

# **FUNDS MOBILIZATION OF COMMERCIAL BANK**

*(With Special reference to NIBL, NABIL & Siddhartha Bank)*



**SUBMITTED TO:**  
**Office of the Dean**  
**Faculty of Management**  
**Tribhuvan University**



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*In partial fulfillment of the Requirement for Master's Degree in*

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## **RECOMMENDATION**

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## **DECLARATION**

I hereby declare that the work reported in this thesis entitled "*Fund Mobilization of Commercial Bank with special reference to NIBL, NABIL and Siddhartha Bank*" submitted to the Office of Dean, Faculty of Management, Tribhuvan University, is my original own work done which is prepared as the partial fulfillment of the requirement of degree of Master of Business Studies (M.B.S) under the guidance and supervision of **Asso. Prof. Achyut R. Bhattarai and D.R. Bhandari** of Shanker Dev Campus.

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## ABBREVIATIONS

A.D.	:	Anno Domini
ATM	:	Automated Teller Machine
BG	:	Bank Guarantee
B.S.	:	Bikram Sambat
C.V.	:	Coefficient Variance
Dr.	:	Doctor
Fig.	:	Figure
FYs	:	Fiscal Years
Govt.	:	Government
HBL	:	Himalayan Bank Limited
i.e.	:	That is
L.C.	:	Letter of Credit
Ltd.	:	Limited
Mr.	:	Mister
NABIL	:	Nabil Bank Limited
NIBL	:	Nepal Investment Bank Limited
NIDC	:	Nepal Industrial Development Corporation
No.	:	Number
NRB	:	Nepal Rastra Bank
Org.	:	Organization
Prof.	:	Professor
Rs.	:	Rupees
S.D.	:	Standard Deviation
S.N.	:	Serial Number
T.U.	:	Tribhuvan University
U.K.	:	United Kingdom
U.S.A.	:	United States of America
www	:	World Wide Web

# **CHAPTER-I**

## **INTRODUCTION**

### **1.1 Background of the Study**

Overall national development of any country depends upon the economic development of that country and economic development largely depends upon the financial infrastructure of that country. Therefore, the primary goal of any nation including Nepal is rapid economic development to promote the welfare of the people and the nation as well. Nepal being one of the least developed countries has been trying to embark upon the path of economic development by economic growth rate and developing all sectors of economy.

The proper mobilization and utilization of domestic resources is one of the key factors in the economic development of a country. Similarly, integrated and speedy development of the country is only possible when competitive and reliable banking services are reached and operated to every corner of the country. It has been well established that the economic activities of any country can hardly be carried without the assistance and support of financial institutions. Financial institutions have catalytic role in the process of economic development. The investment policy of financial institutions, especially banks has long term impact not only on their growth and sustainability but also on the economic development of the country. Successful formulation and effective implementation of investment policy is the prime requisite for the successful performance of banks and other financial institutions. Good investment policy has a positive impact on economic development of the country and vice- versa.

Generally the organization that transacts money is called bank. Bank and banking has always played a significant role for the financial activities in the business. So bank is the major need for various developments. Bank collects fund as a saving from the community and invest them into most desirable and highly yielding sector as a full to a process of economic development. It develops saving habits of people. The

importance of the banking as the nerve center of economic development can not be over emphasized and it is said that bank which are the need of and great wealth of country have get to be kept very scared. Just as water for irrigation, good banks are for the country's industry and trade.

The main objectives of the bank are collection of amount from public in a form of saving and providing short-term loan (for the development of industry, trade, and business) to the ones in need. The development of country's economy is impossible without expansion of banking function in both rural and urban area of the country. Development of trade and industry is dependent upon the development of banking facilities. So it is said that the bank is backbone of economic development in modern society. Banking institutions are inevitable for mobilizing resources, for finance and social economic development of a country and which is important to all parties i.e. generally public, business, organization, government and other small financial institution. The development of a country is always measured by its economic development through economic indices. That's why every country has given emphasis on boost up its economy. At present, the financial institutions are viewed as catalyst in the process of the economic growth. The mobilization of domestic resources is one of the key factors in the economic development of a country.

Bank is resource for economic development that maintains economic confidence of various segments and expands credit to people. Bank means a financial establishment for the deposit, loans exchange or issue of money and for the transmission of funds. The bank draws surplus money from the public, who cannot use the money at the time and lends to those who give attention to use for productive purposes. Bank lends the loan to the customers; gain interest amount, the bank draw the money from institution or individual or people pay the interest amount by certain interest rate. Banking institutions collect scattered financial resources from the mass and invest them among those who are associated with the economic, commercial, and social activities of the country.

Bank assists both the flow of goods and services from the producers to the consumers and the financial activities of the government. Banking provides the country with a monetary system of making payment and is an important part of financial system, which makes loans to maintain and increase the level of consumption and production in the economy.

A new organized financial institution companies, commercial banks and other financial intermediaries play an important role for the development of a country. In the above context, fund mobilization is very important so I have chosen three banks i.e. NIBL, NABIL and Siddhartha Bank Limited.

## **1.2 Focus of the Study**

Bank is an institution, which helps in collection and mobilization of savings. The role of commercial banks in uplifting the economic growth of the country is very important. The uplifting of the development of a nation largely depends upon the development of its economic growth. The development of the economy is greatly influenced due to the financial management of the bank.

General fund mobilizing means to flow the cash in different sectors at profit motive. Investment in its broadest sense means the sacrifice of certain present value for (possibly uncertain) future value. In pure financial sense, the subsequent use of the term investment will be in the prevalent financial sense of the placing of money in the hands of other for their use, in return for a proper instrument entitling the holders to fixed income payment or the participation in expected profits. It can define the terms of investment at manufacturing and trading forms those long term expenditures that aim at increasing plant capacity of efficiency or at building up goodwill, there by producing an increased return over a period. Experts define the terms of investment from economic view point that investment as a productive process by means of which additional are made to capital equipment's. It is finding to clear the terms of investment at different points of view. But it needs to clear the terms of investment in financial point of view as related to this study.

This research focuses on the comparative study of fund mobilization of three commercial banks; NABIL Bank Ltd., Siddhartha Bank Ltd. and Nepal Investment Bank Ltd. These three banks are compared as per their fund mobilization procedure by taking 5 years data from the year 2009 to 2013.

### **1.3 Statement of the Problems**

After introducing the liberalization policy of the government, many banks and institutions are established rapidly. These days many commercial banks, developments bank and financial institutions are operating their work to assist in the process of economic development in the country. Due to the high competition between the financial institutions the collected huge amount from public is comparatively lower than fund mobilization and investment practice of collected funds. Therefore, it raised the problems of investment and proper mobilization of collected funds. Strong fund mobilization activities play a vital role in utilization of collected funds and overall development of the economy of the nation.

If the funds are wrongly invested without thinking any financial risk, business risk and other related facts, the bank cannot obtain profitable return as well as it should sometimes lose its principle. Fund mobilization policy may differ from one Commercial banks to another but there is no optimum utilization of shareholders fund to have greater return in any bank. Nepal Rastra Bank has also played significant role to make commercial bank mobilize their fund in good sector. For this purpose, NRB imposed many rules and regulation so that commercial bank can have sufficient liquidity and security. Though most of the joint-venture banks have been successful to earn profit from fund mobilization, none of them seem to be capable to invest their entire fund in more profitable sectors.

To meet the requirement of NRB, Commercial banks must have 6% deposits of total current account and fixed deposit account of local currency with NRB. They should have 3% minimum cash balance in their own vault of total currency of all types of accounts. Except this, they have fund from current, saving and fixed deposits

borrowing, from other banks, cash margin for different purpose, amount of bills payable and retained earning, reserves share capital and other liabilities.

Commercial banks are reported to be criticized by customer due to implementation of wrong investment policies. They are said to be investing less risky and highly liquid sector, they keep high liquid position and flow less funds in productive sectors, so these types of function prove less investment opportunity of the fund. Sometimes they seem to be ready to invest the idle fund even in those investment, which have lower risk and comparatively greater profit the another problem is diversification of investment. The bank cannot achieve profitable return from their resources as well as they sometimes may lose their principle resulting in decreasing of national economy.

Fund mobilization is the most important factor from the shareholder and banks management point of view. This study is a comparative study on fund mobilization of NIBL, NABIL and Siddhartha Bank Limited. The problems related to fund mobilization procedures of the commercial banks of Nepal have been presented briefly as under:

- a) Is there any stability in fund mobilization between NIBL, NABIL and Siddhartha Bank Ltd.?
- b) What is the relationship between deposit and total capital raised, deposit with total investment and loan and advances?
- c) Does the investment decision affect the total earning capacity of the bank?
- d) Are they maintaining sufficient liquidity position?
- e) Which banks have more effective investment policy among NIBL, NABIL and Siddhartha Bank Ltd.?

#### **1.4 Objectives of the Study**

For any kind of research work or study, first of all the objectives should be determined. It shows the way to achieve desired goals. Likewise, the main objectives of this research work is to examine, interpret and analysis the fund mobilization procedures adopted by three Commercial Banks; Nepal Investment Bank Ltd., Nabil

Bank Ltd. and Siddhartha Bank Ltd. This study is concerned with whether NIBL, NABIL and Siddhartha Bank are adopting efficient fund mobilizing policy or not. The main objectives related to this study are presented below:

- To study and evaluate the growth and risk ratio of loan and advances and total investment with respect to growth rate of total deposit and net profit of Banks.
- To make comparative evaluation on operating, financial and investment efficiency of three commercial banks.
- To examine the relationship between deposits and total investment, deposits and loan and advance and net profits of Banks.
- To recommend some measures for improvement of financial performance of Banks on the basis of study findings.

### **1.5 Significance of the Study**

Fund mobilization activities of commercial banks greatly affect the growth and earning of banks. Effective, stable, appropriate fund mobilizing policy may cause the earning of sufficient return to the banks. Most of the banks have been successful to earn profit from effective fund mobilization. Fund mobilizing policy may differ from one commercial bank to another but there is no optimum utilization of shareholders fund to have sufficient return in any bank.

Optimum utilization of fund makes better impact on the economy of the nation. Fund mobilization activities must consider customer, national and government as well as its shareholders interest. Significance of the fund mobilization can be written as the following manner:

- The depositor's general public can make decision to deposit their money in the bank after analyzing the fund mobilization of commercial banks.
- By the help of this study, general public can know the funds mobilizing activities of banks.
- It is also beneficial for the government while formulating policies and rules regarding commercial bank.

- From the study of fund mobilizing policy about bank, shareholders and companies would get information related to the fund mobilizing scheme of the bank and they may know how banks are mobilizing their fund and resources. And it is fruitful to make investment on shares of various commercial banks.
- The study of fund mobilizing policy would provide information to the management of the bank that would be helpful to take corrective action in the bank activities.
- Effective fund mobilization activities are the cause to increase earnings of the banks.
- This study will serve to be a guide to the management of banks, financial institutions, related parties, shareholders, general public (customer, depositors and creditors).

## **1.6 Limitation of the Study**

For the completion of the study, some facts are to be considered as limitation of this research work:

- This study is based on secondary data and accuracy depends upon the data collected and provided by the organization.
- The whole study is based on the data of 5 years period (i.e. from F.Y. 2009 to 2013).
- This study has been only of three commercial banks for sample, they are NIBL, NABIL and Siddhartha Bank Ltd.
- Non availability of the various references of sources acts as constraints for the study.
- Only the fund mobilization aspects are analyzed. Other performance of the organizations is fully neglected, while providing suggestions.

## **1.7 Organization of the Study**

The entire study carried out to different stages and procedures as it needed. The study organized in the following chapters in order to make the study easy to understand.

The **first chapter** is an introductory chapter which contains background of the study, introduction of commercial banks, focus of the study, statement of the problems, research methodology, and objectives of the study, limitation of the study and organization of the study.

The **second chapter** is concerned with review of literature. This contains conceptual framework, review of legislative provision, review of research paper and published and unpublished master's thesis of T.U.

The **third chapter** is the most important part of the study. It deals with the research methodology, which is applied to collect the data and analyze them in this study. It contains introduction, research design, sources of data, population and sample, financial analysis and statistical analysis.

The **fourth chapter** is analyzing chapter, which deals with presentation and analysis of relevant data through definite courses of research methodology with financial and statistical analysis related to investment and fund mobilization of NABIL, NIBL and Siddhartha Bank. Major findings of the study have been presented at the end of this chapter.

The **fifth chapter** is the last part of the study, which provides summary and conclusion, suggestions and recommendations for improving the future performance of the sample banks. Finally, an extensive, bibliography and appendices are also presented at the end of the thesis work

## CHAPTER-II

### REVIEW OF LITERATURE

#### 2.1 Conceptual Framework

##### 2.1.1 Meaning of Fund Mobilization

Fund mobilization means to flow the cash in different sectors at profit motive. Investment in its broadest sense means the sacrifice of certain present value for (Possibly uncertain) future value. In financial sense, the subsequent use of the term investment will be in the prevalent financial sense of the placing of money in the hands of other for their use, in return for a proper instrument entitling the holders to fixed income payment or the participation in expected profits. In terms of investment an define the terms of investment at manufacturing and trading forms those long term expenditures that aim at increasing plant capacity of efficiency or at building up goodwill, there by producing an increased return over a period. Experts define the terms of investment from economic view point that investment as a productive process by means of which additional are made to capital equipment's. It is finding to clear the terms of investment at different points of view.

While economics of scope of leading and mobilizing deposits in banking are justified the creating and found empirically, in microfinance the existence and magnitude of scope economies has not been investigated. We use a semi parametric smooth coefficient model to estimate these economics using a dataset put together from MFIs with 2700 annual observations from across the globe. This model affords the researcher sufficient flexibility in incorporating zero valued input price and out price and output into the cost function without resorting to ad hoc data replacement techniques.(*Vhattarai:2011:7*)

We estimated a generalized cost function capable of producing meaningful estimate of scope economies that seamlessly incorporates environmental variables and decompose overall scope economies into fixed and complementary cost components. These components of scope economies are important because they provide direct evidence as

to how MFIs could use alternative solutions to cut costs to produce both deposits and loan. (*Valentina Hartarsk ; Nov 2011:11*)

Fund mobilization means to convert (short term floating debt) into long term debt bearing fixed interest and represented by bond. (*Reverso; 2011*)

Fund mobilization is a reserve of money, set aside for a certain purpose, a supply or store of something, to furnish money to in the form of a fund and to place or store up in a fund. (*Reverso;2013*)

### **2.1.2 Areas of Sound Lending and Fund Mobilization Policy**

Income and profit of the financial institutions like commercial banks and financial institutions depend upon its lending procedure, lending policy and mobilizing collected fund through investing in different securities. The greater the credit created by the bank the higher will be the profitability. Some required features of sound lending policy and fund mobilization is explained as under:

#### **a) Safety and Security**

Financial institutions should inlets their deposit in profitable and secured sectors. They should not invest their fund in securities of those companies whose securities are too much depreciated and fluctuated because of risk of loss factors. They should accept those securities, which are marketable, durable, profitable and high market price as well as stable. In this case MAST should be applied for the investment.

Where,

M = Marketability

A = Ascertain ability

S = Stability

T = Transferability

## **b) Legality**

Each and every financial institution follow the rules and regulation of the company, government and various directions supplied by Nepal Rastra Bank, Ministry of Finance and on while issuing securities and mobilizing their fund. Illegal securities will bring out any problems to the investors. Lastly, the reputation and goodwill of the firm may be lost.

## **c) Liquidity**

Liquidity is the position of the firm to meet current or short-term obligations. General public or customers deposit their savings at the banks in different accounts having full confidence of repayment by the banks whenever they require. To show a good current position and maintain the confidence, every firm must keep proper cash balance with them while investing in different securities and granting loan for excess fund.

## **d) Profitability**

To maximize the return on investment and lending position, financial institutions must invest their collected fund in proper sectors. Finally they can maximize their volume of wealth. Their return depends upon the interest rate, volume of loan its time period and nature of investment on different securities and sectors.

## **e) Tangibility**

A commercial bank should prefer tangible security to an intangible one. Though it may be considered that tangible properly doesn't yield an income a part from intangible securities, which have lost their value due to price level inflation.

## **f) Purpose of loan**

Banks and other financial institutions must examine why loan is required to the customer. If customers do not use their borrowings, they can never repay and the financial institutions will have heavy bad debts. So, they should collect detailed information about the plan and scheme of the borrowing.

### **g) Diversification**

A firm can invest its deposit collection in various securities to minimize the risk. So, all the firms must diversify their fund or make portfolio investment. Diversification helps to earn a good return and minimize the risks and uncertainty. So, the firms are making portfolio investment with different securities of different companies.

### **2.1.3 Meaning of Some Important Terminologies**

The study in this section comprises of some important banking terminology for which efforts have been made to clarify the meaning, which are frequently used in this research work. Their brief summary is presented below:

#### **a) Loan and Advances**

Loan, advances and overdrafts have occupied a huge portion for the mobilization of funds of the commercial banks. Bank deposits can be crossed beyond a desired level but the level of loans and advances and overdrafts will never cross it. Commercial Banks and other financial institution may take more preferential collateral while granting loan and advances. Some portion of loan and advances and overdrafts includes that amount which is given to staffs of the banks as home loan, vehicle loan, personal loan and others.

#### **b) Investment on Government Securities, Shares and Debentures**

Commercial bank can earn some interest and dividend from the investment on government securities, shares and debentures. It is not the major portion of income but it is treated as a second source of banking business. A commercial bank may extent credit by purchasing government securities, bond and shares for several reasons. Some of them are given as:

- It may want to space it's maturing so that the inflow of cash coincides with expected withdrawals by depositors of 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 it 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 since depositors may demand funds 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.

### **c) Investment on other Company's Shares and Debentures**

Due to excess funds and least opportunity to invest these funds in much more profitable sector and to meet the requirement of NRB directives many commercial banks have to utilize their funds to purchase shares and debentures of many other financial and non-financial companies. These days most of the commercial banks have purchased regional development banks, NIDC and other development bank's shares.

### **d) Off- Balance Sheet Activities**

Off-balance sheet activities involve contracts for future purchase and sale of assets and all these activities are contingent obligations. These are not recognized as assets or liabilities on balance sheet. Some good example of these items are letter of credit(L/C), letter of guarantee, bills of collections etc. nowadays, such activities are stressfully highlighted by some economist and finance specialists to expand the modern transaction of a bank.

### **e) Other use of Fund**

A commercial bank must maintain the minimum bank balance with NRB i.e.6% for fixed deposits and 8% for each of current and saving deposit account in local currency. Likewise, 3% cash balance of local cash balance, in local currency, accounts must be maintained in the vault of the bank. Again a part of the fund should be used for bank balance in foreign bank and to purchase fixed assets like land, building, furniture, computers, stationery etc.

## **f) Deposits**

Deposit is the most important source of the liquidity for each and every commercial bank. For financial strength of banks, it is treated as a barometer. In the word of Eugene, “a bank’s deposits are the amount that it owes to its customers.” A deposit is the lifeblood of the commercial banks. Even though, they constitute the great bulk of bank liabilities, the success of a bank greatly depends upon the extent to which it may attract more and more deposits, for accounting and analyzing purpose, deposits are categorized in three headings. They are:

- Current Deposits
- Saving Deposits
- Fixed Deposits

### **2.1.4 Fund Mobilizing Procedure of Commercial Banks**

All the banks of entire world were applied their own fund mobilizing procedure. In practice, straightforward and effective fund mobilization procedure has adopted by the bank. Effective fund mobilization is the indicator of banks prosperity and its growth. Banks have some fund mobilizing procedure they are summarized below:

#### **2.1.4.1 Sources of Fund**

In the economic activities there are so many sources of fund. In these sources, issuing share and borrowing loan from different sector. The sources of funds can be categorized in two ways.

##### **A. Owned Funds/ Equity Capital of Bank**

Following are the sources of owned funds:

###### **a) Ordinary Share**

Ordinary sources are the bank’s strong and reliable sources of funds. Banks promoters issue ordinary shares to the public in fixed number. Banks collects the fund by selling fixed ordinary shares to the public by adopting fixed rules and regulation. These public make shareholders after purchasing the issued share.

### **b) Preference Share**

It is that kind of share which receive dividend and after liquidation money before ordinary share. But in Nepal, bank can not issue preference share. But some situation it can issue preference share by taking permission from Nepal Rastra Bank.

### **c) Bonus Share**

Company issue the extra share to the shareholder from the saving from profit and reserve fund by capitalizing these funds is known as bonus share. Bank issue shares to shareholders instead of banks amount. From this share, bank collects some share of funds.

### **d) Retained Earning**

Banks earns profit by investing the funds in different sector through the principle of profit earning. Banks invests its fund in productive or profitable industries and business. Bank earns some amount from these investments.

### **e) Reserve Fund**

Bank separates some share of capital in reserve funds in the time of banking activities. The reserve funds size based on banks earning and rules and regulation. Banks must separate some share of amount from profit in reserve fund. Banks have been earning by investing the reserve funds in liquid sector.

### **f) Undistributed Dividend**

Bank does not distribute all profit to the shareholders. Banks invest some amount from profit by not distributing to shareholders. By this, the invested profit makes sources of funds to the banks.

## **B. Borrowed Fund of Bank**

Bank collects the funds from another source except owned funds. Another source is borrowing from different sector. These types of funds collect borrow and debt capital. Following are the sources of the borrowed fund:

### **a) Selling of Debenture**

Debenture means a “Rinpatra” which is issued by company by keeping or not keeping assets securities for collection of funds. If bank need a fund, it can collect capital by issuing debenture. The money also collects bank capital, which is collected by issuing debenture.

### **b) Deposits**

The bank performs two-fold functions, i.e. the receipt of the deposits and granting the loans. The bank borrows money by accepting different types of deposits. The bank attracts the deposits from the public. The bank not only undertakes to take care of the deposits but also agrees to honors the demands of the depositor for withdraw of money from the deposits. Deposits accepted by the bank are of different types. They are:

#### **▪ Current Deposit**

It is also known as demand deposit. A customer can open a current account with a bank by making an initial of Rs. 100. Any amount may be deposited in this account. The bank makes a small charge on the customer having current deposit account.

#### **▪ Saving Deposit**

In this deposit, there are restriction on the maximum amount that can be deposited and also withdrawals from the account. The bank may not permit more than one or two withdrawals during a week.

#### **▪ Fixed Deposit**

A fixed deposit is one where a customer is required to keep a fixed amount with the bank for specific periods. He is not allowed to withdraw amount before expiry of

the period. The rate of interest is higher than on other deposit account during this period the bank is free to make use this money for granting loans and advances.

**c) Loan from the Central Bank**

NRB is the central bank of Nepal. All banks should operate their banking activities by maintaining the rules and regulations directed by the NRB. In the time of necessity, NRB provides the loans for the banks. The loan granted by the central bank is a bank capital.

**d) Loan from the Financial Institutions**

Financial institutions also provide loan for the banks. Bank can receive loans from financial institutions in the form of borrowing. The loan granted by the financial institutions is also a bank capital.

**e) Loan from Commercial Banks**

If banks need money, it receives money from other commercial bank also in the form of borrowing. Banks fulfill the need of cash by taking loan from other banks. It is also the types of bank capital. ([www.nrb.org.np](http://www.nrb.org.np))

**2.1.4.2 Mobilization of Funds**

Banks utilize its funds in suitable area and right sector. Banks can not achieve its goals until and unless it mobilizes its funds in right sectors and by performing different activities. Many kind of activities and other thing can origin for the purpose of receiving invest from the bank. But bank should separate the useful and profitable sector for mobilization its funds. Banker being only a financial intermediary, we will not be able to make any profit unless he has to pay interest on deposits, meet establishment expenses, meet liquidity of cash balance, and yet allow him some balance from out of which he can build reserve and pay dividend to the shareholder.

As commercial bank they are expected to make profit. If there is no profit, there will be adverse criticism against public sector banking, both in and outside the parliament when these banks are asked to open new branches in areas which do not allow profits

for years, or asked to grant loan to the priority sectors such as small industries and agriculture with a high incidence of bad debts, there is need for counter balancing profit from elsewhere. Therefore, these banks will have to show an ascending order of profits in order to ensure growth with stability. For this purpose the bank will have to allocate land able resources to different segments in such a manner these banks can ensure adequate profitability while at the same time responding to policies laid down in accordance with national objectives.

Therefore, banks should mobilize its funds in suitable and profitable banking activities and right sector. Generally bank has mobilized its funds in the following activities.

**a. Liquid Funds**

A bank has kept a volume of amount in liquid funds. The funds have so many responsibilities in banking activities liquid funds has covered following transactions.

- Cash in hand
- Balance with NRB
- Balance with domestic bank
- Call money

**b. Investment**

Bank invests its fund in different banking activities and different fields. Many types of fields are shown in market for investment. But banks invest its funds in profitable and safety activities. Bank invests its fund in the following titles:

- Share and debenture
- Government securities
- NRB bond

**c. Loan and Advances**

Banks mobilize its funds by providing different types of loan and advances to customers, by charging fixed interest. Different types of loan and advances are

- To government enterprises
- To provide enterprises

Bank manages the different types of loans i.e. providing loan, business loan, and traditional loan to priority area.

#### **d. Fixed Assets**

Land and buildings are essential for the establishment of bank. Bank's funds are used in buying of furniture, vehicle, computer, and other concerned instrument, which are related to banking activities. Bank cannot take direct gain from these assets, but bank should buy it. A bank has a need of fund to purchase fixed assets for the new branches of the bank.

#### **e. Administrative and Miscellaneous Expenses**

Bank should manage funds for administrative and other miscellaneous expenses.

The administrative expenses are:

- Salary of Employee
- Allowances
- Pension
- Advertisement
- Stationery
- Provident Fund
- Rent
- Income tax
- Donation
- Insurance
- Tour expenses
- Commission

The miscellaneous expenses are

- To distribute the dividend to shareholders
- To bear the loss on sale and purchase of banking assets
- Maintenance expenses
- To pay the interest on borrowed amount
- Reserve fund

In this way, bank mobilizes its fund by performing different activities to achieve its desired goals i.e. earning profit. Banks are able to earn sufficient profit by mobilizing its funds in proper way into the different profitable sector. It can utilize its collected fund as well as own funds in all banking activities by performing effective fund mobilization procedure.

## **2.2 Review of Related Studies**

### **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.

**Shrestha (2006)** 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:

- 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.
- The analysis of resources position of commercial banks should quit high percentage of deposit as cash reserve.
- 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.
- 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.
- In case of the analysis of the management achievement foreign banks have comparatively higher total management achievement index.

**Shrestha (2009)** 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 Commercial 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 (2012)** 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.

**Sharma (2012)** 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.

**Pradhan (2012)**, in his articles, *“Deposit mobilization, its problem and prospects”* He has presented the following problems in the context of Nepal:

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

**Hartarska (2013)** On his article "*Assistance for the mobilization on other financial resources*". To this end the bank encourages and cooperates with the borrowers is securing additional external financing from different sources. The principles forms of mobilization additional resources are:

- Expert Credit: At the request of borrowing institution, the bank furnishes advisory assistant and cooperates with them in arranging for credit for specialized countries to finance for which the bank has made loans.
- Parallel: Credit from other public financial institution, in which the bank coordinates its activities with national and international public financial institution with an interest in offering financing for project or programmed in the original developing member countries. To facilitate co financing for such project, the bank is prepared to perform studies and undertake missions in conjunction with other organization for project identification and evaluation and to enter into agreements with those organization to administer financing granted by the on their behalf

- Other Parallel Credits: In which at the request of borrowers, the bank cooperatives with them in obtaining parallel loans from banks or institutional investors of other countries.

### 2.2.2 Review of Theses

Before this study, various studies regarding the various aspects of commercial banks such as fund 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:

**Silwal (2008)** has conducted a study on “*Lending Policy of Commercial Banks in Nepal*” having following objectives:

- To analyze the role of commercial banks in its historical perspective
- To show the relationship between deposits and loan and advances
- To identify major weakness of lending policy of the commercial banks

The research was conducted mainly on the basis of secondary data. Findings of this research are summarized below:

- Effectiveness of lending policy is directly based upon a sound banking system. But due to geographical variation, transportation and other regional disparities, it is very difficult to expand branches in different rural areas. So, it can be said that commercial banks in Nepal are not playing an active role to utilize their sources collected from different sectors.
- By paying higher interest rate, the banks are increasing deposits, which in turn increase saving habits of the general people. Then the banks will be able to utilize these idle funds in productive channels. This type of business of commercial bank is really a necessary one in an agricultural country like Nepal, where public investment has limited capacity.

**Karm acharya (2009)** in his thesis paper “*A study on the Deposit Mobilization by the joint venture banks*” has mention following objectives:

- To analyzed the Bank’s utilization side as comparing to the collective resources.
- To show the relationship between short-term as well as long-term deposit and credit.
- To recommend some measures for improvement of financial performance of joint venture banks on the basis of study finds.

The bank has successfully maintained its liquid asset position but could not mobilize its resources efficiently. Findings of this research are summarized below:

- 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.

**Panta (2010)** in his thesis paper “*A Study of Commercial Bank Deposits and Utilizations*” has tried to examine the resources collection and utilization. The main objectives of his study are as follows:

- To analysis the commercial bank’s utilization resources due to lending for short term period and long term period.
- To show the deposit and utilization of commercial banks.
- To suggest for the improvement on the basis of overall findings of the study.

Major findings of this study are as follows:

- He has concluded that commercial banks have failed to utilize their resources due to lending for short term only. So that he has suggested that all commercial banks should give preference on long term lending sectors for

the better utilization of the deposits and improvement of their existing situation.

- He has tried to show the deposit position and utilization. He has not also explained the risk factors. His main focus is deposit collection, which can not show and analyze the financial position and proper investment policy.
- His study period is up to FY 2005/2010 which can not show deposit position and its utilization for succeeding years.

**Bohara (2011)** in his thesis paper "*A Comparative Study of the Financial Performance of Nabil Bank Ltd. and Standard Chartered Bank Ltd.*" has studied mainly financial performance of two joint venture banks. His main objective is to examine the comparative financial performance of NABIL and SCBNL in terms of their liquidity, activity and profitability. He has summarized and concluded that the increasing trend of SCBNL's earning per share, cash dividend per share, tax per share, net profit, total loans, total deposits and advances and market value per share in the last deposits, total loans and advances and market value per share in the last three years of the study period had shown improvement than that of NABIL.

- a. Statement Recommendation: He 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: He has suggested about liberal policy and coat management strategy.

**Shrestha (2011)** also has thesis " the main objectives of his study is to examine of the management of working capital position of bank of Kathmandu limited" All the year of study period, main objectives of his study are as follows:

- To analyzed working capital of BOKL on the study period.
- To analyze working capital depicts the liquidity of the BOKL.

- To examine the relationship between saving deposit to total deposit ratio and loan and advance to total ratio of BOKL.

The main findings of the study are as follows.

- He found the study period working capital BOKL is positive.
- The working capital depicts the liquidity of the organization. It means the working capital higher the liquidity of the firm and vice versa.
- The current ratio of the bank slightly fluctuating, the saving deposit to total deposits ratio of the bank has been gradually increasing at initial and decreasing at the end of the study period.
- The loan and advance to total ratio is of BOKL is in increasing trend.

**Chhetri (2012)** in his thesis, "*A Study on fund mobilization of standard chartered Bank, NIBL and Nepal SBI Bank ltd*" main objectives of his study are as follows

- To evaluate the growth ratio of loan and advance and Total investment with respective to the growth rate of total deposits and net profit of Standard Chartered Bank, Nepal Investment Bank Ltd.
- To evaluate liquidity, assets management efficiency and profitability portion in related to fund mobilization of three joint venture banks.
- To compare the relationship between deposits and total investment, deposit and loan also advance net profit of SCB, NABIL an SBI respectively.

The research was conducted mainly on the basis of secondary data. Finding of this research are summarized below.

- The result shows that the liquidity position of SBI is comparatively better than SCB and NABIL. Again SCB has the highest cash and bank balance to total deposit ratio and SBL has highest cash and bank balance to current ratio.
- From the analysis it helps to conclude that NABIL is comparatively successful to provide loan and advance of its collected deposits and to invest in the productive sectors

- From the finding it can be observed that the SBI is maintained the higher Growth ratio in total deposits.

**Dungana (2013)** in his thesis, "*Fund Mobilization and Investment Policy of Banks of Nabil Bank and Himalayan Bank Ltd.*" The main objectives of this study are as follows.

- To examine the mobilization of fund and investment made by HBL and NIBL selected for the study.
- To assess the liquidity, profitability, risk position in assets management of these commercial banks.
- To determine the relationship between the bank's total deposit and loans and advance, total deposit and total investment.

Major finding of this study are as follows:

- The study has found that total deposit and loan and advances and investment of selected bank will be in increasing trend if other things remain the same.
- Positive relationship between deposit and loan and advance, deposit and investment of selected bank.
- The trend analysis of loan and advance to total deposit ratio of sample bank show that is increasing trend.

**Dhungana (2013)**, has done his research work in the topic , "*A study on working capital management of selected joint venture banks in Nepal*" .The main objectives of his thesis are as follows:

- To analyzed working capital components of the sample banks.
- To examine the cash & bank, money at call or short notice and miscellaneous and government securities portion.
- To suggest for the improvement on the basis of overall findings of the study.

The main findings of the study are as follows:

- Working capital components of the sample banks are fluctuating all over the study period.

- Cash and bank balance, money at call or short notice and miscellaneous and government securities cover huge portion of more as secured income.
- It is found that SCBNL segregates its funds in working capital more efficiently.

### **2.3 Research Gap**

The review of above relevant literature has contributed to enhance the fundamental understanding and knowledge. This is required to make this study meaningful and purposeful. There are various researchers conduct in lending practice, credit policy, financial performance and credit management of various commercial banks. Some of the researchers have done the financial performance between two or three different commercial banks. In order to perform those analysis researchers have used various ratio analysis. The past researches is measuring financial performance of banks have been focused on the limited ratio, which are incapable of solving the problems. In this research various ratios are systematically analyzed and generalized. Past researchers are not properly analyzed about fund mobilization on the profitability. The ratios are not categorized according to nature. Here in this research all are categorized according to their area and nature.

In this research comparative study of fund mobilization NABIL bank, Siddhartha bank and Nepal Investment Bank is measured by various ratios, trend analysis and various statistical tools as well and financial tools are used for analyzing survey data. Since the researcher has used data only five fiscal year but all the data are current and factual. Clearly these are the issue in Nepalese commercial bank the previous scholar couldn't the present facts. This study tries to show fund mobilization by applying and analyzing various financial tools ratio analysis ( risk ratio growth ratio) , cash flow analysis and correlation analysis as well as different statistical tools like average mean, Standard deviation and Co- variance. Probably this will be the appropriate research in the area of financial performance of the bank and financial institution.

## **CHAPTER-III**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

Research methodology is a way to systematically solve the research problem. It refers to the various sequential steps that are to be adopted by a researcher during the course of studying the problem with certain objectives. This chapter refers to the overall research method from the theoretical aspects to the collection and analysis of data. This study covers quantitative methodology in a greater extent and also uses the descriptive part based on both technical aspects and logical aspect. This research tries to perform a well-designed quantities and qualitative research in a very clear and direct way using both financial and statistical tools.

#### **3.2 Research Design**

This study is analytical in nature. A true research design is basically concerned with various steps to collect the data for analysis and draw a relevant conclusion. The research design allows the researchers to take an appropriate measure and direction towards the predetermined goals and objectives.

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.

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 adapted to evaluate the fund mobilization of Commercial banks viz. NIBL, NABIL and Siddhartha bank in consideration not only to research about them but also to facilitate among them.

### **3.3 Sources of Data**

The study is mainly based on secondary data. The secondary sources of data collections are those that have been used from published on used by someone previously. The secondary sources of data are Balance Sheet, Profit & Loss account and literature publication of the concerned banks. The NEPSE report of the concerned bank has furnished some important data to this research work. Some supplementary data and information have been collected from the authoritative sources like Nepal Rastra Bank, Post Graduate Campus library, National Planning Commission, different journals, magazines and other published and unpublished reports documented by the authorities.

In order to fulfill the objectives of this research work, all the secondary data are compiled, processed and tabulated in time series. And to judge the reliability of data provided by the banks and other sources, they were compiled with the annual reports of auditors. Formal and informal talks to the concerned head of the department of the bank are also helpful to obtain the additional information of the related problem.

### **3.4 Nature of Data**

In case of primary data, some personal views and ideas of individual's respondent are collected. But in case of entire study secondary data used are basically of the following nature.

- Most of the data taken for the analysis is collected in the form of published by the concerned banks through their annual reports.
- Since all the banks which are taken into account for the study are listed in NEPSE, the figures are all most reliable and suitable too.

### **3.5 Population and Sample**

There are altogether 30 commercial banks functioning all over the country and most of their stocks are traded actively in the stock market. . In this study three Commercial banks are to be taken for research work. These banks are compared as per fund mobilizing activities. NIBL, NABIL and Siddhartha Bank are selected from population.

These three banks are compared as per fund mobilization procedure, that they are adopting to mobilize their collected funds as well as own funds.

### **3.6 Data Analysis Tools**

Analysis and presentation of the data is the core of each and every research work. This study requires some financial and statistical tools to accomplish the objective of the study. The financial and statistical tools are most reliable. In this study various financial, statistical and accounting tools have been used. These tools make the analysis more effective, convenience, reliable and authentic.

The various results obtained with the help of financial, accounting and statistical tools are tabulated under different headings. Then they are compared with each other to interpret the results. Two kinds of tools have been used to achieve the certain goals.

1. Financial Tools
2. Statistical Tools

#### **3.6.1. Financial Tools**

Financial tools basically help to identify the financial strengths and weaknesses of the firm by properly establishing relationships between the items of the balance sheet and the profit and loss account. Financial tools are categorized into two parts. They are

- I. Ratio Analysis
- II. Cash flow Analysis

#### **I. Ratio Analysis**

Ratio analysis is the powerful tool of financial analysis. A ratio is defined as the indicated quotient of two mathematical expressions the relationship between two or more things. In financial analysis, a ratio is used as a benchmark for evaluating the financial position and performance of a firm. The relationship between two accounting figure expressed mathematically, is known as a financial ratio or simply a ratio. An accounting figure conveys meaning when it is related to some relevant information.

A ratio is a mathematical relationship between two variables. It is significant for financial analysis. It also helps us to predict the future performance of a company based on study of ratios of earlier years.

Thus, ratio analysis is the part of whole process of analysis of financial statements of any business or industrial concerned especially to take output and credit decision. Ratio indicates a quantitative relationship, which can be, in turn, used to make a qualitative judgment. Even though there are various types of ratios to analyze and interpret the financial statement, only six types of ratios have been taken in this study, which are related to fund mobilization of the banks. They are presented below:

#### **A. Liquidity Ratios**

- i) Cash and bank balance to total deposit ratio
- ii) Cash and bank balance total assets ratio

#### **B. Assets Management Ratios**

- i) Loan and advances to total deposit ratio
- ii) Total investment to total deposit ratio
- iii) Loan and advances total working fund ratio

#### **C. Profitability Ratios**

- i) Return on loan and advances ratio
- ii) Return on total working fund ratio
- iii) Total interest earned to total working fund ratio

#### **D. Risk Ratios**

- i) Liquidity risk ratio
- ii) Credit risk ratio

#### **E. Growth Ratios**

- i) Growth ratio of total deposits
- ii) Growth ratio of total investment
- iii) Growth ratio of loan and advances

iv) Growth ratio of net profit

## **A. Liquidity Ratios**

Liquidity ratios are applied to measure the ability of the firms to meet short term obligations. It measures the speed of firms to convert the firms asset into cash to meet deposit withdraws and other current obligations. This is quick measure of the liquidity and financial strength of the firm.

Liquidity ratios examine the adequacy of funds, the solvency of the firms ability to pay its obligation when due. Various types of liquidity ratios are applied in these studies, which are explained below:

### **i) Cash and Bank Balance to Total Deposit**

Cash and bank balance are the most liquid current assets of a firm, cash and bank balance to total deposit ratio measures the percentage of most liquid assets to pay depositors immediately. This ratio is computed dividing the amount of cash and bank balance by the total deposits. It can be presented as,

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

Where, cash and bank balance includes cash on hand, foreign cash on hand, cheques and other cash items, balance held abroad. Total deposits consist of deposits on current account, saving account, fixed account, money at call and short notice and other deposits.

### **ii) Cash and Bank Balance to total Assets Ratio**

This ratio measures the percentage of liquid assets i.e. cash and bank balance among the current assets of a firm. Higher ratio shows the higher capacity of firms to meet the cash demand. This ratio is calculated dividing cash and bank balance by total current assets and can be calculated as,

$$\text{Cash and Bank Balance}$$

$$\text{Cash and Bank Balance to total Assets Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Total Assets}}$$

Hence, cash and bank balance includes cash in hand, foreign cash and foreign banks.

### iii) Total Investment to Current Assets Ratio

This ratio is used to find the percentage of current assets invested in profitable sectors.

It can be mentioned as:

$$\text{Total Investment to Current Assets} = \frac{\text{Total Investment}}{\text{Current Assets}}$$

## B. Assets Management Ratios (Activity Ratio)

The asset management ratios, measures how effectively the firm is managing its assets. These ratios are designed to answer this question: does the total amount of each type of asset as reported on the balance sheet seem reasonable or not. If a firm has excessive investments in assets then its capital costs will be unduly high and its stock price will suffer.

In this study this ratio is used to indicate how efficiently the selected banks have arranged and invested their limited resources. The following financial ratios related to fund mobilization are calculated under asset management ratio and interpretation is made by these calculations.

### i) Loan and Advances to Total Deposit Ratio

This ratio is calculated to find out how successfully the selected banks are utilizing their total collections or deposits on loan and advances for the purpose of earning profit. Greater ratio shows the better utilization of total deposits. This ratio can be obtained dividing loan and advances by total deposits, which can be shown as,

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

### **ii) Total Investment to Total Deposit Ratio**

Investment is one of the major sources of earning of profit. This ratio indicates how properly firm's deposits have been invested on government securities and shares and debentures of other companies. This ratio is computed by using following formula:

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

Where, total investment includes investment on government securities, investment on debentures and bonds, share in subsidiary companies, shares in other companies and other investments.

### **iii) Loan and Advances to Total Working Fund Ratio**

The main element of total working fund is loan and advances. This ratio indicates the ability of selected banks in terms of earning high profit from loan and advances. Loan and advances to working fund ratio can be obtained dividing loan and advances amount by total working fund. That is formulized as,

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

Where, total working fund includes total amount of assets given in balance sheet which refers to current assets, net fixed assets, total loans for development banks and other sundry assets except off balance sheet items i.e. letter of credit, letter of guarantee etc.

## **C. Profitability Ratios**

Profit is only appeared when there is positive difference between total revenues and total cost over a certain period of time. Profitability ratios show the combined effects of liquidity, assets management, and debt on operating results. Profitability ratios are very helpful to measure the overall efficiency of operations of a firm. It is a true indication of the financial performance of each and every business organization. Here

profitability ratios are calculated and evaluated in terms of the relationship between net profit and assets. Profitability of the firms can be presented through the following different ways:

**i) Return on Loan and Advances Ratio**

Return on loan and advances ratio shows how efficiently the banks have utilized their resources to earn good return from provided loan and advances. This ratio is computed dividing net profit (loss) by the total amount of loan and advances and can be mentioned as,

$$\text{Return on Loan and Advances Ratio} = \frac{\text{Net Profit (Loss)}}{\text{Loan and Advances}}$$

**ii) Return on Total Working Fund Ratio**

Return on total working fund ratio measures the profit earning capacity of the banks by utilizing available resources i.e. total assets. If the bank's well managed and efficiently utilized its working fund, it will get higher return. Maximizing taxes, this in the legal options available will also improve the return. It is computed as:

$$\text{Return on Total Working Fund Ratio} = \frac{\text{Net Profit}}{\text{Total Working Fund}}$$

**iii) Total Interest Earned to Total Working Fund Ratio**

This ratio reflects the extent to which the banks are successful in mobilizing these total assets to acquire income as interest. This ratio actually reveals the earning capacity of commercial banks by mobilizing its working fund. Higher the ratio higher will be the income as interest.

We have,

$$\text{Total Interest Earned to TWF Ratio} = \frac{\text{Total Interest Earned}}{\text{Total Working Fund}}$$

### **iii) Total Interest paid to Total Working Fund Ratio**

This ratio measures the percentage of total interest expenses against total working fund. A high ratio indicates higher interest expenses on total working fund and vice-versa. This ratio is calculated as:

$$\text{Total Interest paid to Total Working fund Ratio} = \frac{\text{Total Interest paid}}{\text{Total Working fund}}$$

## **D. Risk Ratios**

Generally, risk means uncertainty which lies in the business transaction of investment management. When a firm wants to bear risk and uncertainty, profitability and effectiveness of the firm is increased. This ratio checks the degree of risk involved in the various financial operations. For this study, following risk ratios are used to analyze and interprets the financial data and investment policy.

### **i) Liquidity Risk Ratio**

The liquidity risk of the bank defines its liquidity need for deposit. The cash and bank balance are the most liquid assets and they are considered as banks liquidity sources and deposit, as the liquidity needs. The ratio of cash and bank balance to total deposit is an indicator of bank's liquidity of need.

This ratio is low if funds are kept idle as cash and bank balance but this reduces profitability. When the bank makes loan, its profitability increases and also the risk. Thus, higher liquidity ratio indicates less profitable return and vice-versa. This ratio is calculated by dividing cash and bank balance to total deposit.

$$\text{Liquidity Risk Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Total Deposit}}$$

### **ii) Credit Risk Ratio**

Bank utilizes its collected funds in providing credit to different sectors. There is risk of default or non-repayment of loan. While making investment, bank examines the credit risk involved in the project. Generally credit risk ratio shows the proportion of

non performing assets in the total investment plus loan and advances of a bank. It is computed as:

$$\text{Credit Risk Ratio} = \frac{\text{Total Investment} + \text{Total Loan and Advances}}{\text{Total Assets}}$$

## **E. Growth Ratios**

The growth ratios represent how well the commercial banks are maintaining their economic and financial position. The higher ratios represent the better performance of the selected firms to calculate, check and analyze the expansion and growths of the selected banks the following growth ratios are calculated. Growth ratios are directly related to the fund mobilization and investment of those firms.

- i) Growth ratio of total deposits
- ii) Growth ratio of total investment
- iii) Growth ratio of loan and advances
- iv) Growth ratio of net profit

### **3.6.2 Statistical Tools**

In this study, some important statistical tools have been used to present and analyze the data for achieving the objectives. Such as coefficient of correlation between different variables, trend analysis of important variables as well as hypothesis test (t-statistic) has been used, which are presented below:

- i) Karl Pearson's of Coefficient of Correlation Analysis
- ii) Coefficient of Variation (C.V)
- iii) Standard Deviation (S.D)
- iv) Probable Error (P.E)
- v) Testing of Hypothesis(T-test)

#### **i) Karl Pearson's Coefficient of Correlation Analysis**

This statistical tool has been used to analyze, identify and interpret the relationship between two or more variables. It interprets whether two or more variables are correlated positively or negatively. Statistical tool analyses the relationship between

those variables and helps the selected banks to make appropriate investment policy regarding to profit maximization and deposit collection; fund mobilization through providing loan and advances.

For the purpose of decision-making, interpretation is based on following term:

- When  $r = 1$ , there is perfect positive correlation.
- When  $r = -1$ , there is perfect negative correlation.
- When  $r = 0$ , there is no correlation.
- When 'r' lies between 0.7 to 0.999 (-0.7 to 0.999), there is a high degree of positive (or negative) correlation.
- When 'r' lies between 0.5 to 0.699, there is moderate degree of correlation.
- When 'r' is less than 0.5, there is low degree of correlation.

Karl Pearson's correlation coefficient has been used to find out the relationship between the following variables:

#### **a) Coefficient of correlation between Deposit and Loan and Advances**

Correlation coefficient between deposits and loan and advances measures the degree of relationship between two variables i.e. X and Y. In this analysis, deposit is independent variables (X) and loan and advances is dependent variables (Y). The main purpose of calculating correlation coefficient is to justify whether the deposits are significantly used in proper way or not and whether there is any relationship between these two variables.

#### **b) Coefficient of Correlation between Deposit and Total investment**

Correlation coefficient between deposit and investment is to measure the degree of relationship between deposit and total investment. In this analysis, deposit is independent variables (X) and total investment is dependent variables (Y).

Karl Pearson's Correlation coefficient(r) can be obtained as:

$$\text{Correlation Coefficient} = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}}$$

Where,

$\sum x$  = sum of observations in series x

$\sum y$  = sum of observations in series y

$\sum x^2$  = sum of squared observations in series x

$\sum y^2$  = sum of squared observations in series y

$\sum xy$  = sum of the product of observations in series x and y

### ii) Coefficient of Variation (C.V)

The coefficient of variation is the most commonly used measure of relative variation. It is used in such problems where the researcher wants to compare the variability of more than two years. Greater the C.V, the variable or conversely less consistent, less uniform, more consistent, more uniform, more stable and homogeneous.

$$\text{C.V} = \frac{\text{Standard deviation } (\sigma)}{\text{Expected Return } (\bar{X})} \times 100$$

### iii) Standard Deviation (S.D)

The standard deviation is an important and widely used measure of dispersion. The measurement of the scatter-ness of the mass of figure in a series about an average is known as dispersion. The greater the amount of dispersion, greater the standard deviation. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of a series; a large standard deviation means just the opposite it is denoted by the letter  $\sigma$ .

$$\text{S.D } (\sigma) = \sqrt{\frac{1}{N} \sum (X - \bar{X})^2}$$

Where,

N = Number of observations

X = Expected return of the historical data

#### iv) Probable Error (P.E)

Probable error is measured for testing the reliability of an observed value of correlation coefficient. It is computed to find the extent to which it is dependable. If correlation coefficient is greater than 6 times P.E the observed value of r is said to be significant, otherwise nothing can be concluded with certainty. But if the calculated (r) is less than the P.E correlation is not at all significant. It is calculated by using following formula:

$$P.E = 0.6745 \times \frac{1-r^2}{\sqrt{n}}$$

Where,

P.E. (r) = Probable error of correlation coefficient

r = Correlation coefficient

n = Number of observations

#### vi) Test of Hypothesis (T-test)

If we draw a large number of small samples i.e. ( $n < 30$ ) and compute the mean for each sample and then plot the frequency distribution of these means, the resulting sampling distribution would be t-test. On this study sample are taken only for five years.

#### Assumptions:

- a) The present population from which the sample is drawn is normal or approximately normal.
- b) The given sample is drawn by random sampling method.
- c) The population standard deviation ( $\sigma$ ) is not known.

Under this analysis the effort has been made to test the significance level regarding the parameter of the population on the basis of sample drawn from the population. The following steps have been followed for the test of hypothesis:

- a) Formulating hypothesis
  - i) Null Hypothesis ( $H_0$ )
  - ii) Alternative Hypothesis ( $H_1$ )

- b) Computing the t- statistic
- c) Fixing the significance level
- d) Finding critical region
- e) Deciding two-tailed or one-tailed test
- f) Decision making

In the following lines, some of main hypothesis tests are calculated and decision is made according to findings.

**Null Hypothesis ( $H_0$ ):**  $\mu_1 = \mu_2 = \mu_3$  i.e., there is no significant difference between mean ratios of loan and advances to total deposit of NIBL, NABIL and Siddhartha Bank.

**Alternative Hypothesis ( $H_1$ ):**  $\mu_1 \neq \mu_2 \neq \mu_3$  i.e., there is significant difference between mean ratios of loans and advances to total deposits of NIBL, NABIL and Siddhartha Bank.

## **CHAPTER-IV**

### **PRESENTATION AND ANALYSIS OF DATA**

This is an analytical chapter, where an attempt has been made to analyze and evaluate major financial items, which have an impact on investment management and fund mobilization of NIBL, NABIL and Siddhartha Bank. A number of financial ratios -- crucial in evaluating the funds mobilization system of commercial banks -- have been calculated and analyzed in this chapter.

#### **4.1 Ratio Analysis**

Ratio analysis is the powerful tool of financial analysis. A ratio is defined as the indicated quotient of two mathematical expressions the relationship between two or more things. In financial analysis, a ratio is used as a benchmark for evaluating the financial position and performance of a firm. The relationship between two accounting figure expressed mathematically, is known as a financial ratio or simply a ratio. An accounting figure conveys meaning when it is related to some relevant information. They are presented below:

##### **4.1.1 Liquidity Ratios**

Liquidity ratios are applied to measure the ability of the firms to meet short term obligations. It measures the speed of firms to convert the firms asset into cash to meet deposit withdraws and other current obligations. This is quick measure of the liquidity and financial strength of the firm. Various types of liquidity ratios are applied in these studies, which are explained below:

###### **4.1.1.1 Cash and Bank Balance to Total Deposit**

Cash and bank balance to total deposit ratio is computed by using following formula:

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

**Table - 1**  
**Cash and Bank Balance to Total Deposit Ratios**

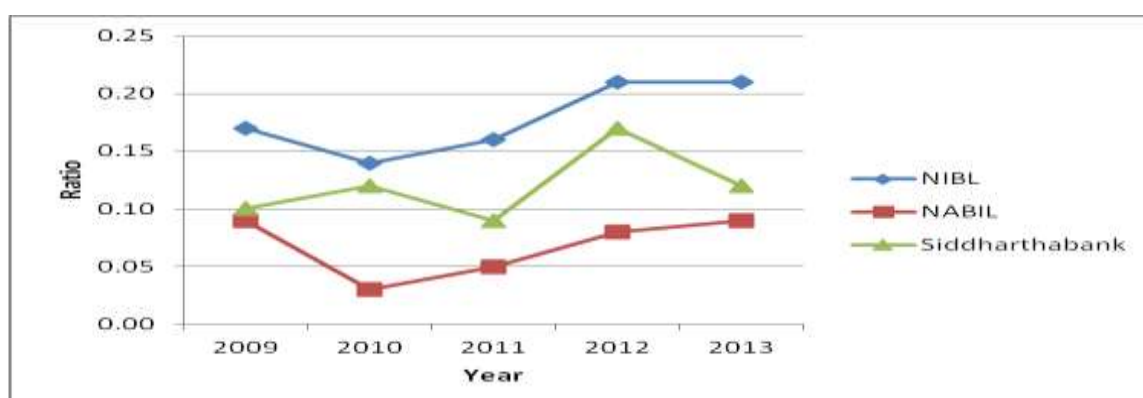
Year	Ratio		
	NIBL	NABIL	Siddhartha Bank
2009	0.17	0.09	0.10
2010	0.14	0.03	0.12
2011	0.16	0.05	0.09
2012	0.21	0.08	0.17
2013	0.21	0.09	0.12
<b>Mean (%)</b>	<b>17.80</b>	<b>6.80</b>	<b>12.00</b>
<b>S.D.</b>	<b>3.11</b>	<b>2.68</b>	<b>3.08</b>
<b>C.V.</b>	<b>17.47</b>	<b>39.41</b>	<b>25.66</b>

Source: Appendix-1

From the above comparative table, cash and bank balance to total deposit ratio of the three banks followed a fluctuated trend. NIBL has maintained the highest ratio i.e. 0.21 or 21% of cash and bank balance to total deposit than other two banks during the study period.

The average ratio of NIBL is higher than NABIL and Siddhartha Bank Limited. The variability of the ratio is lower in NABIL. It states that NABIL is more consistent among three banks. Similarly, the variability of the ratio is higher in NIBL among three banks.

**Figure – 4.1**  
**Ratio of Cash and Bank Balance to Total Deposit**



In the above figure no. 4.1 shows the trend of cash and Bank Balance to Total Deposit Ratios of five year's period of three different banks. NIBL and NABIL are firstly decreasing trend in year 2009 to 2010 but then after increasing trend up to year 2013 but Siddhartha Bank trend shows fluctuated that means year 2009 to 2010 increasing then after decrease and then after increasing trend year 2012 but decrease in year 2013 i.e. 0.12. Here Cash and Bank Balance to Total Deposit Ratio is highest show in year 2013 of NIBL and lowest in year 2010 of NABIL i.e. 0.03.

#### 4.1.1.2 Cash and Bank Balance to Total Assets

This ratio is calculated dividing cash and bank balance by total assets and can be calculated as,

$$\text{Cash and Bank Balance to Total Assets Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Total Assets}}$$

**Table - 2**  
**Cash and Bank Balance to Total Assets Ratio**

Year	Ratio		
	NIBL	NABIL	Siddhartha Bank
2009	0.15	0.08	0.09
2010	0.12	0.03	0.11
2011	0.14	0.04	0.08
2012	0.18	0.07	0.15
2013	0.18	0.08	0.10
<b>Mean (%)</b>	<b>15.40</b>	<b>6.00</b>	<b>10.60</b>
<b>S.D.</b>	<b>2.61</b>	<b>2.35</b>	<b>2.70</b>
<b>C.V.</b>	<b>16.95</b>	<b>39.16</b>	<b>25.47</b>

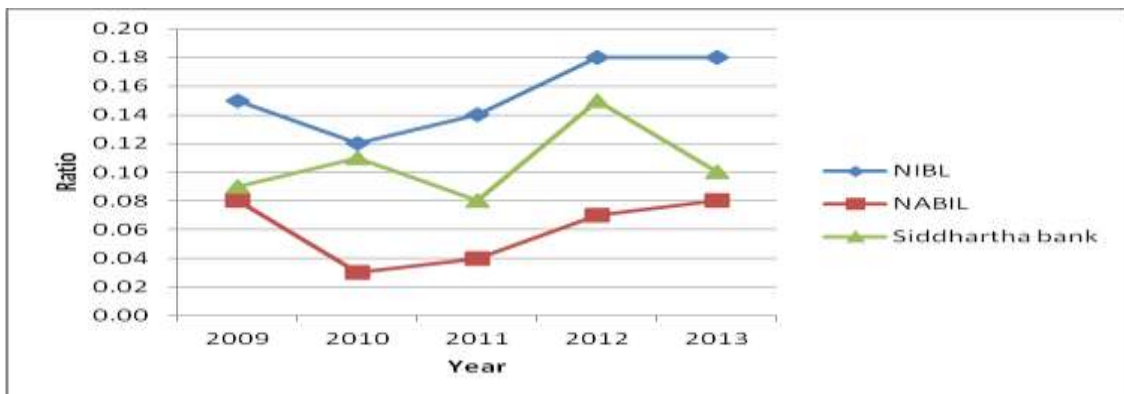
Source: Appendix- I

From the above comparative table, it reveals that cash and bank balance to assets ratios of NIBL has less fluctuating trend. The highest ratio of NIBL is 0.18 or 18% in the two year 2012 and 2013 and lowest ratio is 0.12 or 12% in the year 2010. NABIL has highest ratio of 0.08 or 8% and lowest ratio of 0.03 or 3%. In the same way Siddhartha Bank has highest ratio of 0.15 or 15% and lowest ratio of 0.08 or 8%.

Among three banks, NIBL has maintained the highest ratio than other banks i.e. 0.18 or 18%.

Similarly, C.V. of NIBL is less than that of two banks i.e. 16.95%. It indicates that ratio of NIBL is more stable than that of NABIL and Siddhartha Bank Limited.

**Figure – 4.2**  
**Ratio of Cash and Bank to Total Assets**



Similarly, It referring to the above graph cash and bank balance to total assets ratio line is showing five fiscal year's trend of different three banks which fluctuating in go-down. In the year 2012 and 2013 shows highest ratio of NIBL i.e. 18. Similarly in the year 2010 shows lowest point of trend of NABIL i.e. 0.03. But Siddhartha Bank's trend lies moderate between NIBL and NABIL.

#### **4.1.2 Assets Management Ratios**

The following financial ratios related to fund mobilization are calculated under asset management ratio and interpretation is made by these calculations:

##### **4.1.2.1 Total Investment to Current Assets**

This ratio is used to find the percentage of current assets invested on government securities, treasury bills and development bonds. It can be mentioned as:

$$\text{Total Investment to Current Assets Ratio} = \frac{\text{Total Investment}}{\text{Current Assets}}$$

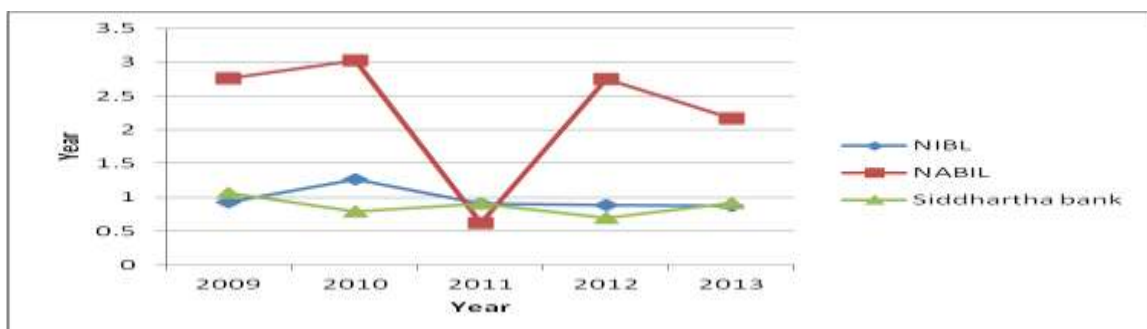
**Table - 3**  
**Total Investment to Current Assets Ratios**

Year	Ratio		
	NIBL	NABIL	Siddhartha Bank
2009	0.93	2.76	1.07
2010	1.27	3.03	0.79
2011	0.91	0.62	0.91
2012	0.89	2.75	0.69
2013	0.87	2.17	0.92
<b>Mean</b>	<b>0.89</b>	<b>2.28</b>	<b>0.88</b>
<b>S.D.</b>	<b>0.17</b>	<b>0.97</b>	<b>0.14</b>
<b>C.V.</b>	<b>0.19</b>	<b>0.43</b>	<b>0.16</b>

Source: Appendix -I

The mean ratio of NABIL is the highest i.e.2.75 than that of NIBL and Siddhartha Bank Limited. Coefficient of variation of Siddhartha Bank is 0.16. It seems that Siddhartha Bank is more consistent to make investment in government securities than NIBL and NABIL. This ratio of total investment to current assets can be clearly showed in graph as following ways.

**Figure – 4.3**  
**Ratio of Total Investment to Current Assets**



The figure no. 4.3 shows the trend of different five years of different three bank's total investment to current assets ratios. Here also shows the three banks trend fluctuation. Year 2010 shows highest ratio of NABIL is 2.76 and lowest also same bank in year 2011 i.e. ratio is 0.62. NIBL trend shows its ratio first increases 2009 to 2010

thenafter decreasing trend each year and riched to year 2013 is 0.87 and Siddhartha Bank's ratio is 0.92 in the year 2013.

#### 4.1.2.2 Loan and Advances to Total Deposit

This ratio can be obtained by dividing loan and advances to total deposit, which can be shown as,

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

**Table - 4**  
**Comparative Loan and Advances to Total Deposit Ratios**

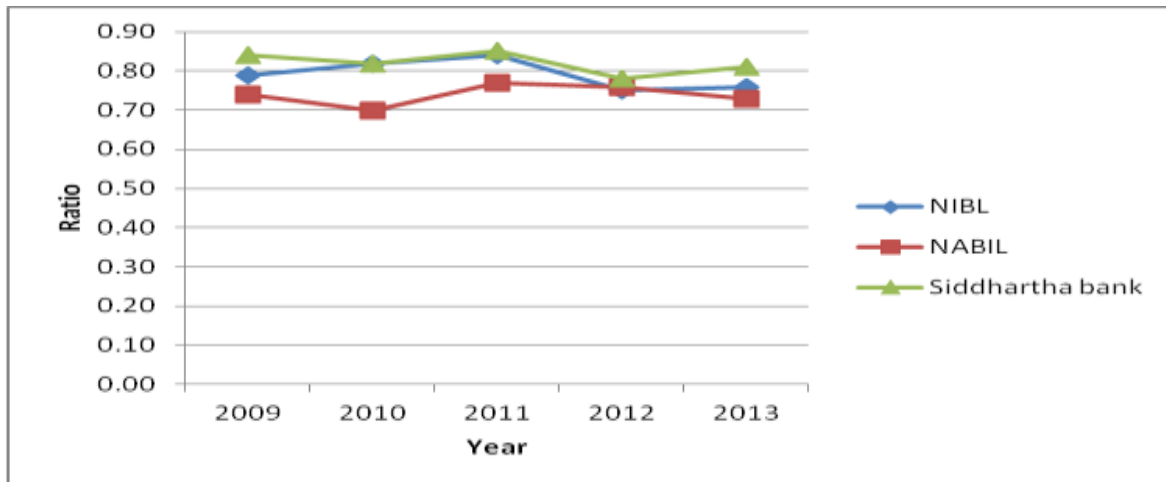
Year	Ratio		
	NIBL	NABIL	Siddhartha Bank
2009	0.79	0.74	0.84
2010	0.82	0.70	0.82
2011	0.84	0.77	0.85
2012	0.75	0.76	0.78
2013	0.76	0.73	0.81
<b>Mean</b>	<b>0.79</b>	<b>0.74</b>	<b>0.82</b>
<b>S.D.</b>	<b>0.04</b>	<b>0.03</b>	<b>0.03</b>
<b>C.V.</b>	<b>0.05</b>	<b>0.04</b>	<b>0.04</b>

Source: Appendix -I

The above comparative table shows that these three banks have mobilized their collected deposits in fluctuating trend as loan and advances during the study period. The highest ratio of loan and advances to total deposit of NIBL, NABIL and Siddhartha Bank are 0.84, 0.77 and 0.85 respectively.

NABIL has mobilized 0.74 of its collected deposit in loan and advances which is less than that of NIBL and Siddhartha Bank in average. Coefficient of variation of NABIL and Siddhartha Bank are same i.e. 0.04, which shows that NABIL and Siddhartha Bank both are more stable than NIBL in mobilizing collected deposit. Prior to this it is effective ratios shown on graph as figure 4.4.

**Figure – 4.4**  
**Ratios of Loan and Advances to Total Deposit**



In figure no. 4.4 shows the ratios of loan and advance to total deposit of year 2009 to year 2013 of NIBL, NABIL and Siddhartha Bank. The trend line shows fluctuating of three banks. The highest ratio is 0.85 in the year 2011 of Siddhartha Bank and the lowest ratio is 0.70 in the year 2010 of NABIL.

#### 4.1.2.3 Total Investment to Total Deposit

This ratio is computed by using following formula:

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

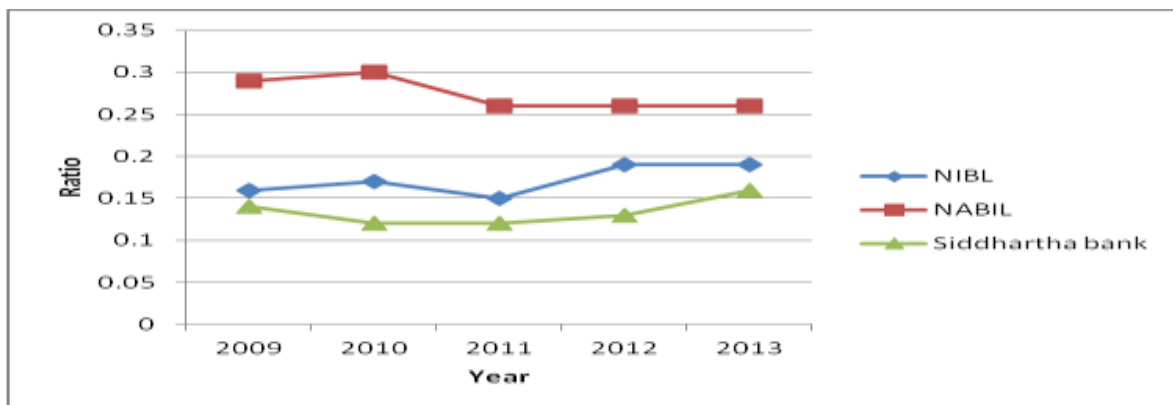
**Table - 5**  
**Comparative Total Investment to Total Deposit Ratios**

Year	Ratio		
	NIBL	NABIL	Siddhartha bank
2009	0.16	0.29	0.14
2010	0.17	0.30	0.12
2011	0.15	0.26	0.12
2012	0.19	0.26	0.13
2013	0.19	0.26	0.16
<b>Mean (%)</b>	<b>17.20</b>	<b>27.4</b>	<b>13.40</b>
<b>S.D.</b>	<b>1.79</b>	<b>1.95</b>	<b>1.67</b>
<b>C.V.</b>	<b>10.41</b>	<b>4.12</b>	<b>12.46</b>

Source: Appendix – I

From the above comparative table, it can be concluded that the NABIL bank has the highest ratios during the study period i.e.0.30 in year 2010. In average also it has invested more amount of its total deposit in comparison than NIBL and Siddhartha Bank i.e. 27.40%. The coefficient of variation of NABIL is 4.12%. It indicates that NABIL is more consistent to make investment of total deposits than NIBL and Siddhartha Bank Limited.

**Figure – 4.5**  
**Ratios of Total Investment to Total Deposit**



In the figure no. 4.5, it referring NIBL, NABIL and Siddhartha Bank’s total investment to total deposit ratio of each fiscal year. The trend shows the highest ratio is 0.30 in the year 0.30 of NABIL and lowest ratio is 0.12 of Siddhartha Bank. That’s way the three banks trend line are showing up and down on overall study.

#### **4.1.2.4 Loan and Advances to Total Working Fund**

Loan and advances to working fund ratio can be obtained dividing loan and advances amount by total working fund. That is formulized as,

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

**Table - 6**

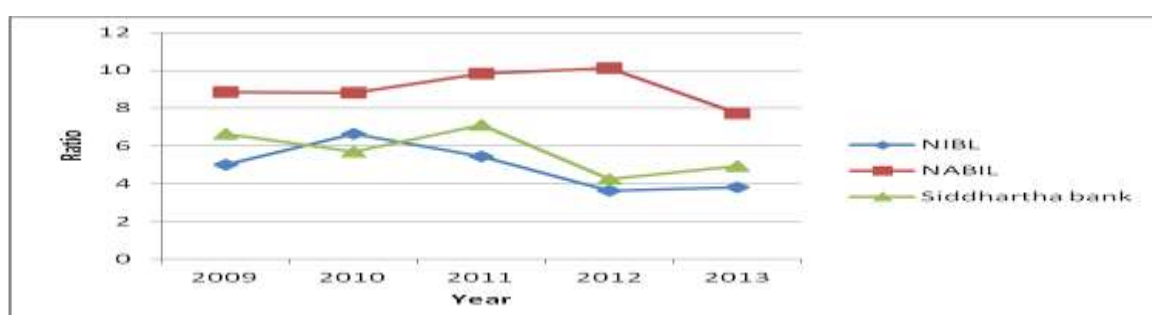
**Comparative Loan and Advances to Total Working Fund Ratios**

Year	Ratio		
	NIBL	NABIL	Siddhartha Bank
2009	5.01	8.83	6.64
2010	6.63	8.82	5.67
2011	5.45	9.84	7.11
2012	3.62	10.12	4.22
2013	3.79	7.71	4.93
<b>Mean</b>	<b>4.90</b>	<b>9.06</b>	<b>5.71</b>
<b>S.D.</b>	<b>1.24</b>	<b>0.96</b>	<b>1.19</b>
<b>C.V.</b>	<b>0.25</b>	<b>0.11</b>	<b>0.21</b>

Source: Appendix – I

Above table describes the loan and advances to total working fund ratio of NIBL, NABIL and Siddhartha Bank in fluctuating trend. During the study period NIBL, NABIL and Siddhartha Bank have highest ratio of 6.63, 10.12 and 7.11 in year 2010, 2012 and 2011 respectively. On average, NABIL maintains highest ratio of 9.06 than NIBL and Siddhartha Bank of 4.90 and 5.71 respectively. Also the coefficient of variation of NABIL is more consistent than NIBL and Siddhartha Bank because it has the ratio of lowest variation i.e.0.11.

**Figure – 4.6**  
**Ratios of Loan and Advances to Total Working Fund**



Above the figure no. 4.6 describes the loan and advances to total working fund ratio of NIBL, NABIL and Siddhartha Bank in fluctuating trend in the during year 2009 to 2009. The highest point shows the in the year 2012's ratio of NABIL and lowest in the year 2012's ratio of NIBL. So it shows overall in highest trend line is NABIL other NIBL and Siddhartha Bank.

### 4.1.3 Profitability Ratios

Here profitability ratios are calculated and evaluated in terms of the relationship between net profit and assets. Profitability of the firms can be presented through the following different ways:

#### 4.1.3.1 Return on Loan and Advances

This ratio is computed dividing net profit (loss) by the total amount of loan and advances and can be mentioned as,

$$\text{Return on Loan and Advances Ratio} = \frac{\text{Net Profit (Loss)}}{\text{Loan and Advances}}$$

**Table - 7**  
**Comparative Return on Loan and Advances Ratios**

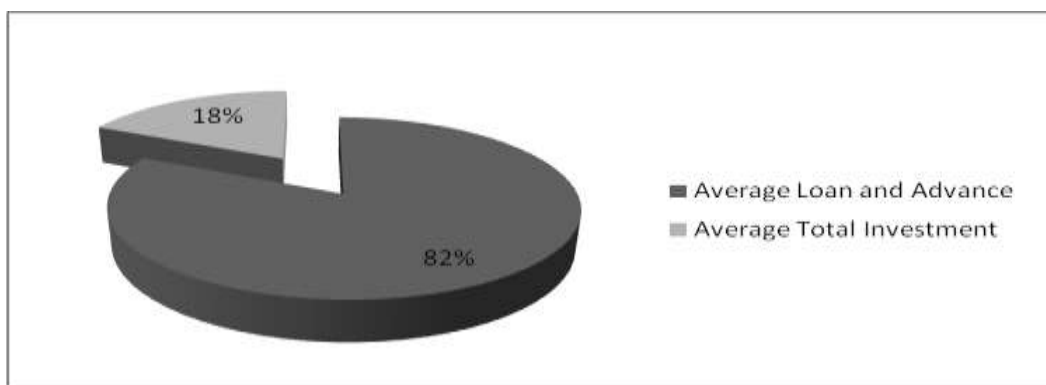
Year	Ratio		
	NIBL	NABIL	Siddhartha Bank
2009	0.02	0.04	0.02
2010	0.03	0.04	0.01
2011	0.03	0.04	0.02
2012	0.02	0.04	0.02
2013	0.04	0.05	0.02
<b>Mean (%)</b>	<b>2.80</b>	<b>4.20</b>	<b>1.80</b>
<b>S.D.</b>	<b>0.48</b>	<b>0.45</b>	<b>0.45</b>
<b>C.V.</b>	<b>17.14</b>	<b>10.71</b>	<b>25.00</b>

Source: Appendix-I

In the above analysis the return on loan and advances of NIBL have the ratio of fluctuating trend but other two banks NABIL and Siddhartha Bank are not more fluctuated. During the study period NIBL has the highest ratio of 0.04 or 4% in year 2013 than that of NABIL and Siddhartha Bank i.e. 0.05 and 0.02 respectively. In average NABIL has the highest mean ratio of 4.20% where as NIBL and Siddhartha Bank has the mean ratio of 2.80% and 1.80% respectively. Coefficient of variation indicates that NABIL has no more variance between five years study period i.e. 10.70 than other two banks.

**Figure – 4.7**

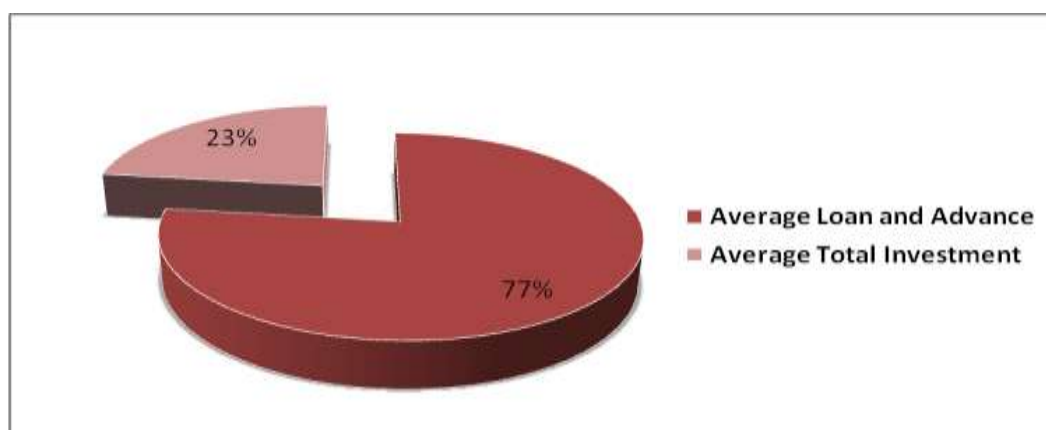
**Pie Diagram showing average loan and advances and average total investment NIBL (From 2009 to 2013)**



Above the figure no.4.7 is the average loan & advances and average total investment of NIBL. Loan and advance ratio is higher than total investment of NIBL. It indicates mobilization of loan and advance is 4.556 times more than total investment. Average loan and advance is 82% i.e. Rs.42053.80 million and Average total investment is 18% i.e. Rs.9190.6 which is shown on above pie chart.

**Figure - 4.8**

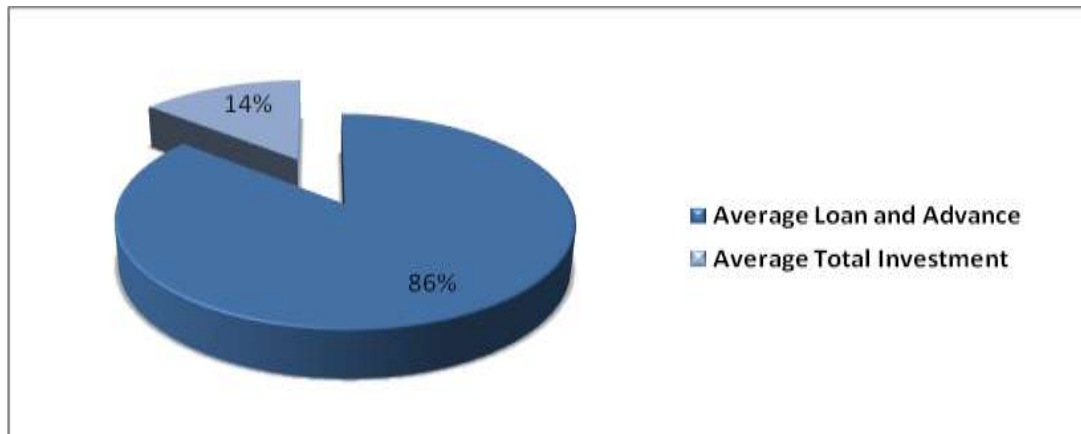
**Pie Diagram showing Average Loan and Advances and Average Total Investment NABIL (From 2009 to 2013)**



In the figure no. 4.8 is the average amount of loan and advance of year 2009 to 2013 and average amount of total investment of year 2009 to 2013 of NABIL. Which shows 23% of average total investment and 77% of average loan and advance which is 3.348 times more than mobilized loan and advance.

**Figure – 4.9**

**Pie Diagram showing Average Loan and Advances and Average Total Investment Siddhartha Bank (From 2009 to 2013)**



In the figure no. 4.9 is the average loan and advance and average total investment of Siddhartha Bank during the year 2009 to 2013. Loan and Advances and total investment are increasing trend during the year 2009 to 2013 and amounted Rs.23086.56 million and Rs. 4472.79 million are loan and advance and total investment of the year 2013 respectively. So it indicates 14% i.e. Rs.3006.76 million is average total investment and 86% i.e. Rs. 18333.71 million is average loan and advance which is 6.143 times more than average total investment of the Siddhartha Bank Limited.

#### **4.1.3.2 Return on Total Working Fund**

Return on total working fund ratio is computed as:

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

**Table - 8****Comparative Return on Total Working Fund Ratios**

<b>Year</b>	<b>Ratio</b>		
	<b>NIBL</b>	<b>NABIL</b>	<b>Siddhartha Bank</b>
2009	0.12	0.33	0.11
2010	0.2	0.31	0.08
2011	0.15	0.35	0.12
2012	0.09	0.41	0.07
2013	0.15	0.37	0.10
<b>Mean (%)</b>	<b>14.20</b>	<b>35.40</b>	<b>9.60</b>
<b>S.D.</b>	<b>0.04</b>	<b>0.04</b>	<b>0.02</b>
<b>C.V.</b>	<b>0.003</b>	<b>0.001</b>	<b>0.002</b>

**Source: Appendix-I**

As per the above comparative table the return on total working fund of NIBL, NABIL and Siddhartha Bank have the ratio of rising and falling trend. During the study period, NABIL has the highest average ratio of 35.40% than that of NIBL and Siddhartha Bank, i.e. 14.20% and 9.60% respectively among three banks in average. In case of coefficient of variation, also NABIL has the lowest C.V. of 0.001, than that of NIBL and Siddhartha Bank i.e. 0.003 and 0.002 respectively.

#### **4.1.3.3 Total Interest Earned to Total Working Fund**

This ratio actually reveals the earning capacity of commercial banks by mobilizing its working fund. Higher the ratio higher will be the income as interest. We have,

$$\text{Total Interest Earned to TWF Ratio} = \frac{\text{Total Interest Earned}}{\text{Total Working Fund}}$$

**Table 9**  
**Comparative Total Interest Earned to Total Working Fund Ratios**

Year	Ratio		
	NIBL	NABIL	Siddhartha Bank
2009	0.44	0.90	0.63
2010	0.75	1.11	0.69
2011	0.76	1.36	1.04
2012	0.50	1.49	0.61
2013	0.47	0.95	0.62
<b>Mean</b>	<b>0.58</b>	<b>1.16</b>	<b>0.72</b>
<b>S.D.</b>	<b>0.16</b>	<b>0.26</b>	<b>0.18</b>
<b>C.V.</b>	<b>0.28</b>	<b>0.22</b>	<b>0.25</b>

**Source: Appendix-I**

The above analysis shows the NIBL has highest interest earned to total working fund ratio of 0.76 in the year 2011 and lowest ratio of 0.44 in the year 2009. Likewise NABIL and Siddhartha Bank have the highest ratio of 1.49 and 1.04 in year 2012 and 2011 respectively. NIBL has 0.58 mean ratio, but NABIL and Siddhartha Bank have 1.16 and 0.72 respectively. The coefficient of variation of NABIL is less than NIBL and Siddhartha Bank i.e.0.22.It indicates that interest earning power of NABIL is more consistent than NIBL and Siddhartha Bank.

#### **4.1.3.4 Total Interest paid to Total Working Fund**

Total interest paid to total working fund ratio is calculated as:

$$\text{Total Interest paid to Total Working fund Ratio} = \frac{\text{Total Interest paid}}{\text{Total Working fund}}$$

**Table - 10**

**Comparative Total Interest paid to Total Working Fund Ratios**

Year	Ratio		
	NIBL	NABIL	Siddhartha Bank
2009	1.13	0.69	0.41
2010	2.43	1.08	0.48
2011	3.45	1.17	0.74
2012	3.63	1.05	0.43
2013	2.64	0.60	0.33
<b>Mean</b>	<b>2.66</b>	<b>0.92</b>	<b>0.48</b>
<b>S.D.</b>	<b>0.99</b>	<b>0.26</b>	<b>0.16</b>
<b>C.V.</b>	<b>0.37</b>	<b>0.28</b>	<b>0.33</b>

Source: Appendix -I

From the above comparative table, NIBL, NABIL and Siddhartha Bank have interest paid to total working fund ratio in fluctuating trend that mean ratio of total interest paid to total working fund is decreasing-increasing trend. NIBL has 3.63 highest ratio in the year 2012 and lowest ratio of 1.13 in the year 2009. Also NIBL has 2.66 mean ratio, which is greater than that of NABIL and Siddhartha Bank i.e. 0.92 and 0.48 respectively.

The coefficient of variation of NABIL is more stable than NIBL and Siddhartha Bank i.e. 0.28.

#### **4.1.4 Risk Ratios**

For this study, following risk ratios are used to analyze and interpret the financial data and investment policy.

##### **4.1.4.1 Liquidity Risk Ratio**

This ratio is calculated by dividing cash and bank balance to total deposit.

$$\text{Liquidity Risk Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Total Deposit}}$$

**Table - 11**  
**Comparative Liquidity Risk Ratios**

Year	Ratio		
	NIBL	NABIL	Siddhartha bank
2009	0.17	0.03	0.10
2010	0.14	0.04	0.12
2011	0.16	0.06	0.09
2012	0.21	0.06	0.17
2013	0.21	0.03	0.12
<b>Mean (%)</b>	<b>17.80</b>	<b>4.40</b>	<b>12.00</b>
<b>S.D.</b>	<b>0.03</b>	<b>0.02</b>	<b>0.03</b>
<b>C.V.</b>	<b>0.002</b>	<b>0.005</b>	<b>0.003</b>

Source: Appendix-I

The above table shows that NIBL has highest cash and bank balance to total deposit ratio of 0.21 in the year 2012 and 2013 and lowest ratio of 0.14 on 2010. Whereas, NABIL and Siddhartha Bank have highest ratio of 0.06 in the year 2011 and 2012 and 0.17 in the year 2012 likewise lowest ratio of 0.03 in the year 2009 and 2013 and 0.09 in the year 2011 respectively.

The mean ratio of NABIL is lower than that of Siddhartha Bank and NIBL i.e.  $4.40 < 12.00 < 17.80$ . It means that NABIL has maintained the lower liquidity risk ratio which means it operates with higher risk for higher profit. The coefficient of variation of NABIL i.e. 0.005 is highest than that of NIBL and Siddhartha Bank where as NIBL and Siddhartha Bank have 0.002 and 0.003. It shows that the ratio of NABIL is more variable than of NIBL and Siddhartha Bank Limited.

#### **4.1.4.2 Credit Risk Ratio**

In general, credit risk ratio shows the proportion of non-performing assets in the total investment plus loan and advances of a bank. It is computed as:

$$\text{Credit Risk Ratio} = \frac{\text{Total Investment} + \text{Total Loan and Advances}}{\text{Total Assets}}$$

**Table - 12**  
**Comparative Credit Risk Ratios**

<b>Year</b>	<b>Ratio</b>		
	<b>NIBL</b>	<b>NABIL</b>	<b>Siddhartha Bank</b>
2009	0.83	0.88	0.87
2010	0.87	0.88	0.84
2011	0.85	0.88	0.86
2012	0.81	0.88	0.80
2013	0.81	0.86	0.82
<b>Mean</b>	<b>0.83</b>	<b>0.88</b>	<b>0.84</b>
<b>S.D.</b>	<b>0.03</b>	<b>0.01</b>	<b>0.03</b>
<b>C.V.</b>	<b>0.04</b>	<b>0.01</b>	<b>0.04</b>

Source: Appendix-I

The above comparative table shows that NIBL, NABIL and Siddhartha Bank have the credit risk ratio is in consistent trend. NIBL, NABIL and Siddhartha Bank have the highest ratio of 0.87, 0.88 and 0.87 in the year 2010, same in year 2009 to 2012 and 2009 respectively whereas they have lowest ratio of 0.81, 0.86 and 0.80 in same year 2012 - 2013, 2013 and 2012 respectively.

On the basis of mean ratio, it can be said that the credit risk of NIBL is lowest than that of Siddhartha Bank and NABIL i.e.  $0.83 < 0.84$  and  $0.88$ . NIBL and Siddhartha Bank have highest coefficient of variation than that of NABIL i.e. 0.04 which shows more variable ratios of NIBL and Siddhartha Bank than NABIL.

#### **4.1.5 Growth Ratios**

The growth ratios represent how well the commercial banks are maintaining their economic and financial position. To calculate, check and analyze the expansion and growth of the selected banks the following growth ratios are calculated.

#### 4.1.5.1 Growth Ratio of Total Deposits

**Table - 13**  
**Growth Ratio of Total Deposits**

(Rs. 000,000)

Year	Deposit		
	NIBL	NABIL	Siddhartha Bank
2009	46698.10	37348.25	15855.00
2010	50094.70	46410.70	20197.00
2011	50138.10	49696.11	21576.00
2012	57010.60	55023.70	25949.00
2013	62428.90	63609.81	28392.82
<b>Growth (%)</b>	<b>7.53</b>	<b>14.24</b>	<b>15.68</b>

Source: Appendix-II

The table presented above shows that NIBL, NABIL and Siddhartha Bank are increasing their deposit collection during five years study period. But NIBL total deposits are slowly increased than NABIL and Siddhartha Bank. The growth ratio of NIBL, NABIL and Siddhartha Bank are 7.53%, 14.24% and 15.68% respectively. The growth ratio of total deposits of Siddhartha Bank seems higher than NIBL and NABIL.

#### 4.1.5.2 Growth Ratio of Total Investment

**Table - 14**  
**Growth Ratio of Total Investment**

(Rs. 000000)

Year	Total Investment		
	NIBL	NABIL	Siddhartha Bank
2009	7399.00	10826.38	2176.00
2010	8635.00	13703.02	2453.00
2011	7573.00	13081.21	2538.00
2012	10644.00	14048.97	3394.00
2013	11702.00	16332.04	4472.79
<b>Growth (%)</b>	<b>12.14</b>	<b>10.83</b>	<b>19.74</b>

Source: Appendix-II

The above table shows that Siddhartha Bank has consistently increased its investment from the year 2009 to 2013 but NIBL and NABIL are fluctuating. NIBL, NABIL and Siddhartha Bank have the growth rate of 12.14%, 10.83% and 19.74% respectively. Among them Siddhartha Bank has the highest growth rate than NIBL and NABIL.

#### 4.1.5.3 Growth Ratio of Loan and Advances

**Table - 15**  
**Growth Ratio of Loan and Advances**

(Rs. 000,000)

Year	Loan and Advance		
	NIBL	NABIL	Siddhartha Bank
2009	36827.00	27589.93	13328.00
2010	40948.00	32268.87	16653.00
2011	41887.00	38034.09	18384.00
2012	42907.00	41605.68	20217.00
2013	47700.00	46369.84	23086.56
<b>Growth Ratio (%)</b>	<b>6.68</b>	<b>13.86</b>	<b>14.72</b>

Source: Appendix-II

The above table describes the growth ratio of loan and advances of NIBL, NABIL and Siddhartha Bank under five years study period. The table shows the high growth ratio of Siddhartha Bank 14.72% and low growth ratio of NIBL 6.68%. But NABIL has the medium growth ratio i.e. 13.86%.

#### 4.1.5.4 Growth Ratio of Net Profit

**Table - 16**  
**Growth Ratio of Net Profit**

(Rs. 000,000)

Year	Net Profit		
	NIBL	NABIL	Siddhartha Bank
2009	901.00	1031.05	217.92
2010	1265.00	1139.20	240.84
2011	1139.00	1337.75	311.42
2012	1039.00	1689.39	330.46
2013	1915.00	2218.76	482.56
<b>Growth (%)</b>	<b>20.74</b>	<b>21.12</b>	<b>21.99</b>

Source: Appendix-II

The above table represents the growth ratio of net profit of NIBL, NABIL and Siddhartha Bank during five years study period. It shows that Siddhartha Bank has the highest ratio of 21.99% and NIBL has the lowest ratio of 20.74%. NABIL growth ratio of net profit is 21.12%.

## 4.2 Correlation Analysis

Correlations between the important variables are analyzed under this heading.

### 4.2.1 Analysis of Correlation Coefficient between Deposits and Total Investment

The following table describes the relationship between deposits and total investment of NIBL, NABIL and Siddhartha Bank under five years study period. In this case, deposit is independent variables (X) and total investment is dependent variable (Y).

**Table - 17**  
**Correlation Coefficient between Deposits and Total Investment**

Banks	Base of Evaluation			
	R	R <sup>2</sup>	P.E.	6×P.E.
NIBL	0.9719	0.9446	0.0167	0.1002
NABIL	0.9608	0.9231	0.0232	0.1392
Siddhartha	0.9322	0.8690	0.0395	0.2371

Source: Appendix -III

From the above table, it is found that coefficient of correlation between deposits and total investment of NIBL is 0.9719 i.e. high degree of positive correlation between these two variables. And the value of coefficient of determination (R<sup>2</sup>) is also 0.9446 which means 94.46% of investment decision is depend upon deposit and only 5.54% investment is depend upon other variables. Similarly probable error (P.E.) is 0.0167 and 6P.E. is 0.1002 which shows that 'r' is more than 6P.E. Therefore it reveals that relationship between deposit and investment is significant.

Likewise in case of NABIL, coefficient of correlation between investment and deposit is 0.9608 i.e. there is high degree of positive correlation between two variables. Coefficient of determination (R<sup>2</sup>) is 0.9231, which means 92.31% of investment decision is depend upon deposit and only 7.69% investment is depend on other variables. And its P.E. is 0.0232 and similarly 6P.E. is 0.1392 which is lower than 'r' i.e. 0.9608. It means correlation of coefficient between deposit and Investment of NABIL is significant positive relationship between them.

Similarly, coefficient of correlation of Siddhartha Bank is 0.9322 i.e. there is high degree of positive correlation between two variables. Coefficient of determination ( $R^2$ ) is 0.8690, which means 86.90% of investment decision is depend upon deposit and only 13.10% investment is depend on other variables. And P.E. is 0.0395 and 6P.E. is 0.2371 which is less than 'r' i.e. 0.981. It means correlation of coefficient between deposit and investment of Siddhartha Bank is no significant.

#### 4.4.2 Analysis of Correlation Coefficient between Deposits and Loan and Advances

The following table describes the relationship between deposit and loan and advances of NIBL, NABIL and Siddhartha Bank with comparatively under five years study period. In the following case, deposit is independent variables(X) and loan and advances is dependent variables(Y).

**Table - 18**  
**Correlation Coefficient between Deposits and Loan and Advances**

Banks	Base of Evaluation			
	R	$R^2$	P.E.	6×P.E.
NIBL	0.9401	0.8838	0.0784	0.4703
NABIL	0.9839	0.9680	0.0096	0.0579
Siddhartha	0.9896	0.9793	0.0062	0.0374

**Source: Appendix –III**

From the above table, we can find that the coefficient of correlation between deposit and loan and advances value of 'r' of NIBL, NABIL and Siddhartha Bank are 0.9401, 0.9839 and 0.9839 respectively. This shows the high positive relationship between these two variables i.e. loan and advances and deposits. By considering coefficient of determination ( $R^2$ ), the value of  $R^2$  is 0.8838 in case of NIBL, 0.9680 in case of NABIL and 0.9793 in case of Siddhartha Bank Limited.

The value of  $R^2$  of NIBL is 0.8838, which means 88.38% of loan and advances decision is depend upon deposit and only 11.62% loan and advances depend upon other variables. The value of  $R^2$  of NABIL is 0.9680 which means that 96.80% of loan

and advances decision is depend upon deposit and only 3.20% loan and advances depend upon other variables. Similarly, the value of  $R^2$  of Siddhartha Bank is 0.977, which means 97.7% of loan and advances decision is depend upon deposit and only 2.30% loan and advances depend upon other variables.

By considering the probable error (P.E.), the value of  $R^2$  is greater than the 6 times of P.E., i.e.  $0.8838 > 0.4703$  for NIBL which indicates that there is significant relationship between deposit and loan and advance. Similarly, remaining two banks results;  $0.9680 > 0.0579$  and  $0.9896 > 0.0374$  which indicates that there is significant relationship between deposits and loan and advances.

### 4.3 Test of Hypothesis

Under this analysis an effort has been made to test the significance level regarding the parameter of the population on the basis of sample drawn from the population.

#### 4.3.1 Test of Hypothesis on Loans and Advances to Total Deposit Ratio

In this analysis ratios of loan and advances to total deposits of NIBL, NABIL and Siddhartha Bank Limited are taken and are carried out under t-test of significance difference.

**Table - 19**  
**Test of Hypothesis on Loans and Advances to Total Deposit ratios between NIBL, NABIL and Siddhartha Bank Limited**

Fiscal Year	NIBL			NABIL			Siddhartha Bank		
	$X_1$	$x_1$	$x_1^2$	$X_2$	$x_2$	$x_2^2$	$X_3$	$x_3$	$x_3^2$
2009	79	-0.2	0.04	74	0	0	84	2	4
2010	82	2.8	7.84	70	-4	16	82	0	0
2011	84	4.8	23.04	77	3	9	85	3	9
2012	75	-4.2	17.64	76	2	4	78	-4	16
2013	76	-3.2	10.24	73	-1	1	81	-1	1
<b>n=5</b>	<b><math>\sum X=396</math></b>		<b><math>\sum x_1^2=58.76</math></b>	<b><math>\sum X_2=370</math></b>		<b><math>\sum x_2^2=30</math></b>	<b><math>\sum X_3=410</math></b>		<b><math>\sum x_3^2=30</math></b>

Here

$$\bar{X}_1 = \frac{\sum X_1}{n} = \frac{396}{5} = 79.20$$

Where,  $\sum x_1 = X_1 - \bar{X}_1$

Again,

$$\bar{X}_2 = \frac{\sum X_2}{n} = \frac{370}{5} = 74$$

Where,  $\sum x_2 = X_2 - \bar{X}_2$

$$\bar{X}_3 = \frac{\sum X_3}{n} = \frac{410}{5} = 82$$

Where,  $\sum x_3 = X_3 - \bar{X}_3$

### a) Test of Significance of difference between NIBL and NABIL

Here,

**Null Hypothesis (H<sub>0</sub>):**  $\bar{X}_1 = \bar{X}_2$  i.e. there is no significant difference between mean ratios of loans and advances to total deposit of NIBL and NABIL.

**Alternative Hypothesis (H<sub>1</sub>):**  $\bar{X}_1 \neq \bar{X}_2$  i.e. there is significant difference between mean ratios of loans and advances to total deposit of NIBL and NABIL (Where  $\bar{X}_1$  is mean ratio of NIBL and  $\bar{X}_2$  is mean ratio of NABIL).

Under H<sub>0</sub>, the test statistic is given by,

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{s^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}} = \frac{79.2 - 74}{\sqrt{11.095 \left( \frac{1}{5} + \frac{1}{5} \right)}} = 1.172$$

Where,  $s^2 = \frac{1}{n_1 + n_2 - 2} (\sum x_1^2 + \sum x_2^2) = \frac{1}{8} (58.76 + 30) = 11.095$

Degree of freedom =  $n_1 + n_2 - 2 = 5 + 5 - 2 = 8$

The tabulated value of t for 8 d.f. at 5% level of significance for two tailed test is 2.306.

### Conclusion:

Since, the calculated value of t i.e. 1.172 is less than the tabulated value i.e. 2.306.

It is no significant, null hypothesis is accepted hence alternative hypothesis is rejected which means that there is no significant difference between mean ratios of loan and advances to total deposit of NIBL and NABIL.

**b) Test of Significance of difference between NIBL and Siddhartha Bank**

Here,

**Null Hypothesis (H<sub>0</sub>):**  $\bar{X}_1 = \bar{X}_3$  i.e. there is no significant difference between mean ratios of loans and advances to total deposit of NIBL and Siddhartha Bank.

**Alternative Hypothesis (H<sub>1</sub>):**  $\bar{X}_1 \neq \bar{X}_3$  i.e. there is significant difference between mean ratios of loans and advances to total deposit of NIBL and Siddhartha Bank (Where  $\bar{X}_1$  is mean ratio of NIBL and  $\bar{X}_3$  is mean ratio of Siddhartha Bank).

Under H<sub>0</sub>, the test statistic is given by,

$$t = \frac{\bar{X}_1 - \bar{X}_3}{\sqrt{s^2 \left( \frac{1}{n_1} + \frac{1}{n_3} \right)}} = \frac{79.2 - 82}{\sqrt{11.095 \left( \frac{1}{5} + \frac{1}{5} \right)}} = -0.631$$

Hence,  $|t| = 0.631$

Where,  $s^2 = \frac{1}{n_1 + n_3 - 2} (\sum x_1^2 + \sum x_3^2) = \frac{1}{8} (58.76 + 30) = 11.095$

Degree of freedom =  $n_1 + n_3 - 2 = 5 + 5 - 2 = 8$

The tabulated value of t for 8 d.f. at 5% level of significance for two tailed test is 2.306.

**Conclusion:**

Since, the calculated value of  $|t|$  i.e. 0.631 less than the tabulated value i.e. 2.306. It is significant, null hypothesis is accepted hence alternative hypothesis is rejected which means that there is no significant difference between mean ratios of loan and advances to total deposit of NIBL and Siddhartha Bank Limited.

**c) Test of Significance of difference between NABIL and Siddhartha Bank**

Here,

**Null Hypothesis (H<sub>0</sub>):**  $\bar{X}_2 = \bar{X}_3$  i.e. there is no significant difference between mean ratios of loans and advances to total deposit of NABIL and Siddhartha Bank.

**Alternative Hypothesis (H<sub>1</sub>):**  $\bar{X}_2 \neq \bar{X}_3$  i.e. there is significant difference between mean ratios of loans and advances to total deposit of NABIL and Siddhartha Bank Limited (Where  $\bar{X}_2$  is mean ratio of NABIL and  $\bar{X}_3$  is mean ratio of Siddhartha Bank Limited).

Under H<sub>0</sub>, the test statistic is given by,

$$t = \frac{\bar{X}_2 - \bar{X}_3}{\sqrt{s^2 \left( \frac{1}{n_2} + \frac{1}{n_3} \right)}} = \frac{74 - 82}{\sqrt{7.5 \left( \frac{1}{5} + \frac{1}{5} \right)}} = -2.667$$

Hence,  $|t| = 2.667$

Where,  $s^2 = \frac{1}{n_2 + n_3 - 2} (\sum x_2^2 + \sum x_3^2) = \frac{1}{8} (30 + 30) = 7.5$

Degree of freedom =  $n_2 + n_3 - 2 = 5 + 5 - 2 = 8$

The tabulated value of t for 8 d.f. at 5% level of significance for two tailed test is 2.306.

**Conclusion:**

Since, the calculated value of t i.e. 2.667 greater than the tabulated value i.e. 2.306. It is significant, null hypothesis is rejected hence alternative hypothesis is accepted which means that there is significant difference between mean ratios of loan and advances to total deposit of NABIL and Siddhartha Bank Limited.

**4.3.2 Test of Hypothesis Total Investment to Total Deposit Ratio**

In this analysis ratio of total investment to total deposits of NIBL, NABIL and Siddhartha Bank Limited are taken and are carried out under t-test of significance difference.

**Table - 20**

**Test of Hypothesis on Total Investment to Total Deposit ratios between NIBL,  
NABIL and Siddhartha Bank Limited**

NIBL			NABIL			Siddhartha Bank			
Fiscal Year	X <sub>1</sub>	x <sub>1</sub>	x <sub>1</sub> <sup>2</sup>	X <sub>2</sub>	x <sub>2</sub>	x <sub>2</sub> <sup>2</sup>	X <sub>3</sub>	x <sub>3</sub>	x <sub>3</sub> <sup>2</sup>
2009	16	-1.2	1.44	29	1.6	2.56	14	0.6	0.36
2010	17	-0.2	0.04	30	2.6	6.76	12	-1.4	1.96
2011	15	-2.2	4.84	26	1.4	1.96	12	-1.4	1.96
2012	19	1.8	3.24	26	1.4	1.96	13	-0.4	0.16
2013	19	1.8	3.24	26	1.4	1.96	16	2.6	6.76
<b>n=5</b>	<b>∑X=86</b>		<b>∑x<sub>1</sub><sup>2</sup>= 12.80</b>	<b>∑X<sub>2</sub>= 137</b>		<b>∑x<sub>2</sub><sup>2</sup>= 15.20</b>	<b>∑X<sub>3</sub>= 67</b>		<b>∑x<sub>3</sub><sup>2</sup>= 11.20</b>

Here

$$\bar{X}_1 = \frac{\sum X_1}{n} = \frac{86}{5} = 17.20$$

Where,  $\sum x_1 = X_1 - \bar{X}_1$

Again,

$$\bar{X}_2 = \frac{\sum X_2}{n} = \frac{137}{5} = 27.40$$

Where,  $\sum x_2 = X_2 - \bar{X}_2$

$$\bar{X}_3 = \frac{\sum X_3}{n} = \frac{67}{5} = 13.40$$

Where,  $\sum x_3 = X_3 - \bar{X}_3$

**a) Test of Significance of difference between NIBL and NABIL**

Here,

**Null Hypothesis (H<sub>0</sub>):**  $\bar{X}_1 = \bar{X}_2$  i.e. there is no significant difference between mean ratios of total investment to total deposit of NIBL and NABIL.

**Alternative Hypothesis (H<sub>1</sub>):**  $\bar{X}_1 \neq \bar{X}_2$  i.e. there is significant difference between mean ratios of total investment to total deposit of NIBL and NABIL (Where  $\bar{X}_1$  is mean ratio of NIBL and  $\bar{X}_2$  is mean ratio of NABIL)

Under H<sub>0</sub>, the test statistic is given by,

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{s^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}} = \frac{17.20 - 27.40}{\sqrt{3.50 \left( \frac{1}{5} + \frac{1}{5} \right)}} = -7.286$$

Hence,  $|t| = 7.286$

$$\text{Where, } s^2 = \frac{1}{n_1 + n_2 - 2} (\sum x_1^2 + \sum x_2^2) = \frac{1}{8} (12.8 + 15.2) = 3.50$$

$$\text{Degree of freedom} = n_1 + n_2 - 2 = 5 + 5 - 2 = 8$$

The tabulated value of t for 8 d.f. at 5% level of significance for two tailed test is 2.306.

### Conclusion:

Since, the calculated value of t i.e. 7.286 is greater than the tabulated value i.e. 2.306. It is not significant, null hypothesis is rejected hence alternative hypothesis is accepted which means that there is significant difference between mean ratios of total investment to total deposit of NIBL and NABIL.

### b) Test of Significance of difference between NIBL and Siddhartha Bank

Here,

**Null Hypothesis ( $H_0$ ):**  $\bar{X}_1 = \bar{X}_3$  i.e. there is no significant difference between mean ratios of total investment to total deposit of NIBL and Siddhartha Bank.

**Alternative Hypothesis ( $H_1$ ):**  $\bar{X}_1 \neq \bar{X}_3$  i.e. there is significant difference between mean ratios of total investment to total deposit of NIBL and Siddhartha Bank (Where  $\bar{X}_1$  is mean ratio of NIBL and  $\bar{X}_3$  is mean ratio of Siddhartha Bank)

Under  $H_0$ , the test statistic is given by,

$$t = \frac{\bar{X}_1 - \bar{X}_3}{\sqrt{s^2 \left( \frac{1}{n_1} + \frac{1}{n_3} \right)}} = \frac{17.20 - 13.40}{\sqrt{3.00 \left( \frac{1}{5} + \frac{1}{5} \right)}} = 3.167$$

$$\text{Where, } s^2 = \frac{1}{n_1 + n_3 - 2} (\sum x_1^2 + \sum x_3^2) = \frac{1}{8} (12.8 + 11.2) = 3.00$$

$$\text{Degree of freedom} = n_1 + n_3 - 2 = 5 + 5 - 2 = 8$$

The tabulated value of t for 8 d.f. at 5% level of significance for two tailed test is 2.306.

**Conclusion:**

Since, the calculated value of t i.e.3.167 is greater than the tabulated value i.e. 2.306. Hence the null hypothesis is rejected so alternative hypothesis is accepted which means that there is significant difference between mean ratios of total investment to total deposit of NIBL and Siddhartha Bank Limited.

**C) Test of Significance of difference between NABIL and Siddhartha Bank**

Here,

**Null Hypothesis (H<sub>0</sub>):**  $\bar{X}_2 = \bar{X}_3$  i.e. there is no significant difference between mean ratios of total investment to total deposit of NABIL and Siddhartha Bank.

**Alternative Hypothesis (H<sub>1</sub>):**  $\bar{X}_2 \neq \bar{X}_3$  i.e. there is significant difference between mean ratios of total investment to total deposit of NABIL and Siddhartha Bank. (Where  $\bar{X}_2$  is mean ratio of NABIL and  $\bar{X}_3$  is mean ratio of Siddhartha Bank Limited)

Under H<sub>0</sub>, the test statistic is given by,

$$t = \frac{\bar{X}_2 - \bar{X}_3}{\sqrt{s^2 \left( \frac{1}{n_2} + \frac{1}{n_3} \right)}} = \frac{27.40 - 13.40}{\sqrt{3.30 \left( \frac{1}{5} + \frac{1}{5} \right)}} = 10.606$$

Where,

$$s^2 = \frac{1}{n_2 + n_3 - 2} (\sum x_2^2 + \sum x_3^2) = \frac{1}{8} (15.2 + 11.2) = 3.30$$

Degree of freedom =  $n_2 + n_3 - 2 = 5 + 5 - 2 = 8$

The tabulated value of t for 8 d.f. at 5% level of significance for two tailed test is 2.306

**Conclusion:**

Since, the calculated value of  $t$  i.e. 10.606 is more than the tabulated value i.e. 2.306. It is significant, null hypothesis is rejected hence alternative hypothesis is accepted which means that there is significant difference between mean ratios of total investment to total deposit of NABIL and Siddhartha Bank Limited.

**4.4 Major Findings of the Study**

Basically in this research work, all the data has been obtained from secondary sources. Data has been analyzed by using financial as well as statistical tools. This topic focuses on the major findings of the study, which are derived from the analysis of fund mobilization of NIBL, NABIL and Siddhartha Bank Limited with comparatively applying five years data from 2009 to 2013.

The major findings of the study derived from the analysis of financial tools of NIBL, NABIL and Siddhartha Bank Limited are given below:

**1. Findings from Liquidity Ratios**

- i) The mean ratio of cash and bank balance to total deposits of NIBL is higher than NABIL and Siddhartha Bank and NABIL has lowest mean ratio. It states that the liquidity position of NIBL is better in this regard. The ratio of NABIL is less consistent and Siddhartha Bank has more consistent ratio. It shows NABIL has taken more risk to meet the daily cash requirements.
- ii) The mean ratio of cash and bank balance to total assets of NIBL is higher than NABIL and Siddhartha Bank and NABIL has lowest mean ratio. It reveals that liquidity position of NIBL is better than two banks. It also indicates that NIBL has the higher capacity to meet the cash demand of its customer deposit than that of other commercial banks. The ratio of NABIL is less consistent and Siddhartha Bank has more consistent ratio.

The above result shows that the liquidity position of NIBL is comparatively better than NABIL and Siddhartha Bank. NIBL has the highest cash and bank balance to total deposit and cash and bank balance to current assets ratio. At last, it can be

concluded that NIBL has good deposit collection and higher ability to meet the cash requirements. NIBL has less consistent mean ratio.

## **2. Findings from Assets Management Ratios**

- i) The average ratio of total investment to current assets ratio of NABIL is higher than that of NIBL and Siddhartha Bank. But the variability ratio of Siddhartha Bank is lower than of other two banks. It seems to better as an average NABIL and as variation Siddhartha Bank.
- ii) The mean ratio of loan and advances to total deposit of Siddhartha Bank is greater than NIBL and NABIL. The variability ratio of NABIL and Siddhartha Bank are lower than that NIBL. It seems more consistent than NIBL.
- iii) The average ratio of loan and advances to total working fund of NABIL is higher than NIBL and Siddhartha Bank. The variability ratio of NABIL is lower than that of NIBL and Siddhartha Bank. It is the indication of more consistency of loan and advances.

From the above analysis it helps to conclude that no one banks is fully successful but one is success in one and another is success in other to invest in productive sector and has mobilized its collected deposits to provide loan and advances. Similarly, Siddhartha Bank has mobilized its collected deposits in investment.

## **3. Findings from Profitability Ratios**

- i) The mean ratio of return on total working fund of NABIL is greater than NIBL and Siddhartha Bank. Where as the variability ratio of NABIL is lower than NIBL and Siddhartha Bank. It indicates that the return on total working fund of NIBL is stable.
- ii) The mean ratio of return on loan and advances of NABIL is higher than NICBL and NIBL. The variability ratio of NIBL is lower than NICBL and NABIL. It seems Siddhartha Bank has stable return.
- iii) The mean ratio of total interest paid to total working fund of Siddhartha Bank is lower than NIBL and NABIL. It reveals that NIBL has not paid high interest as

NABIL and Siddhartha Bank. The ratio of NIBL is more consistent than that of other two banks.

- iv) In case of mean ratio of total interest earned to total working fund of NABIL is highest among three banks. The variability ratio of NIBL is lower than NABIL and Siddhartha Bank. It reveals that NABIL is mobilizing its working fund successfully so that it has high earning capacity.

From the above analysis of profitability ratios, it can be concluded that the NABIL is profitable in comparison to other compared banks.

#### **4. Findings from Risk Ratios**

- i) In case of credit risk ratio, NIBL has the lower risk than NABIL and Siddhartha Bank. The variability ratio of NABIL is lower than NIBL and Siddhartha Bank. It indicates that the credit risk ratio is consistent. But in case of NIBL and Siddhartha Bank, they have comparatively high credit risk ratios.
- ii) The mean ratio of liquidity risk of NABIL is lower than NIBL and Siddhartha Bank and in case of NIBL it is higher than NABIL and Siddhartha Bank. Degree of risk and variability of risk is also lower in NIBL in comparison to two banks. It seems liquidity risk ratio is consistent.

From the above analysis, NABIL has maintained the lower liquidity risk and NIBL has maintained lower credit risk. And lower liquidity risk means higher risk for higher profit.

#### **5. Findings from Growth Ratios**

- i) The growth ratio of loan and advances of Siddhartha Bank is in increasing trend whereas NIBL and NABIL has highly fluctuating trend. Growth rate of Siddhartha Bank is higher among three banks. Though NIBL is providing more funds in loan and advances it appears too weak in growth rate point of view.
- ii) The growth rate of total investment of Siddhartha Bank is highly fluctuated than that of NIBL and NABILL. Although NABIL is investing more funds but it seems weak in comparison to NIBL and Siddhartha Bank because of lowest

growth ratio. It shows that Siddhartha Bank had adopted a policy to keep on increasing its investment.

- iii) The growth ratio of total deposits of NIBL, NABIL and Siddhartha Bank are increasing trend. Out of three banks growth rate of total deposits of Siddhartha Bank is greater than NIBL and NABIL. It shows that NIBL has increased its deposit collection capacity.
- iv) The growth ratio of net profit of NABIL and Siddhartha Bank are in increasing trend the during study period. NIBL has fluctuating trend. Siddhartha Bank has the highest growth ratio of net profit among three banks.

From the above findings it can be observed that the NIBL has maintained the high growth ratio in total deposits and loan and advances. It has low position in investment. But the growth rate of total investment and net profit of Siddhartha Bank is better than NIBL and NABIL.

## **6. Findings from Coefficient of Correlation Analysis**

- i) Correlation coefficient between deposit and total investment of NIBL is higher than other compared banks. It indicates that NIBL is successfully mobilizing its deposits as investment. There is significant relationship between correlation coefficient of deposit and total investment of NIBL, NABIL and Siddhartha Bank Limited.
- ii) Siddhartha Bank has the highest degree of correlation coefficient between deposit and loan and advances than other two banks. It states that the Siddhartha Bank is in better position of mobilization of deposit as loan and advances in comparison to NIBL and NABIL. There is significant relationship between correlation coefficient of deposit and loan and advances of NIBL, NABIL and Siddhartha Bank Limited.

## **8. Findings from Test of Hypothesis**

- i) There is no significant difference between mean ratios of total investment to total deposit of NIBL and NABIL.
- ii) There is significant difference between mean ratios of total investment to total deposit of NIBL and NABIL.

- iii) There is no significant difference between mean ratios of total investment to total deposit of NIBL and Siddhartha Bank.
- iv) There is significant difference between mean ratios of loan and advances to total deposit of NIBL and Siddhartha Bank.
- v) There is no significant difference between mean ratios of loan and advances to total deposit of NABIL and Siddhartha Bank.
- vi) There is significant difference between mean ratios of loan and advances to total deposit of NABIL and Siddhartha Bank.

## **CHAPTER-V**

### **SUMMARY, CONCLUSION & RECOMMENDATIONS**

#### **5.1 Summary**

Basically the entire research work focuses on the comparative study on fund mobilization of three Commercial banks; Nepal Investment Bank Limited, Nabil Bank Limited and Siddhartha Bank Limited. These three Commercial Banks are composed as per their fund mobilization activities by taking five years data from the year 2009 to 2013.

The study is mainly based on secondary sources. All data are taken from concerned banks annual report, literature publication, balance sheet, profit and loss account, previous thesis report, different website, related books and booklets, journals and articles. After collecting data from different sources, it is analyzed by using financial and statistical tools. Findings are drawn by applying various financial tools viz. liquidity ratio, assets management ratio, profitability ratio, growth ratio and risk ratio. Similarly, statistical tools have been used viz. mean, standard deviation, coefficient of variation, coefficient of correlation and test of hypothesis.

In an attempt to fulfill the objectives of the research work, all secondary data are compiled, processed and tabulated as per necessity and figures, diagrams, different types of chart are also used.

This study suffers from different limitations; it considers three banks only and time and resource are the constraints of the study. Therefore the study may not be generalized in all cases and accuracy depends upon the data collected and provided by the organization.

## 5.2 Conclusion

The above-mentioned major findings led this study to following conclusions.

- ✚ From the analysis of liquidity ratio, the liquidity position of NABIL is comparatively better than NIBL and Siddhartha Bank. NIBL has the highest cash and bank balance to total deposit and cash and bank balance to total assets ratio. Liquidity position of NIBL is comparatively lower than NABIL and Siddhartha Bank.
- ✚ Considering asset management aspect of three banks, Siddhartha Bank is relatively successful to invest in productive sector and has mobilized its collected deposits to provide loan and advances for the purpose of earning profit. NABIL has weak condition in mobilizing its collected deposits and total investment to total deposit of the other two banks. Otherwise Siddhartha Bank is weak in investing its collected deposits in comparison to NIBL and NABIL. Siddhartha Bank has not invested its fund efficiently towards productive activities of his total deposit.
- ✚ From the analysis assets management include of three banks, NABIL maintain highest ratio of other than NIBL and Siddhartha Bank. So NABIL is collected more fund and see better other two remaining and NIBL is less ratio of loan and advances to total working fund.
- ✚ The liquidity risk ratio of NIBL is higher than that of NABIL and Siddhartha Bank which appears to be less profitable return of NIBL. On the other hand liquidity risk ratio of NABIL has the lowest among three banks which specified that NABIL has kept idle funds in the form of cash and bank balance but this reduces profitability. NIBL has the lowest credit risk ratio among three banks. Credit risk involved in loan and advances and total investment of NABIL is more than NIBL and Siddhartha Bank. It may arise due to default risk or non-repayment of loan.
- ✚ NABIL appears to be more successful to earn profit on loan and advances than NIBL and Siddhartha Bank. Profit earning capacity of Siddhartha Bank is considered too weak. The average ratio of return on total working fund indicates that working fund of NABIL is well managed and efficiently utilized.

Alternatively total asset of Siddhartha Bank has not well managed. NIBL was not able to receive high interest on its total working fund in comparison with NABIL and Siddhartha Bank. On the other hand, NABIL has mobilized its working fund properly and its earning capacity is also high. Siddhartha Bank is in better position from the viewpoint of interest expenses. It seems to be successful to collect its working fund from less expensive sources in comparison to NIBL and NABIL whereas NIBL is in weak position.

- ✚ Growth ratio of total deposits, total investment and loan and advance of NIBL seem too weak in comparison to Siddhartha Bank and NABIL. NIBL has low growth ratio of net profit in comparison to Siddhartha Bank and NABIL. Siddhartha Bank has maintained high growth ratios in total deposit, loan and advances and net profit than NIBL and NABIL. Therefore, we must say that the bank is successful to increasing its sources of funds and its mobilization.
- ✚ Deposit is the strongest sources of fund whereas borrowings cover fewer portions of sources of fund. Siddhartha bank has kept fewer amounts in deposits in comparison to other two banks. Among the uses of funds, loan and advances covers maximum portion and interest accrued covers less portion. Siddhartha Bank has invested fewer amounts into loan and advances in comparison to NIBL and NABIL.
- ✚ Correlation coefficient between deposit and total investment of NABIL, NICBL and NIBL including the positive relationship or there is high degree of positive correlation. Most of the investment decision of these three banks depends upon deposits and only few decisions are depend upon other variables. Moreover by considering the probable error, the value of coefficient of determination of all three banks are more than 6 P.E. so it is significant i.e. there is significant relationship between deposits and total investment though there is positive relation between them. On the other hand there is significant relationship between deposits and total investment of NIBL, NABIL and Siddhartha Bank.
- ✚ Correlation coefficient between deposits and loan and advances indicates the positive relationship between the variables of NIBL, NABIL and Siddhartha Bank but only two banks- NABIL and Siddhartha Bank is high degree of positive

correlation. In most of the cases it has been found that investment decision depends upon the deposits and only few decisions depend upon other variables. By considering the probable error, the value of coefficient of determination of two banks – NABIL and Siddhartha Bank are greater than that of 6 P.E. so it can be concluded that the value of correlation coefficient is significant i.e. there is significant relationship between total deposits and loan and advances. But NIBL is less than that of 6 P.E. so there is no significant relationship between total deposit and loan and advances.

- ✚ In case of testing of hypothesis we can conclude that there is significant difference between mean ratio of loan and advances to total deposits of NABIL & Siddhartha Bank and there is no significant difference between mean ratio of loan and advance to total deposit of NIBL & NABIL and NIBL & Siddhartha Bank. Similarly, that there is significant difference between mean ratio of total investment to total deposit ratio of NIBL & NABIL, NABIL & Siddhartha Bank and NABIL & Siddhartha Bank.

### **5.3 Recommendations**

On the basis of analysis, findings, following recommendations are made. The banks can make use of these recommendations to overcome their weakness, inefficiency and improve their present fund mobilization and their overall investment policy.

#### **➤ To maintain effective liquidity position**

The liquidity position of a bank may be affected by internal as well as external factors. The affecting factors may be interest rates, supply and demand position of loan and advances as well as savings, investment situations, central banks directives, the lending policies, capability of management, strategic planning and funds flow situations. The ratio of cash and bank balance to total deposit and current assets of NIBL is higher than that of NABIL and Siddhartha bank. It means NIBL has higher cash and bank balance than NABIL and Siddhartha Bank and it indicates NIBL has higher idle cash and bank balance. It may decrease profit of bank. NIBL is recommended to mobilize its idle cash and bank balance in profitable sector as loan and advances.

➤ **To increase deposit collection**

The main source of commercial banks is collecting deposit from public who don't need that fund recently. So, it is recommended to collect more amounts as deposits through large variety of deposits schemes and facilities, like cumulative deposit scheme, prize bonds scheme, gift cheques scheme, recurring deposit scheme (life insurance), monthly interest scheme, house building scheme, direct finance housing scheme, education loan scheme and many others.

➤ **To make more investment on share and debentures**

To get success in a competitive market and to raise financial and economic development of the country a commercial bank must mobilize its fund in different sectors such as purchase of share and debenture of other financial and non-financial companies and other government and non-government companies. It is also genuine means of utilization of resource. Thus these companies may get chances to rise and that help to development of the country. Out of total working fund, investment on shares and debentures no one of these three banks invest its fund in share and debentures.

➤ **To make profitable return**

As a private sector, commercial banks can not keep their eyes closed from the profit motive. They should be careful in increasing profit motive. They should be careful in increasing profit in a real sense to maintain the confidence of shareholders, depositors and all its customers. Siddhartha Bank's profitability position is worst than that of other two banks. So, Siddhartha Bank is strongly recommended to utilize risky assets and shareholders fund to gain highest profit margin. Similarly, it should reduce its expenses and should try to collect cheap fund being more profitable.

➤ **To prefer aggressive-defensive policy**

Observing the findings of growth analysis and trend of growth, it has noticed that NABIL has been adopting an aggressive policy in all the parameters including loan

and advances. As the economy has not been able to show the survival growth, the aggressive policy may prove to be harmful in future. NIBL should rather prefer an aggressive-defensive policy in mobilizing the resources into loans.

➤ **To invest deprive and priority sector**

NRB has directed to commercial banks to invest their certain percentage in deprives and Priority sector and it is also responsibility of banks. The study has been found that NABIL has earned high profit because their services are only for profitable sector. It reveals that it has not granted loan on priority and deprives sector. So NABIL is recommended to thoroughly follow the directives issued by NRB and invest in priority and deprive sector and also to invest on other small-scale industries like, public utilities, health, sanitation and drinking water, education and agricultural etc.

➤ **To make effective portfolio management**

The total fund of a bank is the aggregation of different portfolios such as deposits, capital fund, borrowings and other deposit liabilities. It is need not to state that deposit liability is the major contributing source. Considering the position of NIBL and NABIL, the contribution of deposit to total sources of funds is high. It is definitely not a good sign. NIBL and NABIL are therefore, recommended to enhance its capital base and operational resources of funds in order to have an appropriate combination to the total funds of the bank. High contribution of deposits to the total sources of funds demands high level of liquid assets and it is the threat of withdrawals.

Portfolio management is very important for every investor. In each investment, risk is involved. Risk is the chance of loss or the variability of the returns of a period. The greater the variability of the returns project will be riskier. So it is kept in mind while investing in the project which would be lower risk and higher return. Portfolio management plays vital role with dividing total investment in different areas. Portfolio management of the bank assets basically means allocation of funds in different components of banking assets having different degrees of risk and varying rate of return in such a way that the conflicting goal of maximum yield

and minimum risk can be achieved. So, portfolio conditions of NIBL, NABIL and Siddhartha Bank should be examined carefully from time to time and alteration should be made to maintain equilibrium in the portfolio condition as far as possible. So, it can be said “all eggs should not be kept in the same basket”. The bank should make continuous efforts to explore new, competitive and high yielding investment opportunities to optimize their investment portfolio.

➤ **Liberal lending policy and sound credit collection policy**

To get success in competitive banking market, commercial bank must utilize their deposit as loan and advances. Loan and advances are the main source of income and also means of utilization resources of commercial banks. Negligence in administrating these assets could be the cause of liquidity crisis in bank and one of the main reasons of the bank failure. Collection of loan has been most challenging task of commercial banks these days, increasing on non-performing assets discloses the failure of commercial banks in recovery of loan. Therefore, it is recommended to NIBL, NABIL and Siddhartha Bank to follow liberal lending policy when sensations loan and advances with sufficient guaranty and implement a sound collection policy including procedure which rapid identification of bad debtor loans, immediate contact with borrower, continual follow up and as well as legal procedure if require.

➤ **To adopt innovative approach to bank marketing**

In the light of growing competition in the banking sector, the business of the bank should be customer oriented. Marketing is an effective tool to attract and retain the customers. Without effective marketing strategy any one be along behind in today’s competitive environment. Different marketing techniques like advertisement through audio-visual, published web site, documentary etc. are flowed. Similarly, draw attentions of customers through new technologies like, E-banking, increase investment through their wide international banking network should be introduced.

➤ **To extend branches all over the country**

Economic development of the country depends upon the growth of commercial banks. If the service of commercial banks expands all over the country it collects idle money from every corner of the country and can be utilized for income generation purpose. HMG/N has also encouraged the Commercial banks to expand banking service in rural areas and communities without making unfavorable impact in their profit. Therefore, all banks are recommended to expand their branch and providing banking service and facilities to the rural areas and communities to accelerate the economic development of the country.

Being a developing country, economic environment of Nepal is not in a good condition. The strong economic structure is needed for the rapid overall development. Commercial banks play vital role in the developing country like Nepal. Commercial banks are facing several problems related to fund mobilization. They have to rush with modern banking technology so that, they would be a professional institutions. If commercial banks follow above- mentioned suggestions, they would be successful in reaching to the modern innovative and competitive banking market.

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## APPENDIX - I

**Table - 1**  
**Cash and Bank Balance to Total Deposits Ratio**  
(Rs. in million)

S.N.	Name of the Banks	Year				
		2009	2010	2011	2012	2013
<b>1</b>	<b>NIBL</b>					
	Cash & Bank Balance	7917.99	6815.88	8140.38	11803.75	13252.08
	Total Deposits	46698.10	50094.70	50138.10	57010.60	62428.9
	<b>Ratio (%)</b>	<b>0.17</b>	<b>0.14</b>	<b>0.16</b>	<b>0.21</b>	<b>0.21</b>
<b>2</b>	<b>NABIL</b>					
	Cash & Bank Balance	3372.52	1400.11	2436.55	4275.58	5882.51
	Total Deposits	37348.25	46410.70	49696.11	55023.70	63609.81
	<b>Ratio (%)</b>	<b>0.09</b>	<b>0.03</b>	<b>0.05</b>	<b>0.08</b>	<b>0.09</b>
<b>3</b>	<b>Siddhartha Bank</b>					
	Cash & Bank Balance	1547.68	2406.61	1905.68	4291.89	3485.77
	Total Deposits	15855.00	20197.00	21576.00	25949.00	28392.82
	<b>Ratio (%)</b>	<b>0.10</b>	<b>0.12</b>	<b>0.09</b>	<b>0.17</b>	<b>0.12</b>

**Sample Calculation of Expected Return (  $\bar{X}$  ), Standard Deviation ( $\sigma$ ) and Coefficient of Variation (C.V.) is presented below:**

**For NIBL;**

Here,

$$\text{Total Return} = \sum X = 17+14+16+21+21 = 89$$

$$\text{Number of Observation} = N = 5$$

We have,

$$\text{Expected Return } (\bar{X}) = \frac{\sum X}{N} = \frac{89}{5} = 17.80$$

Now,

Year	Return (X)	Expected Return ( $\bar{X}$ )	$X - \bar{X}$	$(X - \bar{X})^2$
2009	17	17.80	-0.80	0.64
2010	14	17.80	-3.80	14.44
2011	16	17.80	-1.80	3.24
2012	21	17.80	3.20	10.24
2013	21	17.80	3.20	10.24
<b>N = 5</b>			$\sum(X - \bar{X})$	<b>38.80</b>

We know,

$$\text{S.D. } (\sigma) = \sqrt{\frac{1}{N-1} \sum (X - \bar{X})^2} = \sqrt{\frac{38.80}{5-1}} = 3.11$$

Again

$$\text{C.V.} = \frac{\text{Standard Deviation } (\sigma)}{\text{Expected Return } (\bar{X})} = \frac{3.11}{17.80} = 0.1747 \text{ or } 17.47\%$$

Likewise, other item has been calculated according the above analysis.

**Table - 2**  
**Cash and Bank Balance to Total Assets Ratio**

(Rs. in million)

S. N.	Name of the Banks	Year				
		2009	2010	2011	2012	2013
<b>1</b>	<b>NIBL</b>					
	Cash & Bank Balance	7917.99	6815.88	8140.38	11803.75	13252.08
	Total Assets	53010	57305	58357	65756	73152
	<b>Ratio</b>	<b>0.15</b>	<b>0.12</b>	<b>0.14</b>	<b>0.18</b>	<b>0.18</b>
<b>2</b>	<b>NABIL</b>					
	Cash & Bank Balance	3372.52	1400.11	2436.55	4275.58	5882.51
	Total Assets	43867.40	52151.68	58141.44	63193.41	73241.26
	<b>Ratio</b>	<b>0.08</b>	<b>0.03</b>	<b>0.04</b>	<b>0.07</b>	<b>0.08</b>
<b>3</b>	<b>Siddhartha Bank</b>					
	Cash & Bank Balance	1547.68	2406.61	1905.68	4291.89	3485.77
	Total Assets	17881.80	22802.40	24405.90	29579.10	33653.85
	<b>Ratio</b>	<b>0.09</b>	<b>0.11</b>	<b>0.08</b>	<b>0.15</b>	<b>0.10</b>

**Table - 3**  
**Investment to Current Assets Ratio**

(Rs. in million)

S.N.	Name of the Banks	Year				
		2009	2010	2011	2012	2013
<b>1</b>	<b>NIBL</b>					
	Investment	7399.00	8635.00	7573.00	10644.00	11702.00
	Current Assets	7918.00	6815.89	8290.37	12009.11	13519.48
	<b>Ratio</b>	<b>0.93</b>	<b>1.27</b>	<b>0.91</b>	<b>0.89</b>	<b>0.87</b>
<b>2</b>	<b>NABIL</b>					
	Investment	10826.38	13703.02	13081.21	14048.97	16332.04
	Current Assets	3925.41	4518.25	4989.06	5102.01	7516.82
	<b>Ratio</b>	<b>2.76</b>	<b>3.03</b>	<b>2.62</b>	<b>2.71</b>	<b>2.17</b>
<b>3</b>	<b>Siddhartha Bank</b>					
	Investment	2176.00	2453.00	2538.00	3394.00	4472.79
	Current Assets	2032.50	3105.60	2788.40	4939.30	4861.02
	<b>Ratio</b>	<b>1.07</b>	<b>0.79</b>	<b>0.91</b>	<b>0.69</b>	<b>0.92</b>

**Table - 4**  
**Loan and Advances to Total Deposit Ratio**

(Rs. in million)

S.N.	Name of the Banks	Year				
		2009	2010	2011	2012	2013
<b>1</b>	<b>NIBL</b>					
	Loan and Advances	36827.00	40948.00	41887.00	42907.00	47700.00
	Total Deposits	46698.09	50094.74	20138.12	57010.60	62428.00
	<b>Ratio</b>	<b>0.79</b>	<b>0.82</b>	<b>0.84</b>	<b>0.75</b>	<b>0.76</b>
<b>2</b>	<b>NABIL</b>					
	Loan and Advances	27589.93	32268.87	38034.09	41605.68	46369.84
	Total Deposits	37348.27	46410.70	49696.11	55023.70	63609.81
	<b>Ratio</b>	<b>0.74</b>	<b>0.70</b>	<b>0.77</b>	<b>0.76</b>	<b>0.73</b>
<b>3</b>	<b>Siddhartha Bank</b>					
	Loan and Advances	13328.00	16653.00	18384.00	20217.00	23086.56
	Total Deposits	15855.00	20197.00	21576.00	25949.00	28392.82
	<b>Ratio</b>	<b>0.84</b>	<b>0.82</b>	<b>0.85</b>	<b>0.78</b>	<b>0.81</b>

**Table - 5**  
**Total Investment to Total Deposit Ratio**

(Rs. in million)

S.N.	Name of the Banks	Year				
		2009	2010	2011	2012	2013
<b>1</b>	<b>NIBL</b>					
	Total Investment	7399.00	8635.00	7573.00	10644.00	11702.00
	Total Deposits	46698.09	50094.74	50138.12	57010.60	62428.00
	<b>Ratio</b>	<b>0.16</b>	<b>0.17</b>	<b>0.15</b>	<b>0.19</b>	<b>0.19</b>
<b>2</b>	<b>NABIL</b>					
	Total Investment	10826.38	13703.02	13081.21	14048.97	16332.04
	Total Deposits	37348.27	46410.70	49696.11	55023.70	63609.81
	<b>Ratio</b>	<b>0.29</b>	<b>0.30</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>
<b>3</b>	<b>Siddhartha Bank</b>					
	Total Investment	2176.00	2453.00	2538.00	3394.00	4472.79
	Total Deposits	15855.00	20197.00	21576.00	25949.00	28392.82
	<b>Ratio</b>	<b>0.14</b>	<b>0.12</b>	<b>0.12</b>	<b>0.13</b>	<b>0.16</b>

**Table - 6**  
**Loan and Advances to Total Working Fund Ratio**

(Rs. in million)

S.N.	Name of the Banks	Year				
		2009	2010	2011	2012	2013
<b>1</b>	<b>NIBL</b>					
	Loan and Advances	36827.00	40948.00	41887.00	42907.00	47700.00
	Total Working Fund	7354.24	6175.47	7679.86	11855.49	12574.60
	<b>Ratio</b>	<b>5.01</b>	<b>6.63</b>	<b>5.45</b>	<b>3.62</b>	<b>3.79</b>
<b>2</b>	<b>NABIL</b>					
	Loan and Advances	27589.93	32268.87	38034.09	41605.68	46369.84
	Total Working Fund	3124.25	3658.08	3864.37	4110.97	6012.48
	<b>Ratio</b>	<b>8.83</b>	<b>8.82</b>	<b>9.84</b>	<b>10.12</b>	<b>7.71</b>
<b>3</b>	<b>Siddhartha Bank</b>					
	Loan and Advances	13328.00	16653.00	18384.00	20217.00	23086.56
	Total Working Fund	2007.15	2938.48	2584.84	4795.28	4684.38
	<b>Ratio</b>	<b>6.64</b>	<b>5.67</b>	<b>7.11</b>	<b>4.22</b>	<b>4.93</b>

**Table - 7**  
**Return on Loan and Advances Ratio**

(Rs. in million)

S.N.	Name of the Banks	Year				
		2009	2010	2011	2012	2013
<b>1</b>	<b>NIBL</b>					
	Net Profit	901.00	1265.00	1139.00	1039.00	1915.00
	Loan and Advances	36827.00	40948.00	41887.00	42907.00	47700.00
	<b>Ratio</b>	<b>0.02</b>	<b>0.03</b>	<b>0.03</b>	<b>0.02</b>	<b>0.04</b>
<b>2</b>	<b>NABIL</b>					
	Net Profit	1031.05	1139.20	1337.75	1689.39	2218.76
	Loan and Advances	27589.93	32268.87	38034.09	41605.68	46369.84
	<b>Ratio</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.04</b>	<b>0.05</b>
<b>3</b>	<b>Siddhartha Bank</b>					
	Net Profit	217.92	240.84	311.42	330.46	482.56
	Loan and Advances	13328.00	16653.00	18384.00	20217.00	23086.56
	<b>Ratio</b>	<b>0.02</b>	<b>0.01</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>

**Table - 8**  
**Return on Total Working Fund Ratio**

(Rs. in million)

S.N.	Name of the Banks	Year				
		2009	2010	2011	2012	2013
<b>1</b>	<b>NIBL</b>					
	Net Profit	901.00	1265.00	1139.00	1039.00	1915
	Total Working Fund	7354.24	6175.47	7679.86	11855.49	12574.60
	<b>Ratio</b>	<b>0.12</b>	<b>0.20</b>	<b>0.15</b>	<b>0.09</b>	<b>0.15</b>
<b>2</b>	<b>NABIL</b>					
	Net Profit	1031.05	1139.20	1337.75	1689.39	2218.76
	Total Working Fund	3124.25	3658.08	3864.37	4110.97	6012.48
	<b>Ratio</b>	<b>0.33</b>	<b>0.31</b>	<b>0.35</b>	<b>0.41</b>	<b>0.37</b>
<b>3</b>	<b>Siddhartha Bank</b>					
	Net Profit	217.92	240.84	311.42	330.46	482.56
	Total Working Fund	2007.15	2938.48	2584.84	4795.28	4684.38
	<b>Ratio</b>	<b>0.11</b>	<b>0.08</b>	<b>0.12</b>	<b>0.07</b>	<b>0.10</b>

**Table - 9**  
**Total Interest Earned to Total Working Fund Ratio**

(Rs. in million)

S.N.	Name of the Banks	Year				
		2009	2010	2011	2012	2013
<b>1</b>	<b>NIBL</b>					
	Interest Earned	3267.00	4654.00	5803.00	5982.00	5872.00
	Total Working Fund	7354.24	6175.47	7679.86	11855.49	12574.60
	<b>Ratio</b>	<b>0.44</b>	<b>0.75</b>	<b>0.76</b>	<b>0.50</b>	<b>0.47</b>
<b>2</b>	<b>NABIL</b>					
	Interest Earned	2798.49	4047.73	5254.03	6126.86	5702.12
	Total Working Fund	3124.25	3658.08	3864.37	4110.97	6012.48
	<b>Ratio</b>	<b>0.90</b>	<b>1.11</b>	<b>1.36</b>	<b>1.49</b>	<b>0.95</b>
<b>3</b>	<b>Siddhartha Bank</b>					
	Interest Earned	1265.82	2018.29	2690.29	2906.26	2894.41
	Total Working Fund	2007.15	2938.48	2584.84	4795.28	4684.38
	<b>Ratio</b>	<b>0.63</b>	<b>0.69</b>	<b>1.04</b>	<b>0.61</b>	<b>0.62</b>

**Table - 10**  
**Total Interest Paid to Total Working Fund Ratio**

(Rs. in million)

S.N.	Name of the Banks	Year				
		2009	2010	2011	2012	2013
<b>1</b>	<b>NIBL</b>					
	Interest Paid	1187	2554	3620	3814	2775
	Total Working Fund	1050	1050	1050	1050	1050
	<b>Ratio</b>	<b>1.13</b>	<b>2.43</b>	<b>3.45</b>	<b>3.63</b>	<b>2.64</b>
<b>2</b>	<b>NABIL</b>					
	Interest Paid	1153.28	1960.11	2955.43	3155.49	2186.19
	Total Working Fund	1681.62	1807.93	2536.75	3008.28	3643.09
	<b>Ratio</b>	<b>0.69</b>	<b>1.08</b>	<b>1.17</b>	<b>1.05</b>	<b>0.60</b>
<b>3</b>	<b>Siddhartha Bank</b>					
	Interest Paid	813.62	1406.49	1925.24	2048.92	1555.57
	Total Working Fund	2007.15	2938.48	2584.84	4795.28	4684.38
	<b>Ratio</b>	<b>0.41</b>	<b>0.48</b>	<b>0.74</b>	<b>0.43</b>	<b>0.33</b>

**Table - 11**  
**Liquidity Risk Ratio**

(Rs. in million)

S. N.	Name of the Banks	Year				
		2009	2010	2011	2012	2013
<b>1</b>	<b>NIBL</b>					
	Cash & Bank Balance	7917.99	6815.88	8140.38	11803.75	13252.08
	Total Deposits	46698.09	50094.74	50138.12	57010.60	62428.00
	<b>Ratio</b>	<b>0.17</b>	<b>0.14</b>	<b>0.16</b>	<b>0.21</b>	<b>0.21</b>
<b>2</b>	<b>NABIL</b>					
	Cash & Bank Balance	1153.28	1960.11	2955.43	3155.49	2186.19
	Total Deposits	37348.27	46410.70	49696.11	55023.70	63609.81
	<b>Ratio</b>	<b>0.03</b>	<b>0.04</b>	<b>0.06</b>	<b>0.06</b>	<b>0.03</b>
<b>3</b>	<b>Siddhartha Bank</b>					
	Cash & Bank Balance	1547.68	2406.61	1905.68	4291.89	3485.17
	Total Deposits	15855.00	20197.00	21576.00	25949.00	28392.82
	<b>Ratio</b>	<b>0.10</b>	<b>0.12</b>	<b>0.09</b>	<b>0.17</b>	<b>0.12</b>

**Table - 12**  
**Credit Risk Ratio**

(Rs. in million)

S. N.	Name of the Banks	Year				
		2009	2010	2011	2012	2013
<b>1</b>	<b>NIBL</b>					
	Total Investment plus Loan and Advances	44226	49583	49460	53551	59402
	Total Assets	53010	57305	58357	65756	73152
	<b>Ratio</b>	<b>0.83</b>	<b>0.87</b>	<b>0.85</b>	<b>0.81</b>	<b>0.81</b>
<b>2</b>	<b>NABIL</b>					
	Total Investment plus Loan and Advances	38416.31	45971.89	51083.06	55654.65	62701.88
	Total Assets	43867.40	52151.68	58141.44	63193.44	73241.26
	<b>Ratio</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>	<b>0.88</b>	<b>0.86</b>
<b>3</b>	<b>Siddhartha Bank</b>					
	Total Investment plus Loan and Advances	15504.00	19106.00	20922.00	23611.00	27559.51
	Total Assets	17881.80	22802.40	24405.90	29579.10	33653.85
	<b>Ratio</b>	<b>0.87</b>	<b>0.84</b>	<b>0.86</b>	<b>0.80</b>	<b>0.82</b>

## APPENDIX - II

### Sample Calculation of Growth Ratio of Total Deposits

#### For NIBL

We have,

$$D_n = D_0 (1+g)^{n-1}$$

Where,

$D_n$  = Total Deposits in the  $n^{\text{th}}$  Year

$D_0$  = Total Deposit in the initial Year

$g$  = Growth Rate

$n$  = Total number of Year

Here,

$$D_{2013} = 62428.90$$

$$D_{2009} = 46698.10$$

$$n = 5 \text{ years}$$

Now,

$$D_n = D_0 (1+g)^{n-1}$$

$$62428.90 = 46698.10(1+g)^{5-1}$$

$$\text{Or, } (1+g)^4 = 62428.90/46698.10$$

$$\text{Or, } (1+g) = (1.3369)^{1/4}$$

$$\text{Or, } g = 1.0753-1$$

$$\therefore g = 0.0753 \text{ or } 7.53\%$$

*Similarly other growth ratios have been calculated by performing same method which is mentioned above.*

## APPENDIX - III

**Table - 13**  
**Sample Calculation of Correlation Co-efficient between Deposit and Loan & Advances of NIBL:**

Year	Deposit(X)	Loan & Advances (Y)	$x = X - \bar{X}$	$y = Y - \bar{Y}$	$x^2$	$y^2$	xy
2009	46698.10	36827.00	-6575.98	-5226.80	43243512.96	27319438.24	34371332.26
2010	50094.70	40948.00	-3179.38	-1105.80	10108457.18	1222793.64	3515758.40
2011	50138.10	41887.00	-3135.98	-166.80	9834370.56	27822.24	523081.46
2012	57010.60	42907.00	3736.52	853.20	13961581.71	727950.24	3187998.86
2013	62428.90	47700.00	9154.82	5646.20	83810729.23	31879574.44	51689944.68
<b>Total</b>	<b>266370.40</b>	<b>210269.00</b>					
<b>Mean</b>	$\bar{X} = 53274.08$	$\bar{Y} = 42053.08$			$\sum x^2 =$ <b>160958651.60</b>	$\sum y^2 =$ <b>61177578.80</b>	$\sum xy =$ <b>93288115.68</b>

We have,

$$\begin{aligned} \text{Correlation Co-efficient}(r) &= \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}} \\ &= \frac{93288115.68}{\sqrt{160958651.60 \times 61177578.80}} \\ &= \mathbf{0.9401} \end{aligned}$$

And,  $r^2 = \mathbf{0.8838}$

$$\begin{aligned} \text{Probable Error (P.E.)} &= 0.6745 \times \frac{1 - r^2}{\sqrt{n}} \\ &= 0.6745 \times \frac{1 - 0.8838}{\sqrt{5}} = \mathbf{0.0784} \end{aligned}$$

Therefore,  $6 \times (\text{P.E.}) = 6 \times 0.0784$   
 $= \mathbf{0.4703}$

*Thus, Remaining Correlation Coefficient has been calculated by using same method as in table no.13.*