margin.

- Mobilization of deposits of Kumari bank ltd. like in every banks has remained largely in the loans and investment in the last five financial years. In the study period of 5 years, the average composition of Cash, Bank Balance, Money at Call, Investments, Loan & Advances, Fixed and other assets were 2.88%, 2.29%, 0.92% 73.51%, 1.36% and 1.78% respectively. The switch over of Net investments on to loan and advances since 2007/08 has been observed. The investment is likely in decreasing trend due to decrease in investment in government securities as a result of government instability.
- The liquid assets to total deposit ratio of Kumari bank ltd. during the period FY 2007/08 to FY 2008/09 has been decreasing but from 2009/10 to 2011/12 are in increasing trend. The liquid assets to deposit ratio minimum in 2008/09. Likewise the ratio is maximum in 2011/12 when the deposits are highest. The extreme levels of the ratio are inversely proportional to the deposit level, in absolute terms. The ratios are always greater than the industrial average ratios in the observed year. Overall, the bank held liquid assets percentage above the industrial average.
- The NRB balance to deposit ratio has showed maximum in 2011/12 when the deposit volume is maximum. Kumari 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. However the ratio is observed low which is a limitation of the study. However the ratio is getting below the industry average except fiscal year 2011/12.
- The volume of cash at vault is fluctuating alternatively over the study years. The ratio is greater than the industry average in all observed years except FY 2011/12. Cash in vaults have been fluctuating randomly over the study period and also the increase is at lower rate than increase in deposits. The ratio is observed above the industry average in the review period except 2011/12. In overall it indicates banks capacity to keep cash position is volatile.
- The slope obtained from total loan and advances to total deposits ratio of the bank is fluctuating. The negative slope of the trend line obtained with least square trend line indicates the decreasing of the ratio since FY 2007/08. This reflects the decreasing trend of ratio. The slope thus indicates decreasing loan and advances with respect to increase in deposits, which is considered as unsatisfactory asset management quality.
- The total investment to deposit ratio of the bank has been fluctuating 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 downward trend in ratio during the period of five years. The decreasing trend of ratios implies that decreasing investments with respect to increasing deposits. This shows that bank has switch deposits. This shows that bank has switch deposit mobilization from investments to other areas.

- The correlation analysis shows that the correlation coefficient ( $r$ ) between deposits and loan and advances bank during the study period. Likewise the value of  $6PE$  is found to be 0.0906. Here  $r > 6PE$  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.
- The correlation analysis shows that the correlation coefficient ( $r$ ) between deposits and investments of the bank is 0.7893 and so it is found that there is positive correlation between deposits and investments during the study period. Likewise the value of  $6PE$  is found to be 0.684. Here  $r > 6PE$  so the correlation coefficient between deposits and investment is significant. As  $r$  is positive but very lower than 1 and so it can be concluded that there is positive relation however relationship is quite nominal.
- The correlation analysis shows that the correlation coefficient ( $r$ ) between loan & advances and investments of the bank is 0.6828. 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 0.9684. Here  $r < 6PE$  so the correlation coefficient between loan& advances and investment is not significant. As  $r$  is positive and so it can be concluded that there is positive correlation.

## 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 " A Case Study On Deposit Collection & Mobilization of Kumari bank Ltd." The study was started with the objective to find out the fact about deposit collection pattern and its mobilization of Kumari 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 its 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 Kumari bank Ltd.

The study was conducted with the general objective to analyze and evaluate effectiveness of Kumari 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 and advances, investments, asset composition, asset management ratios, liquidity ratios, cost involved in deposit collection and correlation between the deposit and its dependent variables of the bank in period of year 2007/08 to 2011/12.

Various material 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 investments and its 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 five years period from year 2007/08 to year 2011/12. 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, Kumari bank ltd. is drawn as a study unit with applying convenience-sampling technique out of 31 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 composition of assets where deposits are mobilized as well managed and deposits are mobilized in evenly manners. However assets mainly composed of loan & advances and investments. The cash in vault to total deposits ratios are above the industrial average and NRB balance to total deposits ratio are sometime below and sometime above the industrial average. Whereas 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 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. Whereas the total loan & advances to total deposits ratio were in fluctuation trend and total investments to total deposits were in decreasing trend though it increased in 2nd last year.ie. in 2010/2011. It has indicated that there has been switch from investment to loan & advances. The relationship between deposits and loan & 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 collections and mobilization of Kumari bank ltd.

- The deposit volume of Kumari bank ltd. during the study period shows that it has been dramatically increasing in the observed all five years. 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.
- The cost involved in deposit collection or the total interest expense to total operating revenue is in increasing trend. The cost of deposits collection and volume of deposits is heading towards same direction. Deposits and interest expenses on deposit are increasing at smaller rate. Due to the effect of interest rate offered by the bank to the public.
- The increasing trend of net interest margin (income) 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.
- The assets composition of the bank during the study period reveals that movement of investments has observed in switch over in to loan and advances during the study period. As it can be seen the major part of total assets are held in form of loans and advances and investment, which falls under high-risk category of assets.
- 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 generation asset and shows lack of specific policy of invest of additional idle funds to high generating assets in the form of investment.
- The NRB balance to total deposits ratio is in fluctuation trend i.e. sometime above and sometime 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.
- The cash in vault to total deposit ratio is above the industrial average ratio except on FY 2011/12 and NRB standard during the study period. It indicates that the bank is running with the adequate liquidity to meet its short-term obligation.
- The increasing trend of assets management ratios i.e. loan and advances to deposits shows 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.

- The conclusion analysis shows that there is positive correlation between deposit and loan & advances and deposits and investments. Also the correlation between investments and loan & advances is positive during the study period. It is also found that correlation between deposits and loan & advances and correlation between investment and deposits and loan & advances and investments are significant.

### **5.3 Recommendations**

The following recommendation are made based on the conclusions as regard to deposits aspects of Kumari bank ltd.

- 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.
- 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.
- During the study period of five years it is observed that bank made a switch from investments to loan & advances as it yield comparatively higher return. There has been decrease in investment in 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.

- The interest expense on deposits to total operating profit ratio during the study period of five years is in increasing trend. Likewise, net interest margin income of the bank is also in increasing trend though 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.
- 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 are above the industrial average and NRB balance to total deposits ratio are in fluctuation trend i.e. sometime below and sometime above the industrial average during the study period so strictly following the NRB directives is better for regulatory mandatory.
- 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 of loans and investments and make continuous effort to explore new, competitive and high yield opportunities to maximize profit.

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[www.nrb.org.np](http://www.nrb.org.np)

**Appendix-1**  
**Kumari Bank Limited**  
**Balance Sheet**

Capital & Liabilities	2007/08	2008/09	2009/10	2010/11	2011/12
1.Share Capital	1,070,000,000	1,186,099,200	1,306,015,920	1,603,800,000	1,603,800,000
2.Reserves and Funds	294,885,269	438,853,508	479,743,128	610,036,668	773,275,338
3.Debentures & Bonds	400,000,000	400,000,000	400,000,000	400,000,000	400,000,000
4.Borrowing Outstanding	100,000,000	293,420,000	429,739,536	660,925,000	5,403,000
5.Deposit Liabilities	12,780,153,444	15,710,925,263	17,432,253,032	16,986,279,457	21,985,198,276
6.Bills payable	65,296,714	70,087,025	42,312,957	8,118,121	20,698,657
7.Proposed Dividend Payable	-	6,583,752	156,816,002	6,581,717	112,266,000
8.Income Tax Liabilities	-	234,986	-	-	-
9.Other Liabilities	325,914,001	432,361,375	238,698,167	216,044,346	230,759,700
<b>Total Capital and Liabilities</b>	<b>15,036,249,428</b>	<b>18,538,565,109</b>	<b>20,485,578,742</b>	<b>20,491,785,309</b>	<b>25,131,400,971</b>
<b>Assets</b>					
1.Cash Balance	565,641,118	544,108,504	574,065,903	524,780,914	584,140,254
2.Balance with NRB	244,576,115	1,120,760,644	1,663,997,917	526,948,923	2,862,923,783
3.Balance with Banks/Financial Institutions	123,624,444	106,429,652	485,765,479	116,794,497	275,563,556
4.Money at call & Short Notice	55,360,000	30,000,000	120,000,000	451,520,000	321,243,141
5.Investment	2,138,087,939	1,510,828,482	2,298,345,764	3,533,622,908	2,940,556,674
6.Loans, Advances and Bills purchase	11,335,087,939	14,593,346,830	14,765,912,480	14,626,073,558	17,614,348,989
7.Fixed Assets	222,000,872	247,832,774	285,637,988	306,276,829	277,268,923
8.Non Banking Assets	3,140,779	-	-	-	-
9.Other Assets	348,020,571	380,258,223	291,853,211	405,767,680	255,355,651
<b>Total Assets</b>	<b>15,036,249,428</b>	<b>18,538,565,109</b>	<b>20,485,578,742</b>	<b>20,491,785,309</b>	<b>25,131,400,971</b>

## Appendix-2

### Kumari Bank Limited

#### Comparative Income and Expenses Statement (Amount in Actual)

INCOME	2007/08	2008/09	2009/10	2010/11	2011/12
<b>A. On Loans, Advances and Overdraft</b>	<b>877,009,516</b>	<b>1,233,549,009</b>	<b>1,732,953,729</b>	<b>2,052,375,446</b>	<b>2,218,622,951</b>
1.Loan & Advances	465,122,390	553,755,728	753,804,161	1,046,617,733	831,876,975
2.Overdraft	411,887,126	679,793,281	975,149,568	1,005,757,713	1,386,745,976
<b>B. On investment</b>	<b>46,978,242</b>	<b>89,856,012</b>	<b>81,378,981</b>	<b>153,426,902</b>	<b>212,074,062</b>
1.Government Securities	46,586,997	88,539,674	80,062,644	152,110,565	210,757,724
a. Treasury Bills	43,361,548	74,990,179	66,166,471	134,991,477	191,628,752
b. Development Bonds	3,225,449	13,549,495	13,896,172	17,119,088	19,128,972
c. National Saving Certificate	-	-	-	-	-
2. Foreign Debt Pages	-	-	-	-	-
a.....	-	-	-	-	-
b.....	-	-	-	-	-
3.Nepal Rastra Bank Bonds	-	-	-	-	-
4. Debentures & Bonds	391,245	1,316,338	1,316,338	1,316,388	1,316,388
5. Interest On Interbank Investment	-	-	-	-	-
a. Bank/Financial Institutions	-	-	-	-	-
b. Other Institutions	-	-	-	-	-
<b>C. On Agency Balances</b>	<b>2,113,916</b>	<b>967,556</b>	<b>636,813</b>	<b>131,482</b>	<b>693,762</b>
1.Domestic Banks/Financial Institutions	-	-	-	52,243	-
2.Foreign Banks	2,113,916	967,556	636,813	131,482	693,762
<b>D. On Money at call &amp; Short Notice</b>	<b>31,144,050</b>	<b>50,349,890</b>	<b>56,096,834</b>	<b>45,805,651</b>	<b>10,189,451</b>
1. Domestic Banks/Financial Institutions	21,189,231	42,610,458	52,341,943	40,027,779	5,650,464
2. Foreign Banks	9,954,819	7,739,432	3,754,892	5,777,872	4,538,987
<b>E. On others</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
1. Certificate of Deposits	-	-	-	-	-
2. Inter-Bank/ financial Institution Loans	-	-	-	-	-
3.Others	-	-	-	-	-
<b>Total</b>	<b>957,245,724</b>	<b>1,374,722,467</b>	<b>1,871,066,357</b>	<b>2,257,719,724</b>	<b>2,441,580,226</b>

<b>INTEREST EXPENSES</b>					
<b>A. On Deposit Liabilities</b>	<b>463,374,013</b>	<b>760,503,809</b>	<b>1,088,328,380</b>	<b>1,469,833,667</b>	<b>1,576,486,718</b>
1. Fixed Deposits	180,664,935	310,276,518	514,190,449	718,295,152	874,689,080
1.1. Local Currency	172,131,676	303,943,983	509,830,550	702,367,287	850,599,945
1.2. Foreign Currency	8,533,259	6,332,535	4,359,899	15,927,864	24,089,135
2. Saving Deposits	130,199,103	153,388,406	204,354,922	523,122,431	329,281,022
2.1. Local Currency	125,515,994	150,717,770	202,270,725	521,138,209	328,062,185
2.2. Foreign Currency	4,683,109	2,670,636	2,084,197	1,984,223	1,218,836
3. Call Deposits	152,509,975	296,838,885	369,783,009	228,416,084	372,516,616
3.1. Local Currency	3,223,579	1,202,963	477,105	645,648	729,635
3.2. Foreign Currency	3,223,579	1,202,963	477,105	645,648	729,635
4. Certificate of Deposits	-	-	-	-	-
<b>B. On Borrowings</b>	<b>35,360,209</b>	<b>55,699,081</b>	<b>100,589,792</b>	<b>96,717,931</b>	<b>46,005,042</b>
1. Debentures & Bonds	3,951,005	32,000,000	32,087,671	32,000,000	32,000,000
2. Loan from NRB	-	-	-	-	-
3 Inter-Bank/Financial Institution Borrowing	31,409,204	23,699,081	68,502,121	64,717,931	14,005,042
Other Organized Institution	-	-	-	-	-
5. Other Loans	-	-	-	-	-
<b>C. On Others</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
1.	-	-	-	-	-
2.	-	-	-	-	-
<b>Total</b>	<b>498,734,222</b>	<b>816,202,890</b>	<b>1,188,918,173</b>	<b>1,566,551,598</b>	<b>1,622,491,760</b>

## Appendix-3

### Assets Composition of Kumari Bank Limited

<b>Particulars</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>
1.Cash Balance	565,641,118	549,108,504	574,065,903	524,780,914	584,140,254
2.Balance with NRB	244,576,115	1,120,760,644	1,663,997,917	526,948,923	2,862,923,783
3.Balance with Banks/Financial Institution	123,624,444	106,429,652	485,765,479	116,794,497	275,563,556
4. Money at call and Short Notice	55,360,000	30,000,000	120,000,000	451,520,000	321,243,141
5. Investment	2,138,797,590	1,510,828,482	2,296,872,913	3,533,622,908	2,940,556,674
6. Loans, Advances & Bills Purchase	11,335,087,939	14,593,346,830	14,765,912,480	14,626,073,558	17,614,348,989
7. Fixed Assets	222,000,872	247,832,774	285,637,989	306,276,829	277,268,923
8. Non Banking Assets	3,140,779	-	-	-	-
9. Other Assets	338,370,318	380,258,229	330,222,007	405,767,680	255,355,651
<b>Total Assets</b>	<b>15,026,539,175</b>	<b>18,538,565,109</b>	<b>20,522,474,688</b>	<b>20,491,785,309</b>	<b>25,131,400,971</b>

## Appendix-4

### Investment Composition

Particulars	2007/08	2008/09	2009/10	2010/11	2011/12
1. Government Treasury Bills	1,278,195,002	882,519,990	1,522,341,633	2,577,192,260	2,244,985,335
2. Government Saving Certificate	-	-	-	-	-
3. Government other Bonds	190,900,000	197,575,000	209,047,851	228,913,348	329,633,174
4. Nepal Rastra Bank Bonds	-	-	-	-	-
5. Foreign Bonds	-	-	-	-	-
6. Local Licensed/Institutions	175,000,000	200,000,000	245,000,000	433,536,800	77,767,665
7. Foreign Bonds	476,482,088	212,387,992	300,035,781	270,560,000	264,750,000
8. Shares of organized Institutions	1,235,500	1,360,500	4,935,500	6,435,500	6,435,500
9. Bonds and Debenture in organized Institutions	16,985,000	16,985,000	16,985,000	16,985,000	16,985,000
10. Other Investment	-	-	-	-	-
Total Investment	2,138,797,590	1,510,828,482	2,298,345,764	3,533,622,908	2,940,556,674
Provision	-	-	-	-	-
Net Investment	2,138,797,590	1,510,828,482	2,298,345,764	3,533,622,908	2,940,556,674

## Appendix-5

### KUMARI BANK LTD.

#### Calculation of Liquidity Ratios

Liquid Assets to Total Deposit	2007/08	2008/09	2009/10	2010/11	2011/12
Cash Balance	565,641,118	549,108,504	574,065,903	524,780,914	584,140,254
Balance with NRB	244,576,115	1,120,760,644	1,663,997,917	526,948,923	2,862,923,783
Balance with Banks/Financial Institutions	123,624,444	106,429,652	485,765,479	116,794,497	275,563,556
Money at call & Short Notice (Placement)	55,360,000	30,000,000	120,000,000	451,520,000	321,243,141
Investment	2,138,797,590	1,510,828,482	2,298,345,764	3,533,622,908	2,940,556,674
Secured Loan against own FDR	6,955,361	2,787,554	53,258,658	103,199,278	230,384,745
Secured Loan against Government Securities	-	-	6,805,423	-	-
Total Liquid Assets	3,134,954,628	3,319,914,836	5,202,239,144	5,256,866,520	7,214,812,153
Total Deposits	12,780,153,444	15,710,925,263	17,432,253,032	16,986,279,457	21,985,198,276
Liquid Assets to Total Deposits(%)	24.53	21.13	29.84	30.95	32.82
Industrial Average(%)	13.16	12.71	12.78	14.96	10.75
Variance from Industrial average (%)	11.37	12.71	12.78	14.96	10.75

<b>NRB to Total Deposits</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>
NRB Balance	244,576,115	1,120,760,644	1,663,997,917	526,948,923	2,862,923,783
Total Deposits less margin & FCY Deposits	12,084,838,839	15,435,076,588	16,769,386,714	16,068,283,754	21,016,183,993
NRB Balance/Total Deposit (%)	2.02	7.26	9.92	3.28	13.62
Industrial Average(%)	7.23	9.85	7.85	7.09	12.74
Variance from Industrial Average	-5.21	-2.59	2.07	-3.81	0.88
Margin Account Balances	109,638,749	97,890,467	137,997,542	131,629,394	141,540,720
FCY Deposits	585,675,856	177,928,789	524,868,776	786,366,309	827,473,563

<b>Cash at Vault to Total Deposits</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>	<b>2011/12</b>
Cash at Vault(in million)	565,641,118	549,108,504	574,065,903	524,780,914	584,140,254
Total Deposits less margin & FCY Deposits	12,084,838,839	15,435,076,588	16,769,386,714	16,068,283,754	21,016,183,993
Cash at Vault/Total Deposits(%)	4.68	3.56	3.42	3.27	2.78
Industrial Average(%)	2.97	2.81	2.79	2.95	3.00
Variance from Industrial Average(%)	1.71	0.75	0.63	0.32	-0.22
Margin Account Balances	109,638,749	97,890,467	137,997,542	131,629,394	141,540,720
FCY Deposits	585,675,856	177,928,789	524,868,776	786,366,309	827,473,563

## Appendix-6

Least Square trend line of total Interest Expenses on Total Deposits to Total Operating Revenue.

Let the straight Line Trend be

$$y=a+bx \dots I$$

### Fitting of trend line by least square method.

Fiscal Year	Year(X)	Total Interest Expenses on Total Deposit to Total Operating Revenue(y)	x=X-3	X <sup>2</sup>	Xy
2007/08	1	0.4459	-2	4	-0.8918
2008/09	2	0.3123	-1	1	-0.3123
2009/10	3	0.5405	0	0	0
2010/11	4	0.6110	1	1	0.6110
2011/12	5	0.6052	2	4	1.2104
		<b>y=2.5149</b>	<b>x=0</b>	<b>X<sup>2</sup>=10</b>	<b>xy=0.6173</b>

$$\begin{aligned} \text{Since } x=0, \text{ So } a &= \frac{y}{n} \\ &= \frac{2.5149}{5} \\ &= 0.5029 \end{aligned}$$

$$\begin{aligned} b &= \frac{xy}{x^2} \\ &= \frac{0.6173}{10} \\ &= 0.0617 \end{aligned}$$

Substituting the value of a & b in equation I, the equation of the trend line is

$$y=0.5029+(0.0617)x.$$

## Appendix-7

Least Square trend line of Net Interest Income

Let the straight line trend be

$$y=a+bx \text{ .....I}$$

### Fitting of trend line by Least Square Method

Fiscal Year	Year(X)	Net Interest Income (y)	$x=X-3$	$X^2$	xy
2007/08	1	458.52	-2	4	-917.04
2008/09	2	558.52	-1	1	-558.52
2009/10	3	682.15	0	0	0
2010/11	4	691.71	1	1	691.71
2011/12	5	819.09	2	4	1638.18
		<b>y=3209.99</b>	<b>x=0</b>	<b>X<sup>2</sup>=10</b>	<b>xy=854.33</b>

Since  $\sum x=0$ , So  $a = \frac{\sum y}{n}$

$$= \frac{3209.99}{5}$$

$$= 641.99$$

$$b = \frac{\sum xy}{\sum x^2}$$

$$= \frac{854.33}{10}$$

$$= 85.433$$

Substituting the value of a & b in equation I, the equation of the trend line is  $y=641.99+(85.433)x$ .

## Appendix-8

### Co-relation between Total Deposit and Loan & Advances

Fiscal Year	Deposit(x)	Loan and Advances(y)	$fX Z \bar{X}^A$	$fX Z \bar{X}^A$	$fY Z \bar{Y}^A$	$fY Z \bar{Y}^A$	$\frac{fX Z \bar{X}^A}{fY Z \bar{Y}^A}$
2007/08	12.78	11.33	-4.2	17.64	-3.25	10.56	13.65
2008/09	15.71	14.59	-1.26	1.59	0.01	0.0001	-0.01
2009/10	17.43	14.76	0.46	0.21	0.18	0.03	0.08
2010/11	16.98	14.62	0.01	0.0001	0.04	0.0016	0.0004
2011/12	21.98	17.61	5.01	25.10	3.03	9.18	15.18
	<b>x=84.87</b>	<b>y=72.91</b>		<b>44.54</b>		<b>19.77</b>	<b>28.92</b>

$$\begin{aligned}
 \text{1. Mean } \bar{X} &= \frac{\sum x}{n} \\
 &= \frac{84.87}{5} \\
 &= 16.97
 \end{aligned}$$

$$\begin{aligned}
 \bar{Y} &= \frac{\sum y}{n} \\
 &= \frac{72.91}{5} \\
 &= 14.58
 \end{aligned}$$

$$\begin{aligned}
 \text{2. Variance } (\sigma^2_x) &= \frac{1}{n} \sum fX Z \bar{X}^A \\
 &= \frac{1}{5} \sum 44.54 \\
 &= 8.91
 \end{aligned}$$

$$\begin{aligned}
 \sigma^2_y &= \frac{1}{n} \sum fY Z \bar{Y}^A \\
 &= \frac{1}{5} \sum 19.77 \\
 &= 3.95
 \end{aligned}$$

$$\begin{aligned}
 \text{3. S.D.}(\sigma_x) &= \sqrt{\sigma^2_x} \\
 &= \sqrt{8.91} \\
 &= 2.92
 \end{aligned}$$

$$\begin{aligned}
 \sigma_y &= \sqrt{\sigma^2_y} \\
 &= \sqrt{3.95} \\
 &= 1.99
 \end{aligned}$$

$$\begin{aligned}
 \text{4. Covariance} &= \frac{1}{n} \sum fX Z \bar{X}^A \cdot fY Z \bar{Y}^A \\
 &= \frac{1}{5} \sum 28.92 \\
 &= 5.78
 \end{aligned}$$

$$\begin{aligned}
 \text{5. Correlation} &= \frac{\text{Cov } xy}{\sigma_x \cdot \sigma_y} \\
 &= \frac{5.78}{2.98 \cdot 1.99}
 \end{aligned}$$

$$\begin{aligned}
 &= \frac{5.78}{5.98} \\
 &= 0.9747
 \end{aligned}$$

### Calculation of PE

$$\begin{aligned}
 \text{PE} &= 0.6745 \frac{1 Z r^2}{\sqrt{N}} \\
 &= 0.6745 \times \frac{1 Z f 0.9747 \text{ \AA}}{\sqrt{5}} \\
 &= 0.6745 \times \frac{0.0499}{\sqrt{5}} \\
 &= 0.6745 \times 0.0223 \\
 &= 0.0151
 \end{aligned}$$

$$\begin{aligned}
 6\text{PE} &= 6 \times 0.0151 \\
 &= 0.0906
 \end{aligned}$$

Therefore  $r > 6\text{PE}$

## Appendix-9

### Co-relation between Total Deposit and Total Investment

Fiscal Year	Deposit (x)	Investment (y)	$f_x z_{\bar{x}}$	$f_x z_{\bar{x}^2}$	$f_y z_{\bar{y}}$	$f_y z_{\bar{y}^2}$	$f_{xy} z_{\bar{x}z_{\bar{y}}}$
2007/08	12.78	2.13	-4.2	17.64	-0.35	0.04	1.47
2008/09	15.71	1.51	-1.26	1.59	-0.97	0.94	1.22
2009/10	17.43	2.29	0.46	0.21	-0.19	0.03	-0.08
2010/11	16.98	3.53	0.01	0.0001	1.10	1.10	0.01
2011/12	21.98	2.94	5.01	25.10	2.53	6.40	12.67
	<b>x=84.87</b>	<b>y=12.4</b>		<b>44.54</b>		<b>8.51</b>	<b>15.29</b>

$$\begin{aligned}
 1. \text{ Mean } \bar{x} &= \frac{\sum x}{n} \\
 &= \frac{84.87}{5} \\
 &= 16.97
 \end{aligned}$$

$$\begin{aligned}
 \bar{y} &= \frac{\sum y}{n} \\
 &= \frac{12.4}{5} \\
 &= 2.48
 \end{aligned}$$

$$\begin{aligned}
 2. \text{ Variance } (\sigma^2_x) &= \frac{1}{n} \sum f_x z_{\bar{x}^2} \\
 &= \frac{1}{5} \sum 44.54 \\
 &= 8.91
 \end{aligned}$$

$$\begin{aligned}
 \sigma^2_y &= \frac{1}{n} \sum f_y z_{\bar{y}^2} \\
 &= \frac{1}{5} \sum 8.51 \\
 &= 1.70
 \end{aligned}$$

$$\begin{aligned}
 3. \text{ S.D.}(\sigma_x) &= \sqrt{\sigma^2_x} \\
 &= \sqrt{8.91} \\
 &= 2.92
 \end{aligned}$$

$$\begin{aligned}
 \sigma_y &= \sqrt{\sigma^2_y} \\
 &= \sqrt{1.70} \\
 &= 1.30
 \end{aligned}$$

$$\begin{aligned}
 4. \text{ Covariance} &= \frac{1}{n} \sum f_{xy} z_{\bar{x}z_{\bar{y}}} \\
 &= \frac{1}{5} \sum 15.29 \\
 &= 3.058
 \end{aligned}$$

$$\begin{aligned}
 \mathbf{5. Correlation} &= \frac{\text{Cov } xy}{x. y} \\
 &= \frac{3.058}{2.98 \mid 1.30} \\
 &= \frac{3.058}{3.874} \\
 &= 0.7893
 \end{aligned}$$

### Calculation of PE

$$\begin{aligned}
 \mathbf{PE} &= 0.6745 \frac{1 Z r^2}{\sqrt{N}} \\
 &= 0.6745 \times \frac{1 Z f 0.7893 \hat{A}}{\sqrt{5}} \\
 &= 0.6745 \times \frac{0.6229}{2.23} \\
 &= 0.6745 \times 0.1691 \\
 &= 0.1140
 \end{aligned}$$

$$\begin{aligned}
 6\mathbf{PE} &= 6 \times 0.1140 \\
 &= 0.684
 \end{aligned}$$

Therefore  $\mathbf{r} > 6\mathbf{PE}$

## Appendix-10

### Co-relation between Total Loan & Advances and Total Investment

Fiscal Year	Total Loan & Advances(x)	Total Investment(y)	$f_x Z \bar{X}^A$	$f_x Z \bar{X}^A$	$f_y Z \bar{Y}^A$	$f_y Z \bar{Y}^A$	$f_{xy} Z \bar{X} \bar{Y}^A$
2007/08	11.33	2.13	-3.25	10.56	-0.35	0.04	1.13
2008/09	14.59	1.51	0.01	0.0001	-0.97	0.94	-0.0097
2009/10	14.76	2.29	0.18	0.03	-0.19	0.03	-0.0342
2010/11	14.62	3.53	0.04	0.0016	1.05	1.10	0.042
2011/12	17.61	2.94	3.03	9.18	2.53	6.40	7.66
	<b>x=72.91</b>	<b>y=12.4</b>		<b>19.77</b>		<b>8.51</b>	<b>8.78</b>

$$\begin{aligned}
 \text{1. Mean } \bar{X} &= \frac{\sum x}{n} \\
 &= \frac{72.91}{5} \\
 &= 14.58
 \end{aligned}$$

$$\begin{aligned}
 \bar{Y} &= \frac{\sum y}{n} \\
 &= \frac{12.4}{5} \\
 &= 2.48
 \end{aligned}$$

$$\begin{aligned}
 \text{2. Variance } (\sigma^2_x) &= \frac{1}{n} \sum f_x Z \bar{X}^2 \\
 &= \frac{1}{5} \sum f_x 19.77^2 \\
 &= 3.95
 \end{aligned}$$

$$\begin{aligned}
 \sigma^2_y &= \frac{1}{n} \sum f_y Z \bar{Y}^2 \\
 &= \frac{1}{5} \sum f_y 8.51^2 \\
 &= 1.70
 \end{aligned}$$

$$\begin{aligned}
 \text{3. S.D.}(\sigma_x) &= \sqrt{\sigma^2_x} \\
 &= \sqrt{3.95} \\
 &= 1.98
 \end{aligned}$$

$$\begin{aligned}
 \sigma_y &= \sqrt{\sigma^2_y} \\
 &= \sqrt{1.70} \\
 &= 1.30
 \end{aligned}$$

$$\begin{aligned}
 \text{4. Covariance} &= \frac{1}{n} \sum f_{xy} Z \bar{X} Z \bar{Y} \\
 &= \frac{1}{5} \sum f_{xy} 8.78 \\
 &= 1.7576
 \end{aligned}$$

$$\begin{aligned}
 \mathbf{5. Correlation} &= \frac{\text{Cov } xy}{x \cdot y} \\
 &= \frac{1.7576}{1.98 \cdot 1.30} \\
 &= \frac{1.7576}{2.574} \\
 &= 0.6828
 \end{aligned}$$

### Calculation of PE

$$\begin{aligned}
 \mathbf{PE} &= 0.6745 \frac{1 Z r^2}{\sqrt{N}} \\
 &= 0.6745 \times \frac{1 Z \cdot 0.6828^2}{\sqrt{5}} \\
 &= 0.6745 \times \frac{0.4662}{2.23} \\
 &= 0.6745 \times 0.5337 \\
 &= 0.1614
 \end{aligned}$$

$$\begin{aligned}
 6\mathbf{PE} &= 6 \times 0.1614 \\
 &= 0.9684
 \end{aligned}$$

Therefore  $\mathbf{r < 6PE}$

## Appendix-11

### Industrial Average of Commercial Banks

	Mid July											
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b><u>A. GDP, DEPOSITS, CREDIT &amp; INVESTMENT</u></b>												
1. Deposit / GDP	44.25	43.85	41.42	43.56	42.82	44.53	46.91	51.91	58.71	53.88	51.09	55.70
2. Credit / GDP	26.56	26.80	25.30	26.09	27.78	27.03	32.22	36.90	41.47	39.89	39.24	39.96
3. Investment / GDP	6.19	8.10	9.22	9.25	10.21	12.56	13.00	13.27	13.63	11.45	3.49	11.63
4. Credit & Investment / GDP	32.76	34.91	34.52	35.34	37.99	39.60	45.22	50.18	55.10	51.34	42.72	51.59
5. Time Deposit / GDP	35.62	35.06	32.61	33.40	33.48	34.89	36.41	38.53	14.71	17.08	18.84	19.18
6. Current Deposit / GDP	8.63	8.79	5.86	6.28	5.88	5.72	6.26	6.83	7.46	6.88	5.87	5.99
7. Credit / Deposit	60.03	61.13	61.08	59.89	64.86	60.71	68.69	71.09	70.64	74.04	76.79	71.73
8. Investment / Deposit	14.00	18.48	22.26	21.24	23.84	28.21	27.71	25.57	23.22	21.25	6.82	20.88
9. Credit & Investment / Deposit	74.03	79.60	83.34	81.13	88.70	88.93	96.40	96.66	93.86	95.29	83.61	92.61
10. Fixed Deposit / Total Deposit	35.94	34.66	31.04	27.86	26.67	26.29	25.84	25.06	25.06	31.71	36.88	34.43
11. Current Deposit / Total Deposit	19.51	20.05	14.16	14.43	13.73	12.84	13.34	13.16	12.71	12.78	14.96	10.75
12. Credit to Govt. Entp. / Credit	2.67	2.34	2.30	1.80	1.49	2.82	2.36	0.66	0.66	1.34	1.47	1.13
13. Credit to Pvt.Sector / Total Credit	97.33	97.66	97.70	98.20	98.51	97.18	95.53	95.16	99.34	98.66	98.53	98.87
<b><u>B. LIQUIDITY</u></b>												
1. NRB Balance / Deposit	12.51	13.44	8.91	9.72	7.08	7.23	6.88	7.23	9.85	7.85	7.09	12.74
2. Vault / Deposit	2.79	3.19	2.87	1.83	1.89	2.17	2.32	2.97	2.81	2.79	2.95	3.00
3. Liquid Fund / Deposit	32.43	28.97	20.15	19.78	15.20	13.34	13.06	15.70	18.81	16.29	14.26	18.64
<b><u>C. CAPITAL ADEQUACY</u></b>												
1. Capital Fund / Total Deposit	4.53	5.51	5.79	(4.36)	(7.58)	(6.09)	(1.23)	2.34	5.39	7.39	8.59	11.15
2. Capital Fund/ Total Credit	7.54	9.01	9.49	(7.29)	(10.82)	(10.03)	(1.79)	3.29	7.64	9.98	11.19	12.39
3. Capital Fund / Total Assets	3.27	3.71	3.87	(3.00)	(4.65)	(4.14)	(0.85)	1.76	3.74	5.92	6.72	7.23
4. Capital Fund / Risk weighted Assets	(5.49)	(9.88)	(12.04)	(9.07)	(6.33)	(5.30)	(1.71)	4.04	7.22	6.58	10.59	11.50