

NEPAL RASTRA BANK GUIDELINES ON INVESTMENT

POLICY OF COMMERCIAL BANK IN NEPAL

(A Case Study of Nepal Investment Bank Ltd.)

A Thesis

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This is to certify that the thesis

submitted by

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Entitled

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(A Case Study of Nepal Investment Bank Ltd.)"

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DECLARATION

I hereby declare that the work reported in this thesis entitled " **NEPAL RASTRA BANK GUIDELINES ON INVESTMENT POLICY OF COMMERCIAL BANK IN NEPAL (A case study of Nepal Investment Bank Ltd.)**" submitted to Nepal Commerce Campus, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirements for the Master Degree in Business Studies (MBS) under the supervision of Sincere Mam Jyoti Pandey and Sir Mahesh Chand , Nepal Commerce Campus, Tribhuvan University.

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ABBREVIATION USED

%	= Percentage
A/C	= Account
AD	= After The Death Of Christ
ATM	= Automated Teller Machine
BOK	= Bank of Kathmandu Limited
BS	= Bikram Sambat
CAR	= Capital Adequacy Ratio
CCR	= Cash Credit Ratio
CRR	= Cash Reserve Ratio
EBL	= Everest Bank Limited
FY	= Fiscal Year
Govt.	= Government
HBL	= Himalayan Bank Limited
HMG	= His Majesty's Government
i.e.	= That is
IMF	= International Monetary Fund
JVB	= Joint Venture Bank
L/C	= Letter of Credit
LBL	= Lumbini Bank Limited
LLP	= Loan Loss Provision
MIS	= Management Information System
NABIL	= Nepal Arab Bank Limited

NBL	= Nepal Bank Limited
NIBL	= Nepal Investment Bank Limited
NICBL	= Nepal Industrial and Commercial Bank Limited
NIDC	= Nepal Industrial Development Corporation
NRB	= Nepal Rastra Bank
P/L	= Profit and Loss
PE	= Probable Error
RBB	= Rastriya Banijya Bank
ROA	= Return on Assets
ROE	= Return on Equity
Rs.	= Nepalese Rupees
RWA	= Risk Weighted Ratio
SBI	= State Bank Of India Limited
SCBNL	= Standard Chartered Bank Nepal Limited
SDC	= Shanker Dev Campus
TU	= Tribhuwan University
WADR	= Weighted Average Deposit Rate
WALR	= Weighted Average Lending Rate

CHAPTER I

INTRODUCTION

1.1 General Background of study:

Nepal is one of the least developed countries in the world. Reason behind Nepal's underdeveloped economy is not due to lack of resources but due to improper utilization of the available resources in the efficient manner. It's been more than four decades ago that Nepal had launched planned economic policy. But now it is, actively trying to achieve the rapid pace of development through liberalization.

To attend the rapid of economic development of the country, there should be good environment for the establishment of corporation in the different sector of the economy. Similarly for the proper and efficient utilization of resources it needs its proper plan and strategy, for plan and strategy development huge amount of capital investment is required.

A country has its own fiscal and monetary policies, which stabilize and supervise the economy. These two policies are like two wheels of the same cart, which drive the economy and take it ahead. In Nepal ministry of finance look after the fiscal policy where as central bank looks after the monetary policy.

The central bank and the commercial bank play its significant role in the economic development of the country, as they are the main source of the capital for most of the investments from one sector to another whether it's big or small. Central bank monitors the spread rates i.e. deposit interest rate and lone interest rate and other bank rate, establishment of branches and many other aspect of financial institution. Central bank almost governs all the functions of the financial institution. Unlike the central bank, commercial bank is the profit oriented financial institution. Main stream function of the commercial bank is to mobilize the scattered saving of the public by providing credit to the needy firms, industries and people to get the productive use. Being a profit oriented financial service providing institution, certain percent interest rate is given to the depositor and certain percent interest is charged by the bank in the lone facilities, which we call as the spread rate.

The development of the country highly depends upon its economic condition. The well-organized financial systems of the country has played a great role, it collects financials resources from public and provide fund for commercial and economic activities. As a financial institution system, commercial bank are the major media which occupy quite an important place in the framework of the every economy, trade and business and other resource deficit sectors contribute to the economic growth of the nation. Beside this commercial banks render numerous services to their customer in view of facilitating their economic and social life. Commercial bank formulates sound investment policies to make it more effective, which eventually contribute to the economic growth of a country.

Now a day, there is much competition in banking market but less opportunity to make investment. In this condition, bank can take initiation in search of new opportunities, so that they can survive in the competitive market and earn profit. But investment is very risky job, for a purposeful, safe, profitable investment, bank most follows sound investment and fund mobilizing policy. The sound policies help commercial bank maximized quality and quantity of investment and hereby achieve the own objective of profit maximization and social welfare. The banking sectors needs to play a vital role to boost the economy by adopting the growth oriented investment policy and building up the financial structure for future economic development Formulation of sound investment policies and coordinated and planned efforts pushes forward the forces of economic growth. So, obviously investment of collected fund is the most important theme for the development of the country

1.1.1 Origin of Banking:

Banking has come to the present advanced form through various phases and platforms. Since time immemorial there has always been some sort of banking activities. According to Geoffrey Crowther; ‘Merchants, Goldsmiths and Money Lenders are ancestors of modern banking’.

The etymology (origin) of word ‘Bank’ is related to the Latin word ‘Bancus’, Italian word ‘Banca’ and French word ‘Banque’ all of which means a ‘bench’. The medieval European moneylenders & money exchangers used benches to display their valuables

and coins. Later, when they were unable to meet the obligations, their benches were broken to pieces. Thus the word 'bankruptcy' came from these circumstances.

It is difficult to pinpoint exactly where the word the 'bank' came from; it might have been from 'Bancus', 'Banca', Banque ' or from the German word 'Bank', meaning joint stock company.

Bank as an institution, is originated from Italy. The world's first bank was established in Venice, Italy as 'Bank of Venice' in 1157AD. Subsequently 'Bank of Barcelona', Spain, the second bank was established in 1401 AD and 'Bank of Geneva', Switzerland was established in 1407 AD. 'Bank of Amsterdam', Netherlands set up in 1609 AD was very popular. The 'Bank of Hindustan' regarded as India's first bank was established in 1770.

In spite of the establishment of 'Bank of England' in 1694, the development of modern commercial banking institutions had to wait for another four decades until the Banking Act was introduced in 1833 AD, which allowed freedom to open joint stock company banks. The 'Bank of England' is the first Central bank of world.

1.1.2 ORIGIN OF BANKING IN NEPAL

Regarding the origin of bank in Nepal as in other countries, goldsmiths and merchants were the ancient bankers in Nepal. Till 18th century, it was not formed officially. In 1933 BS then Prime Minister Ranadip Singh took the first step towards the institutional development of the banking in Nepal by establishing "Tejrath Adda". Tejrath Adda provided loan to the Government employee in low rates of interest, but did not collect deposit from public. As it was focused with in the valley only, the Prime Minister Chandra Shamsheer in 1957 BS undertook an initiative in expansion of setting up branches outside the valley. Banking in true sense was first established in Nepal on 30th Kartik 1994 in BS named as Nepal Bank Limited. Central bank was established in 2013 BS for development of banking sector and to help the Government to formulate monetary policies. Since then, it has been functioning as the Government bank. In 2022 BS Rastriya Banijya bank, the second commercial bank was established. Nepal being an agricultural based country, Agriculture Development Bank was established in 2024 BS. After His Majesty's Government allowed operating a bank in a joint venture, the first joint venture bank in the country, Nepal Arab Bank Limited was established in 2041 BS. This has proved to be a milestone in banking sector in Nepal. Similarly, other

commercial banks have been established in joint venture with foreign banks, which are as follows:

Nepal Indo Suez Bank (Established 2042 BS) Renamed as NIBL on 30 May 2002

Nepal Gindlays Bank (Established 2043 BS) Renamed SCB on 13 July 2001

Himalayan Bank Ltd; (Established 2049 BS)

Nepal SBI Bank Ltd. (Established 2050 BS)

Nepal Bangladesh Bank Ltd. (Established 2051 BS)

Bank Of Kathmandu (Established 2051 BS)

Nepal Bank of Ceylon (Established 2053 BS) Nepal credit & commerce Bank Limited on 10th Sept 2002

Nepal Industrial & Commercial Bank, Biratnagar (Established 2055 BS)

Lumbini Bank Ltd. Narayangadh (Established 2055 BS)

Kumari Bank Ltd. Putalisadak.

Machhapuchhre Bank Ltd. Pokhara

Laxmi Bank Ltd. Banepa

Siddhartha Bank Ltd. Kamaladi

After the restoration of democracy in Nepal there has been tremendous development in banking sector. It has played important role in the economic development of the country. After the introduction of Development Bank Act 2052, many development banks have been opened in the various parts in Nepal. Since the numbers of banks are increasing, Nepal Rastriya Bank is conducting a study whether or not any other banks are required in the country.

1.1.3 Nepal Rastra Bank (Central Bank)

Nepal Rastra Bank is the central Bank of Nepal. It was established set up in 1374 B.S. (26th April 1956) under the Nepal Rastra Bank act 2012BS after it's established, it is used the Nepal notes on 7th Falgun 2016 the 1st time. The main objects established is the use of Nepalese country currency in place if Indian currency. But this act was been Nepal Rastra Bank act 2058(2002) has been enacted by the parliament.

Before, this, Nepal had no formal central Bank to regulate the finances sector of the country. Nepal Rastra Bank was set up with the full ownership of His Majesty's

Government of Nepal. It is an autonomous body with the main objective of stabilizing the country's economy using different financial tools. Unlike commercial Bank, a central Bank neither accepts deposit from the public nor gives loan to the public. But it accepts the credit of His Majesty's Government, commercial banks, the financial institutions, and Govt. offices & provides loan to the His Majesty Government & financial institutions when needed. It is set up to make & used monetary policy the NRB regulates the Commercial Bank of the country. Its main objectives are to uplift the living standard of the people of the country. It controls banking sector by regulation, pervasion & market operation. NRB issues directives to the commercial banks, instructing them to fulfill its regulatory requirement of the country. There is no specific time period & are issued & amended on need basis. This bank also gives advice to the H.M.G. time to time on economic & financial matters.

To ensure stability in the economy, Nepal Rastra Bank (NRB) issues guidelines from time to time related to various aspects of the banks like banking operations, currency and credits with a view to develop a secured and healthy banking system and to protect the interest of the deposit holders and for the economic development of the country. NRB issued directives and guidelines to the banks with some amendment effective from B.S. 2059/04/06 (22 July 2002). Banking sector is being challenging and competitive day by day. Challenges to the banking business are faced not only from the external element but also within the bank. Banks needs to operate in a highly professional manner keeping the bank's financial health sound at any point. Banks need public confidence during its whole life. In order to safe guard from damage in the banking sector and to have a healthy competition NRB guidelines help a lot to the banks. Banks

are required to follow those guidelines. Nepal Rastra Bank plays an important role to make commercial banks invest their funds in productive and profitable sectors. For this purpose, NRB has imposed many rules and regulation so that commercial banks have sufficient liquidity, security and provision. Most of the banks have been successful to earn profit from their investment but none of them seem to be capable to invest their fund in more productive sectors. To meet the requirement of NRB, banks must deposit certain percentage of their total deposit with NRB. i.e. 7% of current and saving deposit liabilities and 4.5% of fixed deposit liabilities. Bank should have 2% minimum cash balance in their self-vault of total local currency of A/C held by the bank. The cash in vault should include only the local currency any foreign currency except clearing cheques etc.

Relating to loan classification and provision, all commercial bank are supposed to categorized the loans disbursed to the customers into different group on the basis of their past due periods. Each category of the loan amount required certain percentage of it to be provision for probable loss. The provision amount is deducted from the profit. This is done mainly to safe guard the money of the depositor and to protect the bank from bankrupt. Similarly, according to the new amendment made on 2002, for a loan to be bad, the time period of past due is 1 year and more.

It lays down various rules & regulation for the banks & the banks need to various facilities to the banks. Similarly, NRB plays significant role to make commercial bank mobilize their fund in good & productive & profitable sector so there Commercial Bank can have sufficient liquidity & security.

1.1.4 Profile of Nepal Investment Bank Limited (NIBL)

There are many commercial banks operating in Nepal's financial market. Nepal Investment bank is previously known as Nepal Indosuez Bank Limited. It is one of the commercial banks established in 1986 as a joint venture between Nepalese and French partners. The French partner was credit Agricole Indusuze,a subsidiary of one of the largest banking group in the world holding 50% of the capital of NIBL . With the decision of credit Agricole Indosuez to divest, a group of companies' comprising of bankers, professionals industrialists and businessmen has acquired the 50% shares of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd. the bank is renamed as Nepal

Investment Bank Limited upon the approval of bank's Annual General Meeting, Nepal Rastra Bank and Company Registrar's office on April 2002. At present, there is no foreign investment in it. All the shares are owned by the Nepalese Shareholders.

50% of the capital is held by group of companies.

15% of the capital is held by Rastriya Banijya Bank.

15% of the capital is held by Rastriya Beema sansthan.

20% by General Public

NIBL started its service from Durgar Marg office. The bank has experienced a dynamic growth up to date. Its objective is to provide more facilities to the customers. It has expanded its services by establishing branch offices at Pulchowk, Birgunj, Thimi, Banepa and Jeetpur. Recently, NIBL has opened new branches at Newroad, Biratnagar and Butwal. NIBL is doing some homework to open other branch offices in other places.

Capital Structure

Authorized Share Capital

10000000 numbers of ordinary shares of Rs 100	1,000,000,000
---	---------------

Issued Share Capital

5905860 numbers of ordinary shares of Rs.100	590, 868, 00
--	--------------

Paid-up Share Capital

5905860 numbers of ordinary shares of Rs.100	590,868,00
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Service Offered

Nepal Investment Bank Ltd. has been providing different services to the customers from its head office and its branch offices. The services offered by NIB are as follows:

Deposits

Loans and Advances

Remittances

Export Credit

Bills Purchased

Tele banking Service

ATM with any branch banking

Vehicle loans

Funds transfer

Bank Guarantees

Clearing/ Collection

Locker Facilities

Any branch banking

EZee saving Scheme

365 days banking.

Telebanking Service: Customers may acquire information about their balance, exchange rate and others. Through telebanking NIBL has been able to provide prompt and efficient service to its customers. The customers just have to dial up a Pre- specified telephone number and can make queries about balance, exchange rate of foreign currency etc.

Any Branch Banking: Under this scheme, customers can deposit and withdraw their cash and Cheque from any of the branches whichever is convenient to them, regardless of having their account in any other branch.

ATM with any Branch Banking: With the introduction of ATM, NIBL extended its service for 24 hours a day, 7 days a week and 365 days a year. Through ATM, customers can deposit and draw money from their account any time. But it allows customer to withdraw up to Rs.20000 per day.

Ezee Saving Scheme: It is a easy saving scheme. In this, saving scheme bank provide 4% interest n daily available balance and also provides following free services to the customer like unlimited withdrawals, Smart ATM card, Telebanking, Any branch banking and Accidental Insurance.

365 days banking: Nepal Investment bank Limited has also stated 365 days banking service from 9th sept. 2002 at Durbar Marg Office. 365 days banking service includes deposits and withdrawals, purchased and sale of foreign currency, Acceptance of clearing cheques and cheques for collection, Issuance of draft.

1.2 STATEMENT OF THE PROBLEM:

Financial institutions assist in the economic development of the country. Commercial bank being the financial institution plays significant role by collecting scattered surplus funds and deploy these fund in the productive sectors as investment. Economic Development of the country is directly related to the volume of investment made and return obtained by the bank. Investment problem has become very serious for the least developed country like Nepal. This is due to lack of sound investment policy of commercial bank.

Nepalese commercial banks have not formulated their investment policy in an organized manner. The implementation of policy is not effective. The credit extended by the commercial bank to agriculture and industrial sector is not satisfactory to meet the present growing need. Nepotism and political pressure also effects the investment decision of the commercial banks. Granting loan against insufficient deposit, overvaluation of goods pledged, land and building mortgaged, risk averting decision regarding loan recovery and negligence in recovery of overdue loan is some of the basic loopholes and the result of unsound investment policy sighted in the banks.

Commercial bank's investment has been found to have lower productivity due to the lack of supervision regarding whether there is proper utilization of their investment or not. Lack of farsightedness in policy formulation and absence of strong commitment towards its proper implementation has caused many problems to commercial bank.

The guidelines in themselves are not important unless properly implemented. The rules and regulation are only the tools of NRB to supervise and monitor the financial

institution. NRB need to monitor the concerned authorities in order to ensure that they are being followed.

Non-performing loans is also one of the serious problem facing by the commercial banks. Non-performing loans can be the result of present condition of the country. Due to instable political condition, insecurity and lot many factors industries of Nepal are closing down and thus are the investment. Therefore, appropriate investment policy is the basic need of all the commercial bank as well as other financial institutions. The main focus of the statement of the problem is the matter related to the investment policy of the commercial banks and this study focus mainly on the loan and advances and investment in share and securities.

Making a research question for the supervision of our study on investment policy:

1. How Nepal Rastra Bank directives regarding investment policy (Loans and advances and investment)?
2. What is the liquidity position of Nepal Investment bank Limited?
3. What is the financial position of the Nepal Investment bank limited?
4. What is the level of profitability of Nepal Investment Bank Limited?
5. How Nepal Investment Bank Limited make the trend analysis of deposit utilization and its projection for next five years?

1.3 OBJECTIVES OF THE STUDY

The basic objectives of this study are listed as follows:

1. To explain the Nepal Rastra Bank directives regarding investment policy (Loans & advances and investment).
2. To analyze the liquidity position of Nepal Investment Bank Limited.
3. To describe the financial position of the Nepal Investment Bank Limited.
4. To analyze the level of profitability of Nepal Investment Bank Limited.

5. To describe the trend value analysis of deposit utilization and its projection for next five years.

1.4. SIGNIFICANCE OF THE STUDY:

The success and prosperity of the bank heavily depends upon the successful implementation and investment of collected resources, which develops the economy of the country. Good investment policy of the bank has positive impact on economic development of the country and vice versa.

1. This study would provide clear picture how bank is investing its collected funds.
2. The analysis on investment practice would help the bank to further improve the investment policy.
3. The shareholders of this bank would be benefited from this research.
4. Depositors can take decision to deposit their surplus money.
5. This study will help Nepal Rastra bank to formulate the new investment policy.
6. More over, it will prove to be an important value for the entire individual interested in commerce and banking field.

1.5 LIMITATIONS OF THE STUDY:

This is done for partial fulfillment for Master's of Business studies (MBS). Time constraints financial problem and lack of research experience will be the primary limitations and other limitations are:

1. This study might not cover all the commercial banks on which NRB provide guidelines on investment policy because it is very difficult to get financial statement of all commercial bank. so, this study confined only one bank that is Nepal Investment bank Limited.
2. This study basically depends on secondary data.

3. The annual reports published by the banks are the major data used for the analysis in this study. Besides this, reports published by NRB, financial statements, articles, journals and publications are also used.
4. This study is limited to the case study of Nepal Investment Bank only. Hence, this research does not reflect anything about other commercial banks of the country.

A period of 5 years trend is considered. The study is made from 2064/65 to 2068/69 only. Research result is based solely the available data from the bank (published). Moreover the study is made for 5 years only; the performances of other years are ignored. The research result does not represent the performance of the whole years.

Statistical tools are used for analysis. Hence, the drawbacks and weakness of those tools are the limitation in this study.

1.6 ORGANISATION OF THE STUDY:

The Study is organized in the following chapters

1. Chapter 1: Introduction

It deals with introduction of the main topic of the study like general background, meaning of central bank, profile of NIBL, statement of the problem, objectives and significance with limitation of the study and other introductory framework.

2. Chapter 2: Review of literature

It deals with the review of available relevant studies. It includes the conceptual review and review of the related books, journals and the published and unpublished research works as well as thesis. It also includes the investment policy of commercial bank.

3. Chapter 3: Research Methodology

It deals with methodology of the study i.e. research carried out in this size and shape. For this purpose various financial tool and statistical tool are defined which will be used for the analysis of the presented data.

4. Chapter 4: Presentation and Analysis of data

It deals with the presentation and analysis of all the relevant collected data. Analysis is done as per described in chapter 3. This chapter is the heart of the study.

5. Chapter 5: Summary, Conclusion and Recommendation

It contains the summary of the study, , conclusion ,recommendation and suggestion on the basis of the study.

CHAPTER II

Review of Literature

This chapter is basically concerned with conceptual framework and review of literature relevant to the investment policy of commercial bank. Every study is much based on past knowledge and activities. The past study and knowledge should not be ignored as it provides foundation to the present study. So, analysis and presenting following parts define this chapter.

2.1. Conceptual Framework

Banks play an important role in the economic growth of a country. Banking, when properly organized, aids and facilitates the growth of trade and industry and hence of national economy. In the modern economy, banks are considered not as a dealer in money but as the leaders of development. Banks are not just the storehouses of the country's wealth but are the reservoirs of resources necessary for economic development.

Banking industry has acquired a key position in mobilizing resources for finance and social economic development of the country. No function is more important to the economy and its constituent than financing. "Bank assists both the flow of goods and service from the producers to the consumers and financial activities of the government. Banking provides the country with a monetary system of payment and is an important part of the financial system, which makes loans to maintain and increase the level of consumption and production in the economy." (American Institute of Banking, 1972) P-162

"Commercial banks deal with other people's money. They have to find ways of keeping their liquid assets so that they could meet the demands of their customers. In this anxiety to make profit, the bank cannot afford to lock up their funds in assets, which are not easily releasable. The depositors must be made to understand the bank is fully solvent. The depositors' confidence could be secured only if the bank is able to meet the demand for cash promptly and fully. The banker has to keep adequate cash for this purpose. Cash is an idle asset and bankers cannot afford to keep a large possession of his assets in the form of cash. Cash brings in no income to the bank. Therefore, the

banker has to distribute his assets in such a way that can have adequate profits without sacrificing liquidity. (M. Radhaswamy, S.V.Vasudevan, 1979)

According to F.A Bardford, "A bank is one who in the ordinary course of his business receives money which he repays by honoring cheques of persons from which of one whose account is receives it." (F.A. Bardford, P 453-454)

Commercial Bank Act 2031B.S. of Nepal has defined that "A commercial bank is one which exchanges money, deposits money, accepts deposits, grant loans and performs commercial banking functions and which is not a bank meant for cooperative, agriculture, industries or for such specific purpose."(Commercial Bank Act, 2031 BS)

According to Shakespeare Vaidya "The central bank is the bank that works as the leader of the money market. It is the chief of all banks operating in the country. It supervises and regulates and controls the functions of the commercial banks and other financial institutions. The central bank also works as the bankers to the government and advises the government on several matters. It is the only organization that monitors the whole economy of the country. Therefore, central bank is an important financial institution in every sovereign independent country in the modern times. It is the apex of economy's banking system. Central bank is the central arch of the monetary and fiscal framework in every country of the world and its functions are indispensable for proper functioning of the economy and fiscal operations of the government." (Shakespeare Baidhya, 1997, P 50.)

According to M.H. DeKock," a central bank is a bank which constitutes the apex of the monetary and banking structure of its country and which performs best assist can in the national economic interest", which are as follows:

- i) The regulation of currency in accordance with the requirements of business and the general public for which purpose it is granted either the sole right of note issue or at least a partial monopoly thereof.
- ii) The performance of general banking and agency services for the country.
- iii) The custody and management of the nation's reserves of international currency.

- iv) The granting of accommodation in the form of discounts or collateral advances, to commercial banks, bill brokers and dealers or other financial institutions and the general acceptance of the responsibility of lender of the last resort.
- v) The settlement of clearance balances between the banks and
- vi) The control of credit in accordance with the needs of business with view to carrying out the board monetary policy adopted by the country

Dekock further elaborated that central bank is that it should not to any great extent, perform such banking transactions as accepting deposits from the general public and accommodating regular commercial customers with discounts and advances. It is now almost generally accepted that a central bank should conduct direct dealings with public in such forms or to such extent as in the circumstances of the particular country, it considers absolutely necessary for the purpose of carrying out its monetary and banking policy."(M.H Dekock, 1956)

The international Bank For settlements defines a central bank as “the bank in any country which has been entrusted the duty of regulating the volume of currency and credit in the country.”

The central bank is a non-profit organization although it generates profit in the course of its functions. Central bank has full authority to manage the whole economic system, performs banking services for the country, maintains the cash reserves of all commercial banks, issues notes and works as a lender of the last resort to all commercial banks. The main objective of a central bank is to serve the board national interest in monetary matters and to support the economic polices of the government.

2.1.1. Functions of Central Bank

Shekhar and Shekhar (2002) Stress that it is very difficult to lay down each function of a central bank. A careful study of the central banks operating in various countries would enable to draw certain broad conclusion as to the fundamental functions of a central bank.

As per the observations made by the governor of the bank of England before the royal Commission on Indian Currency (1962AD), a central bank should be the holder of all reserves of other banks and branches of the banks all over the country.

Although the primary function of any central bank still remains to be issuing, they have different roles to play in the economic sphere of a country. Sometimes, they act as the banker to the government and sometimes to the other financial institutions. The other times, they have a role to play as the lender of the last resort, an agent, an advisor, a custodian of the nations metallic reserves and the ultimate controller of volume of currency.

Banker's Bank: the role of a central bank is that of a banker of the banks. It monitors and controls the functions of all the commercial banks operating in the country and on the other hand it assists them in various ways and guides the banks towards healthy competition.

Origin of Banking Policies: All the banking policies of the country are laid down by the central bank of that country. For instance, Nepal Rastra Bank issues various directives for the commercial banks from time to time. e.g. Instructing them to fulfill its regulatory requirements on the minimum loan that need to be provided to the priority sector of the country. The priority sector of the country comprises areas such as agriculture, small-scale business and cottage industries.

Monitory Control: In any country, it is only the central bank, which issues notes and coins required. It is issued only after careful analysis of the elements such as the rate of unemployment, inflation and economic growth.

Lender of last resort: As the central bank is the banker's bank, it provides loans and advances to the commercial banks operating under it in times of emergency. In the cases, central bank plays a role of the lender of the last resort.

Representative of international institution: A central bank acts as the representative of the country when it comes in contact of international institutions likes IMF and World Bank. The central bank seeks guidance of such institutions when it comes to stabilizing the economy of the country.

2.1.2. INVESTMENT

The word investment sounds good and prestigious too. There is always risk and return in investment. Higher the risk higher will be the return and lower the risk lower will be the return, but it is not always true. Generally investment means to flow cash in different sector with profit motive. But in the broad sense, investment means to sacrifice current rupee in the present and certain for the future rupees, which comes later and is uncertain. According to F. Amling” investment may be defined as the purchase by an individual or the institutional investor of a financial or real asset that produces a return proportional to the risk assumed over some future investment period”. Similarly according to Donal E Fischer and Ronald J Jordan “An investment is commitment of fund made in the expectation of some positive rate of return. If the investment is properly undertaken the return will be commensurate with the risk the investor assumes”.

But in the study the word investment covers the wide range of activities. Investment is not possible without adequate saving. If all income and savings are consumed to solve the basic needs there will be no existence of investment. Therefore both saving and investment are interrelated. According to W J Sharpe and G J Alexender, "distinction is often made between investments and saving, saving is defined as forgone consumption, investment is restricted to real investment of the sorts that increase national output in the future". (W.J. Sharpe & J. Alexender, PH, P1)

Investment is concerned over the managing the surplus resources in such a way that will maximize the investor's wealth. Resources should be utilized in such a way that it provides benefit to the owner by increasing the total assets and simultaneous providing benefits to the suppliers of the funds by letting the third party use such resources. However the investment is the procedural task. It must follow definite process. This definitely begins from the formulation of proper investment policy. Generally, policy is a role or course of future plan action that is proposed to adopt regarding a particular field of activities. Investment policy may be different according to the objectives and nature of the organization but all the investment must be balanced as of risk return characters and suggested to invest at liquidity, safety and profitable sectors.

Investment and return in form of income or profit is the most important factor from bank's management point of view. Investment policy differs from bank to bank. Commercial bank gives more emphasize in short term loan rather than long-term projects, as they want securities for their investment. Unsecured loan and investment may cause the liquidation of the bank. If the funds are wrongly invested without thinking any financial risk, business risk and other related facts, they cannot obtain profitable return.

Investment promotes economic growth and contributes to the nation's wealth. People deposit their surplus money in the bank and bank may lend those collected funds to the various business and companies. These firms in return may invest in new factories and equipment to increase their production. As a result investment raises the nation's living standard. Now a day, most companies issues stocks and bonds to raise the capital needed for business expansion instead of borrowing from the banks. Similarly government also issue bonds to obtain fund to invest in the projects like construction of dams, roads, bridges and schools etc. all such investment by individual business as well as government involves a sacrifice of present value to get an expected future benefit and income which is probably uncertain.

2.1.3. INVESTMENT POLICY OF BANK:

The commercial bank is inspired with the goal of earning profit. There are many reasons after the goal of gaining profit. A bank is a legal person. It can do nothing alone. A bank established without the aim of gaining the profit is central bank. Other banks are inspired with the object of earning profit and helping the economic development and finally to take the social responsibility. They should have the ability to use the policy of banking investment and to implement it much more carefully otherwise a bank may be unsuccessful in its goal.

Some investment policies or principles are as follows:

Principal of Liquidity: Liquidity means the whole money stock in the economy. The liquid property means cash stock of the commercial banks the amount of short term, current account and short term government and business security and the Treasury bill. A bank should not forget the principle of liquidity while it is following its investment policy. A bank should be able to returns the deposit when demanded by the depositors.

For this purpose bank need liquid cash. If they invest the whole deposit as loan and advance they can't give it at the time of demand by the depositors. So the commercial bank should try to move the liquidity and profit together.

Principal of profitability: The objective of commercial bank is to earn profit. The bank should focus from which sectors it can earn much profit. The bank can earn more profit from safe and long-term investment. If bank pays its attention only on profit, liquidity will be less and if it pays attention on the liquidity, it can't be a long-term investment and the bank doesn't earn profit. So it should maintain equality in it.

Principal of Safety: A bank should pay special emphasis on safety. If the investment area is unsafe it is not a good omen for the bank. There will be no doubt of loss whether it is great or little, if the bank has not invested in a safe sector. The bank should think it with much sensibility. Before making any investment, the bank should seriously study whether it is safe to invest or not.

Principal of Diversification: The principal of diversification means, to invest the money in the various sectors. The bank by studying and analyzing the different sectors where it is possible to earn more from little investment should extend its investment. If bank invest in various sectors, it become successful to keep it in balance. As the statement, the bank should not keep all its eggs in the same basket, and should invest in various fields.

Principal of Marketability: A bank should adopt the principal of marketability. The bank should invest by taking the security of high quality as far as possible. Bank should study the market evaluate the goods, which are taken as a security. There should not be investment by taking the securities of such goods, which are not saleable in the market.

Principal of National Interest: The objective of bank should not go against the national interest. The banks should follow the rules and regulation as well as policy, directions given time to time by the Nepal Rastriya Bank. The bank should make its investment, which is suitable to the national interest and carries benefit to the society

Principal of Tangibility: Though it may be considered that tangible property does not yield on income apart from direct satisfaction of possession of property, many times

intangible securities may lose their value due to price level inflation. A commercial bank should prefer tangible security rather than an intangible one.

Principle of Legality: Illegal securities will bring out many problems for the investor. A commercial bank must follow the rules and regulations as well as different directions issued by Nepal Rastra Bank, Ministry of finance, and Ministry of law and other while mobilizing its fund.

2.1.4. Banking Risks

Normally, Banks Confront different kinds of risks, which are categorized as follows:

Credit Risk: Credit risk arises whenever another party enters into an obligation to make payment or deliver value to the bank. This risk is mostly associated with the lending.

Liquidity Risk: Liquidity risk arises when bank itself fails to meet its obligation. The bank required to make payments to the different parties at different times, when they fall due to other parties, it is the liquidity risk.

Yield Risk: it is the risk that bank's assets may generate less income than expense generated by its liabilities.

Market Risk: The risk of loss resulting from movements in the market price of financial instruments in which the bank has a position is the market risk. Such instruments include bonds, equities, foreign exchange and associated derivative products.

Operational Risk: the risk of failure in the banks procedures or controls, whether from external or internal causes or as a result of error or fraud within the institution is the operational risk.

Ownership/ Management Risk: The risk that shareholders directors or senior management be unfit for their respective positions or dishonest.

2.2. Review of books

Banks are such types of institutions that deal in money and substitute for money. They deal with credit and credit instruments. The most important thing for the bank is good circulation of credit. Fluctuate flow of credit and weak decision harms the whole

economy and the bank as well. Thus to collect fund effectively and its well utilization is the very challenging task for the bank. The decision of an investment of fund may be the question of life and death for the bank.

In the word of V.K. Balla and S. K. Tutesa define, “There are basically three concept of investment.

- i) “Economic investment that is on the economists’ definition of investment”
- ii) “ Investment in a more general or extended sense, which is used by the man on the street”
- iii) “The sense in which we are going to be very much interested namely financial investment”(V. K. Bhalla, 1983 P 2.)

John M. Cheney and Edward A define “The word investments beings forth vision of profits, risk, speculation and wealth”

According to cheney & Moses, "The investment objective is to increase systematically the individuals wealth, defined as assets minus liabilities. The higher the level of the desired wealth the higher must be received. An investor seeking higher return must be willing to face higher level of risk."(J.M.Cheney & E. A Moses, P-23)

Investment is made in present, which is certain, and gain profit in future, which is uncertain, involves a present sacrifice of income to get an expected future benefit. So, it is a kind of speculation to increase the wealth and the living standard of oneself as well as that of the nation. Most of the people invest their excess fund to different sectors for future financial gain and to protect the purchasing power of their saving against raising price of goods, due to inflation.

According to William F., sharpe, Gorden.T. Alexander and Jeffery V. Barly, “investment in its broaden sense means the sacrifice of current dollars for future dollars. Two different attributes are generally involved time and risk. The sacrifice takes place in the present and its magnitude as generally uncertain” (W. F. Sharpe, G. J. Alexander and J.V. Barly, 1998 P 1)

In the words of S.P Singh and Singh, “The investment (credit) policies of banks we conditioned to great extent, by the national policy frame work, every banker has to apply his own judgment for arriving at a credit decision, keeping of course his banker’s credit policy also in mind” (S.P. Singh and S.singh, 1983)

According to Mr. Shakespeare Baidhya “A sound investment policy of a bank is such that its funds are distributed on different types of asset with good profitability on the one hand and provide maximum safety and security to the deposits and banks on the other hand. Moreover, risk in banking sectors tends to be concentrated in the loans portfolio. A bank gets into serious financial trouble its problem usually spring from significant amounts of loan that have become un-collectable due to mismanagement, illegal manipulation of loan, misguided lending policy or unexpected economic downturn. Therefore, the bank investment policy must be such that it ensures that it is sound and prudent in order to protect public funds.”

Further in details he deals with what types of loan do bank make and how much of loans in each loan to be invested? The banks make a variety of loans to a wide variety of customers from many different purposes from purchasing automobile construction of homes and making trade with foreign countries. There are no uniform rules that can be laid down to determine the portfolio of a bank. The environment in which the bank operates is influenced its investment policy. The nature and availability of funds are also assets differ widely from country to country and also from operating in Jumla will be different from the scope of bank operating in kathamndu. The investment policy to be applied in kathmandu may not applicable to the customer of Jumla because the demand for loan is less in rural areas where as it is higher in city in urban areas.(Shakespeare Baidhya, 1997 P 46-47.)

According to I.M. Pandey, “In investment decision expenditure and benefits should be measured in cash. In Investment analysis, cash flow is more important than accounting profit. it may also be pointed out that investment decision affects the firms value. The firms’ value will increase if investments are profitable and add to the shareholders wealth. Thus, investment should be evaluated on the basis of a criterion, which is compatible with the objective of the shareholder’s fund maximization. An investment will all to the shareholder’s wealth, if it yields benefit in excess of the minimum benefits as per the opportunity cost of capital.” (I.M.Pandey, 1999, P. 407)

Dr. Sunity Shrestha, in her book “Portfolio behavior of commercial bank In Nepal’ said, “ the commercial banks fulfill the credit needs of various sector of the economy including agriculture, industry, commercial and social service sectors. The lending policy of commercial banks is based on the profit maximizing of the institution as well as the economic enhancement of the country.’(Dr. Sunity Shrestha, P. 51-52)

The decision of investment is very important because it influences the firm’s growth in the long run effects. The risk of the firm requires the large amount of funds, which is difficult to make. A commercial bank must invest its deposits and other funds to secured, profitable, reliable and marketable sector, so that it can earn a reasonable profit as well as it should be secured and can be converted into cash whenever needed. Obviously, a firm that is being considered for commercial loans must be analyzed to find out why the firm needs money, how much money the firm needs and when and how it will be able to repay the loan. Investment policy provides the bank several inputs through which they can handle their investment operation efficiently ensuring the maximum return with minimum exposure to risk, which ultimately leads the bank to the path of success.

2.3. Review of Articles

Mr. Ramesh Lal Shrestha in his articles, “A study on deposit and credits of commercial banks in Nepal” has concluded that the credit deposit ratio would be 51.30%, other thing remaining the same, in 2004 AD, which was the lowest under the period of review. So, he had strongly recommended that the commercial bank should try to give more emphasis in new field as far as possible. Otherwise, they might not be able to absorb even its total expenses. (Mr. Ramesh Lal shrestha, 2045B.S.)

Mr. Bodhi B. Bajracharya, in his article entitled “Monetary Policy and deposit mobilization of domestic savings is one of the prime objectives of the monetary policy in Nepal. Commercial banks and the more active financial intermediary for generating resources in the form of deposit of private sector and providing credit to the investor in different sectors of the economy.(B. B. Bajracharya, 2047,B.S. P93-97)

Mr. Gillesseara, in his articles entitled, “The role of commercial Banks in Nepalese context” has concluded that the five commercial banks were improving their services due to the pressure of competition for public benefits.

The articles entitled, "Role of foreign Banks in Nepal" of Mr. Sunil Chopra concluded that joint venture banks are laying and increasing, dynamic and vital role in the economic development of the country. This will undoubtedly increase with time.

F. Moris, in his articles entitled "Latin America's Banking System in The 1980s" has concluded with most of the banks concentrated on compliance with bank rules on reserve requirements, credit allocation and interest rates, while analyzing loan portfolio quality, sound investment policy, operating efficiency has largely been overlooked. In many developing countries, there are huge losses found in the bank's portfolio due to the poor quality of their oversight investment function.

He further adds that poor management of financial institutions has involved inadequate and overoptimistic loan appraisal, tax loan recovery, high risk diversification of lending and investments, high risk concentration, connected and insider lending, loan mismatching. This has led many banks of developing countries to the failure in 1980s. (F. Moris, 1990.P81)

Dr. Manohar Krishna Shrestha in the article entitled "commercial banks comparative performance Evaluation" concluded that joint venture banks are operationally more efficient than the commercial banks. The Joint venture bank, have achieved better performance by using sophisticated technology, skilled manpower and providing modern banking facilities where as commercial banks have been burdened by the government's policy of rural branching and financing PES having no reimbursement capacity. Local commercial banks have number of loopholes like absence of modern global balance sheets, absence of precise classification of loans and observe of proper development of computer networks. Moreover, local commercial banks have to face various problems from socio- economic political system on one hand spectrum and that of issues and challenges from JVB commanding significant banking business on other spectrum. (DR. Manohar Krishna Shrestha, 2047)

Mr. Shekhar Bdr. Pradhan, in his article, "Deposit mobilization, its problem and prospects" has presented that deposit is the lifeblood of every financial institutions, be it commercial bank, finance company, cooperative or non-government organization. Most of banks and finance companies, the latest figure does produce a strong feeling that a serious review must be made of problems and prospects of deposit sectors. Leaving few

joint venture banks, other organizations rely heavily on the business deposit and credit disbursement.

Mr. Pradhan has highlighted following problems of deposit mobilization in Nepal:

1. Most of the Nepalese people do not go for saving in institution manner, due to the lack of good knowledge. They prefer their saving in the form of cash or ornaments. Reluctance to deal with institutional system is due to lower level of understanding about financial organization process and so on.
2. Unavailability of the institutional services in rural areas.
3. Due to lesser office hours of banking system people prefers holding the cash in the personal possession.

For the prosperity of deposit mobilization, Mr. Pradhan recommended that sufficient institutional services in the rural areas should be provided. By cultivating the habit of using rural banking unit and adding service hour system to bank. Similarly, NRB could also organize training program to develop skilled manpower. Spreading cooperatives in the rural areas to develop mini banking services.

(Shekhar B.Pradhan, Baishakha Masanta 2053,P-9)

2.4. Review of Research and Journal

An article that was published in the Kathmandu post relating "Banking condition of Nepal" has quoted that the most widely and perhaps rightly criticized aspect of the present banking sector is unfavorable in terms of banking services offered to the customers reflected in low interest rates offered to the depositor and high lending rates imposed upon the debtors. This has resulted in high spread rates between the lending and deposit rates. The spread rate in Nepalese banking sector is as high as 8% against the international practice of about 3% of such spreads.(The Kathmandu Post, Feb 19th 1999)

Mr. Shiba Raj Shrestha, Deputy Chief officer of Nepal Rastra Bank, Banking Operation Department, has given short glimpse on the "Portfolio management in commercial bank, theory and practice" He has highlighted that portfolio management is the most

important thing for both individuals and as well as institutional investors. All the investor would like to select a best mix of investment assets subject to following aspect.

Higher return than other alternative opportunities, which is available according to the same risk class to the investors.

High liquidity with adequate safety and profitability of investment

Maximum concession of tax

Certain capital gain

Economic, efficient and effective investment mix

Flexibility of investment

Some strategies are adopted which are as follows:

Do not put all the eggs in the same basket, i.e. do not hold any single securities and do not invest in only one sectors, try to have a portfolio of different securities.

Diversify the investment for adequate safety, liquidity and profitability.

Decide such a portfolio of securities, which ensures maximum return with minimum risk of lower of return but added objective of wealth maximization.

Mr. Shrestha has also presented two types of investment analysis techniques i.e. fundamental analysis and technical analysis to consider any securities such as equity, debenture and bond and other money and capital market instruments. He suggested that banks having international network could also offer access to global financial markets. He has pointed out the requirement of skilled manpower researcher and analysis teams and proper management information system (MIS) in any commercial bank to get success in portfolio management and customer's confidence.

Finally, he concluded that survival of every bank depends upon the own financial wealth and various activities. To develop and expand the portfolio management activities successfully the investment management methodology of a portfolio manager should reflect high standards and give their clients the benefits of global strengths, local insights and prudent philosophy.

The Nepalese banks having greater network and access to national and international capital markets have to go for portfolio management activities for the increment of their fee based income as well as to enrich the client base and to contribute in national economy.(Shiba Raj Shrestha, 31st Baishakh, 2055)

Dr. Sunity Shrestha has made remarkable efforts to examine the investment planning of commercial bank in Nepal. On the basis of the study she concluded that bank portfolio (loans and investments) of commercial banks has been influenced by the variable securities rates. Investment planning of commercial bank in Nepal is directly traced to fiscal policy of government and rules and regulation of central bank. So the investments are not made in professional manner. Investment planning and operation of commercial banks in Nepal has not been found satisfactory in terms of profitability, safety, liquidity, productivity and social responsibility. To overcome this problem, she recommended that commercial banks should take their investment function with proper business altitude and should perform lending and investment operation efficiently with proper analysis of the projects.(Dr. Sunity Shrestha,Ph.D Thesis 1993)

Dr. Radhe Shyam Pradhan had made research," Financial management practices in Nepal." This research is mainly concerned with financial functions, sources and types of financing, financial decisions involving debt, effect of change in taxes of capital structure, financial distress, dealing with banks and dividend policy. The study reveals that banks and retained earning are the most widely used financing sources. Most enterprise does not borrow from one bank only and they do switch between banks to whichever offers best interest rates. Most enterprise finds that banks are flexible in interest rates and convenience. The enterprises have a definite performance for bank loans at a lower level of debt. Generally, there is no definite time to borrow the issues stocks, that is majority of respondents are unable to predict when interest rate will low or go up or are unable to predict when the stock will go up or down. Similarly, he concluded that among the bank loans, bank loans of less than one year are more popular in public sector where as bank loans of 1-5 years are more popular in private sector.(Dr. Radhe S. Pradhan 1994.)

2.5. Review of Relevant Act

The act has significant impact on the commercial banks establishment, their mobilization and utilization of resources. All the commercial banks have to conform to the act, provisions specified in the commercial bank act 2031 and the rules and regulations formulated to facilitate the smooth running of commercial bank. "In the absence of any bank in Nepal the economic progress of the country was being ampere and cause inconvenience to the people and therefore with the objective of fulfilling that need by providing services to the people for the betterment of the country, this law is here by promulgated for the establishment of the bank and its operations"

Nepal Bank Act 1964 Nepal

Central Bank NRB has establish a legal frame work by formulating various rules and regulations to mobilize or invest the deposit of the bank in different sectors of the different parts of the nation, to prevent them from the financial problems. These directives must have direct or indirect impact while making decisions. Those rules and regulation are discuss which are formulated by NRB in terms of investment and credit to priority sector, deprived sector, other institution, single borrower limit, CCR, loan loss provision, capital adequacy ratio, interest spread, productive sector investment. Commercial bank is directly related to the fact that how much fund must be collected as paid up capital while establishing the bank at certain place of the nation, how much fund is needed to expand the branch and counters. But we discuss only those which are related to investment function of the commercial bank .The provision established by NRB in the form of prudential norms areas follows.

1. Provision for investment in productive sector: Being a developing country, Nepal needs to develop its infrastructure and other primary productive sectors like agricultural, industrial etc. NRB has directed commercial banks to extent at least forty percent of its credit to productive sector.
2. Provision for investment in priority sector: NRB has directed commercial banks to extent at least twelve percent of its total outstanding credit to priority sector.
3. Provision for investment in deprive sector: commercial banks are required to disburse credit to the deprived sector at the following stipulated ratio

Name of the banks	Required Deprived sector Lending as % of total outstanding credit
NIBL, NBL, RBB, NABIL, SCBNL, HBL	3%
BOK, EBL, NSBFBLI, NBBL	2.5%
NBBLL	1.75%
LBL, NICBL	0.75%
Other new bank	0.25%

Source: NRB

4. Directive regarding interest spread rate: NRB has directed the commercial banks to limit its interest rates spread with the maximum of 5%. Interest rates spread is the difference between the interests charged on loan and advances and the interest paid to the depositors.

Weighted interest rate is calculated as under:

$$\text{WALR} = \frac{\text{Interest income for six months}}{\text{Average interest earning Assets Outstanding on the month end of 6 months}}$$

$$\text{WADR} = \frac{\text{Interest Expenses for six months}}{\text{Average Deposit Outstanding On the month –end of 6 months}}$$

WALR = Weighted Average Lending Rate

WADR = Weighted Average Deposit Rate

Interest Spread = WALR – WADR

5. Capital Adequacy Ratio (CAR): All commercial banks are directed to maintain the minimum capital fund on the basis of risk weighted assets i.e.(CAR) in the following ratio given below

Time	CAR of their weighted asset	
	Core Capital	Supplementary Capital
F.Y.068/069	4.5%	9%
F.Y069/070	5%	10%
F.Y. 070/071	6%	12%

Source NRB

As per the directives, total risk weighted asset includes

- (a) On balance sheet risk weighted assets
- (b) Off balance sheet risk weighted assets
- (a) Risk Weighted On balance Sheet Assets

Allocation of Risk Factor

On-balance sheet assets	Weights
Cash Balance	0
Gold (Exchangeable)	0
With NRB	0
Investment on Government debenture	0
Investment on NRB debenture	0
Fixed bill collateral Loan	0
Grants loan safety on government debenture collateral	0
Cash balance with domestic bank and financial institution	20
Others banks fixes bill collateral loan with foreign bank	20
Money at call	20
International rated foreign bank of guarantee loan	20
International rated other investment of foreign banks	20
Investment of share, debenture and bond	100
Other investment	100
Loan, bills purchased and discounted	100
Fixed Assets	100
Miscellaneous Assets	100

(b) Risk Weighted on Off- balance Sheet Item.

Allocation of Risk Factor

Off- Balance Sheet Items	Weights
Bills collection	0
Forward Foreign exchange Contract	10
Letter of credit with maturity less than 6 months	20
Issued Guarantee by granted of foreign bank	20
Letter of credit with maturity more than 6 month	50
Bid bond	50
Performance bond	50
Advance Payment guarantee	100
Financial Guarantee	100
Other guarantee	100
Irrevocable Loan commitment	100
Possible Liabilities	100
Other contingent liabilities	100

6. Cash reserve ratio (CRR): To ensure adequate liquidity in the commercial banks to meet the demands of the depositors for cash at anytime and to inject the confidence in depositors regarding the safety of their deposited fund, commercial banks are required to have maximum CRR. In this regard, NRB has directed the commercial; banks to deposit minimum 7% of current and saving and 4.5% of fixed deposits in the NRB as primary cash reserve. The commercial banks are further required to have 3% cash of total deposits in their own bank as secondary reserve.
7. Loan classification and loss provision: With a view to improve the quality of assets of commercial bank, NRB has directed commercial bank to classify their outstanding loan and advances, investment and other assets into four categories. The classification is done in two ways. The loans of more than one hundred thousands are to be classified as per debt service ratio, repayment situation and financial condition of borrower, management efficiency and quality of collateral.

The loans of less than one hundred thousands have to be classified as per maturity period.

- a. Pass
- b. Substandard
- c. Doubtful
- d. Loss

Loan Loss Provisioning (LLP)%

Loan Classification	Loan Loss provisioning
Pass	1
Substandard	25
Doubtful	50
Loss	100

Source: NRB

Loan loss provision has affected bank's capability to extend loans and made them risk adverse in issuing lower loans, where the loan default is high.

- 8. Directive to raise capital fund: All commercial banks are directed to raise their capital funds at a minimum level of Rs. 1000 million.
- 9. Provision for the single borrower credit limit: NRB has directed commercial banks not to exceed the single borrower limit of 25% of its core capital on fund based and 50% on non fund based credit.

❖ **Directives On Loan Classification And Provisioning**

Clause 1:

Classification of outstanding loans and advances on basis of aging:

The loans and advances of a commercial bank shall be classified on the basis of aging of the principal amount.

Clause2:

Classification Of loans and Advances:

As per the directives issued by NRB, all loans and advances of the banks need to be classified into the following four categories:

- Pass Loan
- Sub – Standard Loan
- Doubtful Loan
- Bad Loan

The Loan falling under the pass Categories are said to be the performing loan and the loans that fall under the other three categories are said to be Non- Performing Loans.

NRB has instructed the commercial banks to follow on the basis of the following timetable.

For FY 2011/2012(2068/2069):

Pass Loans not past due up to 3 months.

Sub-standard: Loans and advances past due for a period of over 3 months to 1 Year.

Doubtful: Loans and advances past due for a period of over 3 Years.

For FY 2012/2013 (2069/70):

Pass Loans not past due and past due up to 3 months.

Sub- Standard: Loans and advances past due for a period of over 3 months to 1 Year.

Doubtful: Loans and advances past due for a period of over 1 year to 3 years.

Bad: Loans and advances past due for a period of over 3 years.

For FY 2013/2014 (070/71):

Pass: Loans and Past due and past due up to 3 months.

Sub- standard: Loans and advances past due for a period of over 3 months to 9 months.

Doubtful: Loans and advances past due for a period of over 9 months to 3 years.

Bad Loans and advances that past due for a period of over 2 years.

For FY 2014/2015 (071/72):

Pass Loans not past due and past due up to 3 months.

Sub-standard: Loans and advances past due for of period of over 3 months to 6 months.

Doubtful: Loans and advances past due for a period of over 6 months to 1 year.

Bad: Loans and advances past due for a period of over 1 year.

Additional Arrangements:

Loans and advances fully secured by gold, silver, fixed deposit receipts and HMG securities shall be included under "Pass" Loan. However, where collateral of FDR or HMG Bond or NRB bonds is places as security against loan for other purpose, such loan has to be classified on the basis of aging.

Loans and advances need to be classified as 'loss' even in cased they are not past due, in case of the following discrepancies:

- Loans with no security at all or security not as per the agreement between the two parties, i.e., borrower and the bank.
- The borrower has been declared bankrupt.
- The borrower is absconding or can not be found
- Purchased or discounted bills are not realized within 90 days from the due date'
- The loan amount has not been used for the purpose for which it was originally taken
- Owing to non-recovery, initiation as to auctioning of collateral has passed six months and if the recovery process is under litigation
- Loans provided to the borrowers included in the blacklist and where the credit

Information Bureau blacklists the borrower.

In case of term loans, the classification shall be made against the entire outstanding loan on the basis of the past due period of overdue installment.

Clause3:

Relating to Collateral:

The collateral used by the bank to back up the loans and advances need to be adequate enough to cover up the principal and interest amount on the event of non-realization of the principal and the interest amount.

Loan Loss Provisioning:

After classification, certain percent of the loans and advances including the bills purchased need to be provisioned for the possible loss are as follows:

Classification	Loan Loss Provision	
Pass	1%	General Loan Loss Provision
Sub-Standard	25%	
Doubtful	50%	Specific Loan Provision
Bad	100%	

Provisioning against Personal Guarantee Loan:

In case of Loans Personal Guarantee, a statement of the assets, equivalent to the amount of the personal guarantee, not claimable by others has to be obtained. The provision for such loans has to be made as per the categorization shown above but in case of pass, Sub-Standard and Doubtful loans, in addition to the normal provision made on the basis of aging, another 20% extra provision should also be provided. Therefore, for loans against personal guarantees, the provision amount will be 21%, 45% and 70% for pass, Sub-Standard and Doubtful Loans respectively.

Provisioning against Priority Sector Credit:

Priority Sector Credit / Deprived Sector Credit is normally insured with the deposit Insurance and Credit Guarantee Corporation. In case certain loans under the priority sector credit/ deprived sector credit are not insured, the loan amount will have to be provisioned at 25% of the provision percentage mentioned above for different categories.

The required provisioning for insured priority sector credit/ deprived sector credit is as follows:

Pass	0.25%
Sub-Standard	5%
Doubtful	12.5%
Loss	25%

❖ **Regulation Relating to Investment in Shares and Securities by commercial Bank**

Banks shall prepare written policy relating to investments in the shares and securities of other organized institutions. Such policies shall be implemented only under the approval of the Board of Directors. There shall be no restriction to invest in the securities of His Majesty's Government and the securities issued by NRB.

Banks may invest in shares and securities of any one organized institution not exceeding 10 percent of the paid up capital of such company and the cumulative amount of such investment in all the companies in which bank has financial interest shall be limited to 20 percent of the paid up capital of the bank.

The total amount of investment shall be restricted to 30 percent of the paid up capital of the bank. Any amount of investment made in excess of 30 percent of the paid up capital of the bank, for the purpose of calculation of the capital fund shall be deducted from the core capital fund.

Banks shall invest in the shares and securities of organized institutions, which are already listed in the stock exchange or where arrangement exists for listing within one year. Where the shares and securities are not listed within one-year period, provisioning equivalent to the whole amount of such investment be provided and credited to Investment Adjustment Reserve. The outstanding amount in such Reserve shall not be utilized for any other purpose till the said shares and securities of the organized institution are listed. Banks shall not invest in any shares, securities and hybrid capital instruments issued by any banks and financial institutions licensed by NRB.

2.6. Review of Previous Thesis

Mr. Upendra Tuladhar in his study entitled ‘A study on investment policy of Nepal Grindlays Bank Ltd. in comparison to other joint venture banks (NABIL and HBL)’. The major objectives is to study the fund mobilization and investment policy with respect to fee based off balance sheet transactions and fund based on balance sheet transactions and to evaluate the growth ratios of loan and advances and total investment with respective growth rate of total deposits and net profit. He concluded that NGBL has been successful to maintain in the best way both liquidity position and their consistency, among three banks i.e. NGBL, NABIL and HBL. NGBL has successfully managed assets to generate income. Income from loan and advances and total investment is the main income source of NGBL and it can affect the bank’s net profit. Similarly, he concluded that Joint venture banks have given first priority on education sectors while making investment. The poverty stricken and deprived sectors are given second priority. The reason behind not providing banking facilities to the rural areas is that these banks are profit oriented only. (Mr. Upendra Tuladhar, 1999)

Mr. Deependra Shrestha in his thesis entitled the study on the comparative study on investment practice of joint venture commercial banks. The main objective of the study is to evaluate the liquidity management asset management, efficiency, profitability, risk position and investment practices of Nabil Bank Ltd, Nepal SBI bank Ltd and standard Chartered Bank Nepal Ltd. The study reveals that Nabil has maintained the higher liquidity in compare to other two banks. The investment on the

government securities to total working fund of Nabil is greater than NSBIBL and lower than SCBNL. From his finding, he concluded that profitability position of Nabil is not

satisfactory, where as in some ratios i.e. return on loan and advances total working fund, equity and total interest earned to total outside asset, NABIL has maintained higher mean ratios than NSBIBL and lower mean ratios than SCBNL. (Mr. Deependra Shrestha, 2002)

Mr. Bindeshwor Mahota, in his thesis entitled ‘A comparative study of the financial performance of Nepal Arab Bank Ltd. and Nepal Indosuze Bank Ltd.’ The objective of the study is to analyze the financial performance of two joint venture banks and to evaluate and compare both banks in term of their liquidity, activity, leverage ratio, profitability ratio and other. He concluded that the current assets of these banks are adequate to meet the current obligation. The primary secondary reserve position with respect to short-term deposit is better in NABIL then NIBL. Both of these two banks are utilizing their deposit funds through loan and advances to generate revenue. But comparatively NIBL is doing more efficiently than NABIL. Provision for possible loss on loan and advances in NABIL are higher than NIBL. The capital adequacy ratio of both banks is adequate in meeting the NRB’s directives. Profitability of NABIL is better than NIBL, although the position of NIBL in not so unsatisfactory. Finally, NABIL is in increasing trend in each and every aspect where as NIBL has a mixed trend i.e. increasing in some cases and decreasing in other cases.

(Bindeshwor Mahato, 1997)

Mr. Raja Ram Khadka in his thesis, “A study on the investment policy of Nepal Bank Ltd. in comparison to other joint venture banks of Nepal”. He recommended, “The bank must utilize depositor’s money as loans and advances to get success in competitive banking environment. The largest item of the bank in the assets side is Loans and advance. Negligence in administrating this asset could be the main cause of liquidity crisis in the bank and one of the main reasons of bank failure.”

(Raja Ram Khadka, 1998)

Mr. Shiba Raj Laudhari ,in his study entitled 'A study on investment policy of Nepal Indosuze bank Ltd. (NIBL) in comparison to Nepal SBI Bank Ltd.' The main objective is to evaluate the growth ratio of loan and advance and total investment with respective to growth ratio of deposit, net profit and total assets. He concluded that NIBL has maintained both current ratio and cash reserve ratio better than SBI. But its cash and

bank balance, investment on government securities and loan and advance in comparison to current assets are lower than of SBI. He also found that deposit utilization of NIBL is less effective than SBI. The growth ratio of total deposit, loan and advances total investment and net profit of NIBL is less than Of SBI. Mr. Laudhari highly recommended NIBL to synchronize between deposit collection and investment even though they are different activities. NIBL is to be more liberal in providing the loan and advance and get the better result.(Shiva Raj Laudhari, 2001)

Mr. Ram Prasad Sharma has conducted his study entitled "Priority Sector Investment of commercial Banks in Nepal". The main objective is to highlight the priority sector investment and repayment states of commercial banks in through intensive banking program and to show the repayment position of the sector. He concluded, "All the three commercial banks covered in this study have contributed the credit to priority sector. But the efforts made by different banks are not in the same proportion. Nabil has contributed highest amount of credit to agriculture and cottage industry. NBL has contributed highest amount to services sector. So for the loan repayment from priority sector is concerned Nabil has very satisfactory performance whereas NBL has very low performance or loss repayment overdue loan have been observed more in agriculture".

He further recommended, "Commercial banks should improve the repayment loan by generating the income of rural framers. Reinvestment and right utilization of bank loan are the cost of commercial banks. Since there is a need to increase in assets by better arrangement of institution and organization, the manager and loan staff of the branches should be provided with adequate training so that they could identify right borrowers, right project and ensure correct project appraisal. Reinvestment is the available sources to increase in paying capacity of the borrowers."

(Ram Prasad Sharma, 2002)

Mr. Santosh pandey has conducted his study entitled "Nepal Rastra Bank (NRB) directives, implementation and impact on the commercial bank " The main objective of his research is to find out the norms and standards laid down by NRB relating to the loan classification and provisions, single borrower limit and capital adequacy of banks. "The directives, if not properly addressed, have potential to wreck the financial system of the country, as they are the only tools of the NRB to supervise and monitor the

financial institutions. The directives in themselves are not that important unless properly implemented. The implementation part depends on the commercial banks. So it is felt that there is need to find out if the directions are being followed. In case the commercial Banks are making such huge profit with full compliance of the directives, then the commercial bank would deserve votes of praise because they would then be instrumental in the economic development of the country". From the study, he concluded that the new directives required banks to re categories the loans into four different categories on the basis of aging. The period of past due period for the loans has been changed. Accordingly, the percentage of provision needs to be made by the banks for each category of loans. The limits for the single borrower limit on fund based loan and non-fund based loan have come down. This is mainly because the previous limit for both types of loans were based on the total capital fund while the present limits are based only on the core capital which is less than the total capital fund of the bank

He further concluded that all the foreside result lead to one direction, the bank would be financially healthy and stronger in the future. HBL will be able to withstand tougher economy situation in the future with adequate capital and provision for losses. The tough time through which the bank is undergoing at present will prevail only for a couple of years. But in the long run, it will be strong enough to attract more deposit and expose itself to more risks with capital cushion behind it. Ultimately the changes in direction will bring prosperity not only to the shareholders but also to the depositors, the employees and the economy of the country as a whole.

(Santosh Pandey, 2002)

Ms.Samiksha Thapa. In her thesis," A comparative study on investment policy of Nepal Bangladesh Bank Limited and other joint venture banks." The main objective of the study is to evaluate the liquidity, asset management, efficiency, profitability and risk position of NB bank in comparison to NABIL and NGBL .To examine the fund mobilization and investment policy of NB bank through off balance sheet and on balance sheet activities in comparison to the other banks. She concluded that liquidity position of NB bank is comparatively better than that of NABIL and NGBL. It has the highest cash and bank balance to total deposit cash and bank balance to current assets ratio. The NB bank is not in better position regarding its on balance aswell as off balance activities in compare to NABIL and NGBL. It does not seem to follow any

definite policy regarding the management of its assets. The profitability position of NB bank is comparatively worse than other two sample banks. The bank must maintain its high profit margin for the well being in future. The position of NB bank in regard to utilization of fund to earn profit is not better in compare to NABIL and NGBL.(Samiksha Thapa, 2001)

2.7 Research Gap

The researcher wants to point out the strategy of commercial banks on investment policy. The researcher want to find out the norms and standard laid down by Nepal Rastra Bank relating to loan classification and provision .Their main objective is to highlight the priority sector of investment and repayment states of commercial banks in though intensive banking program. This thesis examines the strategy applied by competitive market in elation to investment policy. This thesis focuses on trend value analysis of deposit utilization and its projection for next five years and also find out the liquidity and profitability position of Nepal Investment bank Limited.

CHAPTER 3

RESEARCH METHODOLOGY

3.1. Introduction:

In the previous chapter, background of C.B. has been highlighted a review of literature with possible review of relevant book, articles, and thesis has been discussed. This has helped me to make choice of research methodology.

Research is essentially a systematic inquiry seeking facts through objectives verifiable methods in order to discover the relationship among them and to deduce from them broad principles or laws. It is a method of defining and refining problems, formulating hypothesis or suggested solution, collecting, organizing and evaluating data, making decisions and making conclusions. "Research is the process of a systematic and in-depth study or search of any particular topic, subject or area of investigation backed by the collection, compilation, presentation and interpretation of relevant details or data. It is a careful search or inquiry in to any subject matter, which is an endeavor to discover or find out valuable facts which will be useful for further application or utilization." (Joshi, Pushpa Raj , 2001)

Research Methodology depends on the various aspects of the research project. The size of the project, the objective of the project, importance of the project, time frame of the project, impact of the project in the various aspects of the human life etc. are the variables that determine the research methodology of that particular project.

“Research Methodology refers to the various sequential steps to adopt by a researcher in studying a problem with certain objectives in view.”(C.R. Kothari 1989)

In other words, Research Methodology describes the methods & proves applied in the entire aspect of the study.

3.2. Research Design:

“A research design is the arrangement of conditions for collection & analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.”(C.R. Kothari, 1992:12)

Research Design is the plan, structure & strategy of investigations conceived so as to obtain to research questions & to control variances. Accomplishing the study, descriptive and analytical research design have been used. The research design is mainly based on two types (a) Descriptive research, describes the general pattern of Nepalese investors, business environment, problems regarding investment policy. (b) Analytical Research Design, helps to analyze gathered facts, information and critically evaluates as well. It is the arrangement of conditions for collection & analysis of data. "A research design is the specification of methods and procedures for acquiring the information needed. It is the overall operational pattern of framework, of the project that stipulates what information is to be collected from which sources by what procedures. If it is good design, it will ensure that the information obtained is relevant to the research questions and that it was collected by objective and economical procedures." (Paul, E. Green Donald, S, Tull, 1999)

Research design is the definite procedure and techniques, which guides the study and the ways to do the study. This in fact is the specific presentation of the various steps in research process. These steps include the selection of a research problem, presentation of the problem, methodology, survey of literature, data collection, interpretation and presentation, report writing and bibliography. Some financial & statistical tools have been applied to evaluate investment of NIBL.

3.2.1 Sources of Data:

This research study is mainly based on secondary data. The data relating to the deposits, loan & advances, investment & profits required for the analysis are directly obtained from the bal-sheet & P/L a/c of concerned banks, annual reports Supplementary data & Information are collected from number of institution & authorities like NRB, Library SDC & T.U. central library

All the secondary data are compiled, processed & tabulated in the time series as per the need & objectives. Similarly various data & information are collected from the

economic, journals & research works from various sources, academic books, various articles published in the news paper, world wide web; the internet.

3.3. Population and Sample:

The total number of commercial banks of Nepal, which stands at 31 is the population of our study. The selection of Nepal Investment Bank Limited is taken as sample.

3.4 Method of analysis:

To achieve the objectives of the study, various financial, statistical & accounting tools are used according to the data available. Because of limited time & resources, simple analytical statistical tools such as percentage, Karl Pearson's, coefficient of correlation are analysis have also been used for financial analysis. The various calculated results obtained through financial, statistical tools are tabulated under different.

3.4.1. Ratio Analysis

Ratio analysis is the calculation and interpretation of financial ratio to assess the firms' performance and status. It is the relationship between two accounting figures expressed mathematically.

“Ratio analysis is the main tool of financial statement analysis. Ratio means the numerical or quantitative relationship between two items or variables. It can be expressed as percentage, fraction or stated comparison between numbers.”

(I M Pandey ,1999)

Financial ratio is the mathematical relationship between two accounting figures. “Ratio analysis is used to compare a firm's financial performance and status to that other firm of to it overtime.” From the help of ratio analysis, the quantitative judgment can be done regarding financial performance of a firm.

In this study, different ratio are calculated and analyzed, which are given below.

A. Liquidity Ratio:

Liquidity ratios measure the ability of the firm to meet its current obligation. The failure of a company to meet its obligation, due to lack of sufficient liquidity, will result in bad credit image, loss of creditor's confidence, or even in lawsuits resulting in the closure of the company. A very high degree of liquidity is also bad, as idle assets earn nothing. The firm's funds will unnecessarily be tied up in current assets. Thus it is the measurement of speed with which bank's assets can be converted into cash to meet deposit withdrawal and other current obligations. There are various ratios under liquidity ratio, which are calculated as follows.

Current ratio:

The current ratio is a measure of the firm's short-term solvency. It indicates the extent to which the claims of short-term creditors are covered by assets that could be expected to be converted into cash in a period roughly corresponding to the maturity of claims. Generally, it shows the relationship between current assets and current liabilities. Current assets include cash, bank balance, money at call and those assets which can be converted into cash within a year such as investment in government securities, receivables, overdrafts, loans, advances, purchased, discounted and miscellaneous current assets. Current liabilities include deposits and other short-term loans, bills payable, staff bonus, dividend payables and miscellaneous current liabilities.

The ratio is calculated by dividing current assets by current liabilities.

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

As a conventional rule, a current ratio of 2:1 or more is considered satisfactory. The higher the ratio, the greater will be the ability of the bank to pay its current obligations. The current ratio represents a margin of safety, i.e. a "Cushion" of protection for creditors. However, an arbitrary standard of 2-to-1 should not be blindly followed because current ratio is a test of quantity, not quality. Firms with less than 2-to-1 current ratio may be doing well, while firms with 2-to-1 or even higher current ratios may be finding great difficulties in paying their bills.

Cash and bank balance to total deposit ratio:

It is ability of bank to meet their daily requirements. Hence, cash and bank balance includes cash on hand, foreign cash on hand, cheques and other cash items, balance held in foreign banks. The deposit represents current deposits, saving deposits, fixed deposits, money at call and short notice and other deposits. Dividing cash & bank balance calculate the ratio by total deposits.

It is stated as: Cash and bank balance ratio:
$$\frac{\text{Cash and Bank Balance}}{\text{Total deposits}}$$

Cash and Bank balance to current Assets ratio:

This ratio shows the relationship of most liquid assets i.e. Cash and Bank Balance among the total current assets of the bank. Cash and Bank balance are the most liquid current assets. Higher ratio implies the bank's sound ability to meet its demand for daily cash requirements to customer's deposits. The ratio is calculated as by dividing cash & bank balance by current assets.

It is stated as: Cash and bank balance to current assets Ratio:
$$\frac{\text{Cash and bank balance}}{\text{Current Deposits}}$$

Investment on Government Securities to Current Assets:

Investment on government securities includes treasury bills and development bonds etc. This ratio can be computed by dividing investment on government securities by current assets.

This can be stated as:

Investment on government securities to current assets:
$$\frac{\text{Investment on Govt. securities}}{\text{Total current Assets}}$$

Loan and Advance to Current Assets Ratio:

This ratio can be computed by dividing Loans and advance by current assets.

Mathematically it is expressed as:

Loan and Advance to Current Assets Ratio:
$$\frac{\text{Loan and advance}}{\text{Current Assets}}$$

B. Assets Management Ratio of Activity Ratio:

Activity ratios are employed to evaluate the efficiency with which the firm manages and utilizes its assets. The ratio are also called turn over ratios because they indicate the speed with which assets are being converted or turnover. Thus ratios are used to measure the banks ability to utilize. These are following ratios, which falls in this category.

Loan and advances to total Deposit ratio:

This ratio shows how successfully the bank in utilizing its total deposits to loan and advances for generating profit. The ratio can be obtained by dividing loan and advances by total deposits. Higher ratio implies the better utilization of total deposits.

This ratio can be stated as:

$$\text{Loan \& Advances to Total deposit ratio: } \frac{\text{Loan and Advances}}{\text{Total Deposit}}$$

Total Investment to total deposit ratio:

This ratio shows the utilization of firm's deposit in government securities and bonds, shares & debentures of other companies and bank. Share is subsidiary companies & other investments.

Mathematically it is expressed as:

$$\text{Total investment to Total Deposit Ratio: } \frac{\text{Total investment}}{\text{Total Deposits}}$$

Loan and Advances to working fund ratio:

Loan and advances is the major component of the total working fund (Total Assets), which indicates the ability of the bank to chhanelized deposits in the form of loan and advance to gain high return. Working funds includes all assets of on –balance sheet items. In others words, this includes current assets, net fixed assets, loans for development banks and other miscellaneous assets but excludes off- balance sheet items like letter of credit, letter of guarantee and forward contracts.

Mathematically it is expressed as:

Loan and Advances to working Fund Ratio: $\frac{\text{Loan and Advance}}{\text{Total working Fund}}$

Investment on government Securities to Total working Fund (Total Assets) Ratio:

This ratio focuses on the bank's investment on government securities in comparison to the working fund. This ratio is calculated by dividing investments on government securities by total working funds.

Mathematically it is expressed as:

Investment on government securities to Total working fund

$$= \frac{\text{Investment on government securities}}{\text{Total Working fund}}$$

Investment on shares and Debentures to Total Working Fund Ratio:

This ratio can be computed by dividing investment on shares and debentures by total working fund. The numerator includes investment on debentures, bonds and shares of other companies.

This can be stated as:

Investment on Shares & Debentures to Total Working Fund

$$= \frac{\text{Investment in shares and debentures}}{\text{Total working fund}}$$

Investment in shares and debentures to paid up capital:

This ratio focuses on the bank's investment on shares and debentures with respect to paid up capital. This ratio is calculated by dividing investment in shares and debentures by paid up capital.

This can be stated as:

Investment in shares and debentures to paid up capital

$$= \frac{\text{Investment in shares and debentures}}{\text{Paid – up capital}}$$

Total Off-Balance Sheet Operation to Loan & Advances Ratio:

This ratio is calculated by dividing total off- balance sheet operation by loan and advances. Total off-balance sheet operation includes. Letter of credit (L/C), Letter of guarantee, document negotiated under reserve (DNUR), capital commitments, commitments of foreign currency purchase contracts claimed at bank by accepted and other such transactions.

Mathematically,

Total Off-Balance Sheet Operation to Loan & Advances

$$= \frac{\text{Total off-balance sheet operation}}{\text{Loan and advances}}$$

Loan Loss Ratio:

This ratio shows the possibility of loan default of a bank. It indicates how efficiency it manages its loan and advances and makes effort for loan recovery. Higher ratio implies higher portion of non-performing loan portfolio. It is computed by dividing loan loss provision from total loan and an advance derives this ratio.

This can be stated as:

$$\text{Loan Loss Ratio} = \frac{\text{Total loss provision}}{\text{Total loan and advances}}$$

C. Profitability Ratio:

Any Organization should earn profit to survive and grow over a long period of time. Profit is the ultimate output of any organization, and it will have no future if it fails to make sufficient profits. Thus, the financial manager should continuously evaluate the efficiency of its organization in terms of profit. Profitability ratios are the best indicator to measure overall efficiency of operation any organization. As the management of the

organization, creditors and owners are also interested in the profitability of firm. Creditors want to get interested and repayment of principal regularly. Owners want to get a reasonable return on their investment. This is possible

only when the organization earns enough profit. Profitability ratio implies that higher the Profitability ratio, better the financial performance of the bank. Profitability position of the bank can be evaluated in terms of the relationship between net profit & assets.

The following ratios are taken into account under this heading.

Return on Total Working Fund to Total Assets (ROA):

A bank has to earn satisfactorily return on Assets or working fund for its survival. Return on total working fund or total assets ratio measure the overall Profitability. Net profit includes the portion of income left to the internal equities after all costs. All the charges, expenses have been deducted.

This ratio is calculated by dividing net profit by total working fund.

Mathematically,

$$\text{ROA} = \frac{\text{Net Profit}}{\text{Total Working Fund}}$$

Net Profit to total deposit ratio:

This ratio shows the efficiency towards its deposit mobilization. Higher ratio indicates proper utilization of total deposits and vice versa.

The ratio can be computed as net Profit divided by Total Deposits

Mathematically,

$$\text{Net profit to total deposit ratio} = \frac{\text{Net profit}}{\text{Total deposit}}$$

Return on Loan and Advance ratio:

This ratio measure the earning capacity of commercial bank on its mobilized fund based and advances. A high ratio indicates a high success to mobilize fund as loan and advances and vice versa. The ratio is calculated as Net Profit divided Loan and Advances

Mathematically it is stated:

$$\text{Return on loan and advance} = \frac{\text{Net profit}}{\text{Loan and Advance}}$$

Total Interest earned to total Outside Assets ratio:

The main assets of a bank are its outside assets, which include loan and advances, bills purchased and discounted, investment on government securities, investment in shares and debentured and other all types of investments. This ratio reflects the extent on which the banks are successful to earn interest on all the outside assets, a high ratio

indicates high earning on such total assets and vice versa. This ratio is calculated by dividing total interest earned by total outside assets.

It is stated as:

$$\text{Total interest earned to total Outside Assets ratio} = \frac{\text{Total interest earned}}{\text{Total outside assets}}$$

Total interest earned to total working fund ratio:

Total interest earned to total working fund is very helpful and significant. This reflects the extent on which the banks are capable to mobilize their total assets to generate high income as interest. A high ratio is an indicator of high earning power of the banks on its total working fund and vice versa this ratio is calculated by dividing total interest earned by total working funds.

It is stated as:

$$\text{Total interest earned to total working fund ratio} = \frac{\text{Total interest earned}}{\text{Total working fund}}$$

Return on Equity (ROE):

Net worth refers to the owner's claim of a bank. The excess amount of total assets over total liabilities is known as net worth. This ratio measures how efficiently the banks have used the funds of owners. Here, total equity capital includes shareholder's reserve including P/L A/C, GLLP and share capital i.e. ordinary share and preferences share capital. This ratio is calculated by dividing net profit by total equity capital (Net Worth)

This can be stated as

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

Total Interest Earned to Total Operating Income Ratio:

This ratio is calculated to find out the proportion of interest income in total operation income of the bank. It indicated how efficient in the bank in mobilization of its resources (funds) in interest bearing assets i.e. loan and advances, investment etc. Total operating income includes the interest income, commission and discount, income from dividend, foreign exchange income and others operating income. This ratio is calculated by dividing total interest earned by total operating income.

This ratio can be stated as:

$$\text{Total Interest Earned to Total Operating Income} = \frac{\text{Total interest earned}}{\text{Total Operating Income}}$$

Total interest paid to Total Working Fund ratio:

This ratio shows the percentage of total interest expenses against working funds (Total assets). A high ratio reflects high interest expenses on total working fund & Vice Versa. The ratio is computed by dividing Total interest paid by total working fund. Total interest paid includes total expenses on deposit liabilities, Loan & advances (Borrowing) & other deposits.

It is expressed as:

$$\text{Total interest paid to Total Working Fund} = \frac{\text{Total interest paid}}{\text{Total working fund}}$$

D. Risk Ratios:

Risk taking is the prime business of bank's investment management. It increases effectiveness and profitability of the bank. These ratios indicate the amount of risk associated with the various banking operations, which ultimately influences the banks investment policy.

The following ratios are evaluated under this topic:

Credit Risk Ratio:

Credit risk ratios measures the possibility that loan will not be repaid or that investment will definition, credit risk ratio is expressed as the percentage of non- performing loan to total loan and advances. Here, dividing total loan and advances by total assets derives this ratio.

This can be started as,

$$\text{Credit Risk Ratio} = \frac{\text{Total loan and advances}}{\text{Total assets}}$$

E Growth ratio:

Growth ratio is directly related to the fund mobilization and investment management of commercial bank. Growth ratio represent hoe well the bank is maintaining its economic and financial position. The ratio can be computed by dividing the last year figure by first year and then referring to the compared interest tables. High growth ratio indicates better performance of concerned banks and vice versa. Following ratios are evaluated.

Ratios	Types
1. Total Deposit Growth Ratio	Liquidity Position
2. Total Investment Growth Ratio	Liquidity Position
3. Loans and Advances Growth Ratio	Liquidity Position
4. Net profit Growth Ratio	Profitability position

Time Series

"Economist and business experts have often to deal with variates (quantities) which change in value with time. Variation of such quantities with time can be systematically studied and analyzed by presenting on graphs. For obtaining knowledge about the nature of variation of a quantity along with time, time series can be used." hen a series of data pertaining to a series of continuing periods should be studies, its characteristics and its future directions best estimated by the time series. Time series analyses a series of data keeping in mind the various short term and long term fluctuations.(Pushpa Raj Joshi, 2001)

Least Square Method

The Least Square Method of trend analysis has been adapted to measure the trend behaviors in this study. "Method of Least Square is mathematical method of obtaining trend that uses the concept of least square method. Simply the technique of fitting regression equation." (Dr. Suniti Shrestha & Ms. Sunil Amatya, 2002)

This method is widely used in practices. The straight-line trend of a series of data is represented by the following formula;

$$Y_c = a + bX$$

Where, Y_c is used to designate the trend values and to distinguish them from the actual Y values, a is the Y intercept or the computed trend figure of the Y variable when $X=0$, b represents the slope of the tend line of the amount of change in Y variable that is associated with a change of one unit in X variable. The X variable in time series analysis represents time.

3.4.2. Statistical Analysis:

Some important statistical tools are used to achieve the objective of the study. In this study statistical tool such as coefficient of correlation and trend analysis of important variables has been used.

Coefficient of correlation Analysis:

Correlation analysis enables us in determining the direction and relationship between two variables. However it does not tell us anything about cause and effect relationship. i.e. if there is a high degree of correlation between two variables, we cannot say, which is the cause and which is effect. e.g.: An extremely high and

significant correlation between the increase smoking and increase in lung cancer would not prove that smoking causes lung cancer. The high degree of correlation between these variables may be due to the following reasons.

Both the variables may be influenced by one or more other variables. eg: there is no relation between television and car. But as person's income increase, they can buy both television and car. Under this topic Karl Pearson's method popularly known as

Pearson's coefficient of correlation is used to measure the degree of relationship between following variables.

- a) Coefficient of correlation between total deposit and total investment
- b) Coefficient of correlation between total deposit and total loan, advances and overdraft
- c) Coefficient of correlation between current assets and current liabilities
- d) Coefficient of correlation between total assets and total income.
- e) Coefficient of correlation between loan loss provision And total loans and advances

Formula is written as under.

$$r = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{N \sum X^2 - (\sum X)^2} \sqrt{N \sum Y^2 - (\sum Y)^2}}$$

Where,

r = the coefficient of correlation

$\sum XY$ = Total population of items in two series

ΣX = Total of X series

ΣY = Total of Y series

ΣX^2 = the total of the square of item in X series

ΣY^2 = the total of the square of item in Y series

N = the number of items paired

Correlation coefficient can be interpreted as follows:

- a) it lies between + 1 and – 1
- b) When $r = +1$, there is perfect positive correlation
- c) When $r = -1$, there is perfect negative correlation
- d) When $r = 0$, there is no correlation
- e) When r lies between 0.7 to 0.999, there is a moderate degree of correlation
- f) When r is less than 0.5, there is low degree of correlation

Probable Error:

The reliability of the value of coefficient of correlation can be judged by its probable error. Probable error is denoted by 'P .Er.' and is calculated as below,

Probable error is obtained as follows $(PE) = 0.675 \frac{(1-r^2)}{\sqrt{N}}$

If the value of correlation coefficient is greater than 6 times the value of Probable Error, the correlation is significant. If the value of correlation is less than the probable error, the correlation coefficient is said to be insignificant and there is evidence of correlation.

CHAPTER-4

DATA PRESENTATION AND ANALYSIS

This chapter deals with the presentation, analysis and interpretation of relevant and available data of NIBL in order to fulfill the objectives of this study. To obtain best result, the data have been analyzed according to the research methodology as mentioned in the third chapter.

They are given below:

1. Analysis of financial Ratios
2. Statistical Ratios
3. Trend Analysis

4. 1 Analysis of Financial Ratios

Under this chapter various financial ratios are calculated to evaluate and analyze the performance of NIBL. Study of all types or ratios is not done; only those ratios that are important from the point of View of the fund mobilization and investment are calculated. The important ratios that are studied for this purpose are given below:

4.1.1 Liquidity Ratio

Liquidity ratio measures the ability of the firm to meet its current obligations. A commercial bank must maintain its satisfactory liquidity position to meet the credit need of the community. Never the less, it must be able to honor its commitment to convert deposit into cash on demand. Demand for the deposits, withdrawals, pay maturity in time and convert non-cash assets into cash to satisfy immediate need without loss to bank and consequent impact on long run profit.

Although withdrawals tend to be offset by new deposits, sometimes there will be less new deposits than their withdrawals. The bank must be able to deal with this eventually. Thus commercial bank must maintain its satisfactory liquidity position to satisfy the customer for immediate need without impact on long run profit.

The following ratios are evaluated and interpreted under liquidity ratios.

A. Current Ratio:

Current Ratio indicates the ability of a bank to meet its current obligation. As a conventional rule, a current ratio of 2:1 or more is considered satisfactory. The current ratio represents a margin of safety for creditors. Higher the current ratio, greater will be the margin of safety, the larger the amount of current assets in relation to current liabilities, the more the firm's ability to meet its current obligations.

$$\text{Current ratio} = \frac{\text{Total Current Assets}}{\text{Total Current liabilities}}$$

Current ratios of NIBL from the fiscal year 2064/65 are given below in table no.1

Table No.4.1
Current Ratio (Times)

Figure in(%)

	Ratio	Yearly change in %
2064/65	1.01	
2065/66	1.03	1.98
2066/67	1.03	
2067/68	1.06	2.91
2068/69	1.05	0.94
	0.85	

Source: Annual report of Nepal Investment Bank Limited Appendix 1 (A)

From the table 4.1. depicts that the current assets of the NIBL have exceeded the current liabilities during the five years period. In general, it can be said that bank have sound ability to meet there short term obligations. The mean ratio is 0.85 The current ratio is higher in the year 2067/68 i.e 1.06 and lower in the year 2064/65 i.e. 1.01. The yearly change in percentage or growth rate in the year 2067/68 is 2.91% and in the year 2066/67 it decreased to zero. This shows that current ratios of NIBL are in the fluctuating trend.

B. Cash and Bank Balance to Total Deposit Ratio (Cash Reverse Ratio):

Cash and bank balance is said to be the first defense of every banks. The ratio between the cash and bank balance and total deposit measure the ability of the bank to meet the unanticipated cash and all types of deposits. Higher the ratio, the greater will the ability to meet sudden demand of deposits, but every high ratio is not desirable since bank has to pay interest on deposits. This will also maximize the cost of fund to the bank.

We have,

$$\text{Cash and bank balance to total Deposit ratio} = \frac{\text{Cash and bank balance}}{\text{Total deposit}}$$

Cash and bank balance to total deposit ratio of NIBL from the fiscal year 2064/65 to 2068/69 are given in below table no.4.

Table No.4.2

Cash and Bank Balance to Total Deposit Ratio (%)

	Ratio%	Figure in Rs. (%) Yearly change in %
2064/65	10.90	
2065/66	0.17	-98.44
2066/67	13.60	7900
2067/68	16.24	19.41
2068/69	20.70	27.46
	15.69	

Source: Annual report of Nepal Investment Bank Limited Appendix 1(B)

Cash and bank balance to total deposit of NIBL are in the fluctuating trend like 10.90% in the year 2064/65, similarly 0.17, 13.60, 16.24 and 20.70 respectively in the year 2065/66 to 2068/69. The mean ratio is 15.69 %. The ratio is higher in the year 2068/69 and lower in the year 2065/66, which is less than the average ratio. There is

negative change in % in the year 2065/66 i.e. (-98.44%). Similarly, growth rate increased to 7900% in the year 2066/67.

C. Cash and Bank Balance to current Asset Ratio:

This ratio shows the banks liquidity capacity on the basis of cash and bank balance that is the most liquidity asset. Higher ratio indicates the banks ability to meet the daily cash requirement of their customer deposit and vice versa. But higher ratio is not preferred as the bank has to pay more interest on deposit and will increase the cost of fund. Lower ratio is also very dangerous as the bank may not be able to make the payment against the cheques presented by the customers. Therefore, bank has to balance to current assets ratio in such a manner that it should have the adequate cash for the customers demand against deposit when required and less interest is required to be paid against the cash deposit.

We have,

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

The table no 4. 3 shows the cash & bank balance to current assets ratio of NIBL from the fiscal year 2064/65 to 2069/70.

Table No.4.3

Cash & Bank Balance to Current Assets Ratio (%)

Figure in Rs. (%)

	Ratio%	Yearly change in %
2064/65	9.98	
2065/66	15.36	53.90
2066/67	12.22	-20.44
2067/68	14.33	17.27
2068/69	18.42	28.54
	14.06	

Source: Annual report of Nepal Investment Bank Limited, Appendix 1 (C)

In the table no 4.3 the ratios are in the increasing decreasing trend. The mean ratio of cash and bank balance to current assets ratio is 14.06%. The ratio of cash & bank balance to current assets is higher in the fiscal year 2068/69 i.e. 18.42% and minimum in the year 2064/65 i.e. 9.98%, which is less than the mean ratio. The ratio has fallen to 12.22% in the year 2066/67 which means, yearly change in % or growth rate is negative i.e. (-20.44%). In the year, 2068/69 and 2067/68 the ratio increased to 18.42% and 14.33% respectively. Even though, there is increase in ratio in the year 2067/68 than the previous year, the growth rate is increased from 17.27% to 28.54%. This shows that bank has fluctuating trend regarding cash & bank balance to current assets ratio. This also shows that in the year 2068/69 banks is able to maintain only 18.42% cash and bank balance of the current assets, which is more than the mean percentage ratio.

D. Investment on Government Securities to Current Asset Ratio:

The commercial banks are interested to invest their collected funds in various government securities issued by government. The government securities are the safest place to make investment. But the government securities are not so much liquid as cash and bank balance. They can be easily sold in the market or they can be converted into cash in other ways. The main purpose of this ratio is to examine that portion of a commercial Banks current asset that is invested on different Govt. Securities.

We have,

$$\text{Investment of Government Securities to Current Asset Ratio} = \frac{\text{Investment on G.S.}}{\text{Current Assets}}$$

The table no. 4.4 shows the ratio of investment on Govt. Securities to current assets for the five fiscal years from 2064/65 to 2068/69.

Table No.4.4**Investment of Government Securities to Current Asset Ratio (%)**

Figure in Rs. (000)

	Ratio%	Yearly change in %
2064/65	0.84	
2065/66	0.49	-41.67
2066/67	0.75	53.06
2067/68	0.76	1.33
2068/69	0.69	-9.21
	Mean =0.71	

Source: Annual report of Nepal Investment Bank Limited, Appendix 1(D)

From the table 4.4 NIBL had made higher investment in the Govt. securities in the year 2064/65 i.e. 0.84 of the current assets. In the five year study NIBL had made lower investment in the year 2065/66 i.e. only 0.49% of the current assets, which is lower than the mean value. The ratio of investment in Govt. Securities to current assets is 0.71%. Maximum growth rate is 53.06%, which is the highest in the year 2066/67. Again, in the year 2067/68 it decreased to 1.33 and in the following year change in % decreased to (9.21)%. This depicts that investment in govt. securities of the NIBL had followed a increasing trend from lower to the higher but in the last year of the study i.e. in the year 2068/69 there is slightly decrease in the ratio%.

E. Loan & Advances to Current Assets Ratio (%):

Loan & Advances are also included in the current Assets of commercial banks because generally it provides short-term loan, advances, overdrafts, cash-credit, local & foreign bill purchased and discounted.

To make a high profit mobilizing its fund in the best way, a commercial bank should not keep its all collected funds as cash and bank balance but they should be invested as loan and advances to the customers. If sufficient loan and advances cannot be granted, it should pay interest on those utilized deposits funds and may lose some earning, but high loan and Advances may also be harmful to keep the bank in most liquid position because they can only be collected at the time of maturity only. Thus, a bank must maintain its loan and advances in appropriate level to find out portion of current asset, which is granted as loan and advances.

We have,

$$\text{Loan \& Advances to Current Asset Ratio (\%)} = \frac{\text{Loan \& Advances}}{\text{Current Asset}}$$

The table no 4.5 shows the ratio of loan & advance to current assets of NIBL for five year from 2064/65 to 2068/69.

Table No.4.5

Loan & Advances to Current Assets Ratio (%)

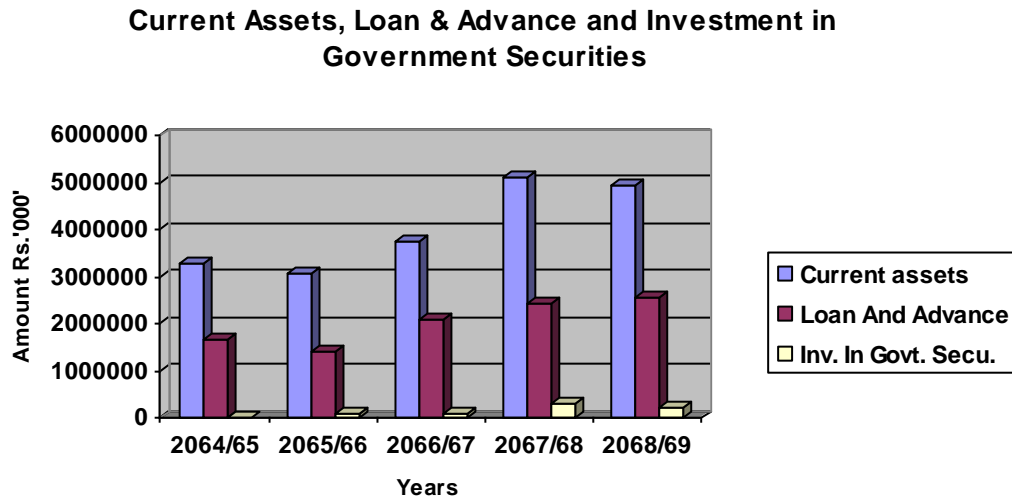
Figure in Rs. (%)

	Ratio%	Yearly change in %
2064/65	73.17	
2065/66	71.43	-2.38
2066/67	73.42	2.79
2067/68	72.34	-1.47
2068/69	66.96	-7.43
Mean	71.46	

Source: Annual report of Nepal Investment Bank Limited, Appendix 1(E)

From table 4.5, mean ratio of loan & advance to current assets is 71.46%. During the five-year study NIBL have recorded higher ratio of 73.42 in the FY 2066/67 and lower ratio of 66.96% in the FY2068/69, which is less than the mean value. In the FY 2067/68, ratio increased to 72.34% and again in 2068/69 decreased to 66.96%. The yearly change in % or growth rate decreased to negative in FY 2065/66 and 2067/68 i.e. (2.38%) and (1.47%) respectively. In the FY 2066/67, growth rate increased to 2.79%, which is the highest during the study. This shows loans & advance to current assets ratio of NIBL are in increasing decreasing trend. In other word, it can be said that NIBL has followed the fluctuating trend in loans & advance to current assets ratio. This depicts that NIBL have mobilized 50% of its funds as loan & advances with respect to current assets.

Fig 4.1



4.1.2 Asset Management Ratio (Activity Ratio)

Asset management ratio measures the efficiency of the bank to manage its asset in profitable and satisfactory manner. A commercial bank must manage its asset properly so as to earn high profit. The following ratio reveals how the NIBL has managed its resources efficiently.

A. Loan & Advances to Total Deposit Ratio:

A bank should mobilize the total deposits on loan and advances for generating profit. This ratio measures the extent to which the banks are successful to mobilize their total deposit on loan and advances. Higher ratio represents better position regarding the mobilization of total deposit on loan and advance. But higher ratio is not better from the point of view of liquidity as the loan and advances is not as liquid as cash and bank balance.

We have,

$$\text{Loan \& Advances to Total deposit Ratio} = \frac{\text{Loan \& Advance}}{\text{Total Deposits}}$$

The table below is the ratio of loans & advances to total deposit of NIBL for the five FY years from 2064/65 to 2068/69.

Table No.4.6

Loans & Advances to Total Deposit (%)

Figure in Rs. (%)

	Ratio%	Yearly change in %
2064/65	79.91	
2065/66	78.86	-1.31
2066/67	81.74	3.65
2067/68	81.96	0.26
2068/69	75.27	-8.16
Mean	79.54	

Source: Annual report of Nepal Investment Bank Limited, Appendix 1 (F)

The table no. 4.6 exhibits that the mean ratio of loans & advances to total deposits is 79.54%. NIBL have recorded higher ratio of 81.96% in the FY 2067/68 and lower in 2068/69 of 75.27%. IN the last year of the study i.e. FY 2067/68 it have recorded the ratio of 81.96%, which is better than the previous year. The yearly change in % or growth ratio has increased up to 3.65% in the FY 2066/67. In the succeeding year change in % decreased to (0.26%) and again in the next succeeding year i.e. 2068/69 change in % is-8.16%. This depicts that ratio of NIBL have fluctuating trend. In the five-year study, NIBL have mobilized more than 60% in average of total deposit in loans & advances, which sounds better.

B.Total Investment to Total Deposit Ratio:

A commercial bank mobilizes its collected deposits by investing its fund in different securities issued by Government and other financial or non-financial institutions. This ratio measures the extent to which the banks are able to mobilize their deposits on investment in various securities. A high ratio indicates the success in mobilizing deposits in securities and vice versa

We have,

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

The table below total investment to total deposit ratio for five FY year from 2064/65

Table No 4.7

Total Investment to Total Deposit Ratio (%)

Figure in Rs. (%)

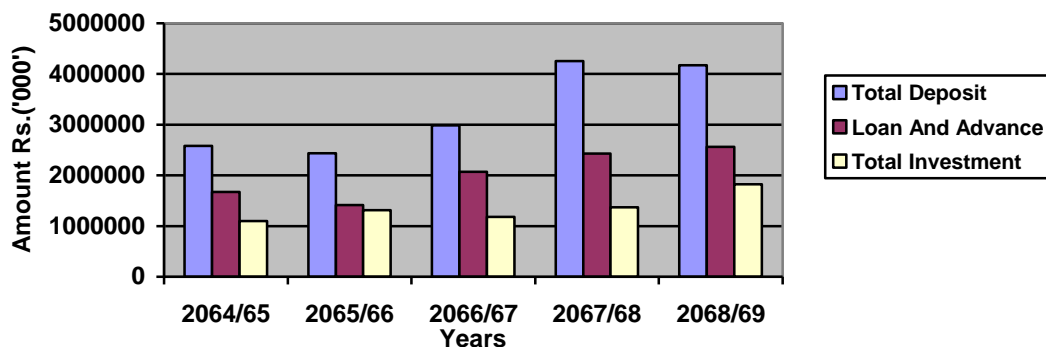
	Ratio%	Yearly change in %
2064/65	19.95	
2065/66	15.85	-20.55
2066/67	17.24	8.77
2067/68	14.81	-14.09
2068/69	18.31	23.63
Mean	17.32	

Source: Annual report of Nepal Investment Bank Limited, Appendix 1 (G)

From table 4.7 it is seen that the total investment to total deposit ratio are in the fluctuating trend. The higher ratio of 19.95% is recorded in the FY 2064/65. In the FY 2065/66 the ratio decreased to 15.85% and again in the FY 2066/67 the ratio increased to 17.24%. The mean ratio is 17.32%. In the last year of the study the ratio increased to 18.31%. Yearly change in% increased by 8.77% in 2066/67. But in the succeeding year change in % or growth rate decreased to negative i.e. (20.55%) and (14.09%) respectively. But, again the FY 2068/69 the growth rate increased by 23.63%. This reveals that total investment of NIBL has maintained the fluctuating trend in respect of total deposit. NIBL has been able to utilize only approx 42% of the total deposit as investment.

Fig 4.2

Total Deposit,loan &Advance and Investment



C. Loan & Advances to Total Working Fund Ratio:

Working fund plays very important role in income generation through its funds mobilization in the form of loan & advances. Commercial bank must be very careful in mobilizing in total assets. As loan & advances in appropriate level to generate profit. This ratio reflects the extent to which the commercial banks are success in mobilizing their assets loan & advances for the purpose of income generation. A high ratio indicates better in mobilization of resource loan and advances and Vice Versa.

We have,

$$\text{Loan \& advances to total working fund ratio} = \frac{\text{Loan \& advances}}{\text{Total working fund}}$$

The table below is the five-year ratio of loan and advances in relation to total working fund.

Table No 4.8

Loan & Advances to Total Working Fund Ratio (%)

Figure in Rs. (%)

	Ratio%	Yearly change in %
2064/65	50.37	
2065/66	45.43	-9.80
2066/67	54.54	20.04
2067/68	47.37	-13.14
2068/69	51.56	8.83
	49.86	

Source: Annual report of Nepal Investment Bank Limited, Appendix 1 (H)

In table 4.8 it exhibits the decreasing increasing trend. The mean ratio of the loan & advances to total working fund is 49.86%. In five-year study, NIBL have recorded higher ratio of 54.54% in the FY 2056/57 and lower in the FY 2065/66 of 45.43%. In the FY year 2067/68 ratios decrease to 47.37% and again in the succeeding year 2068/69 the ratio increased to 51.56%, which is 8.83% more than previous year. Growth rate is higher in the FY 2066/67 i.e. 20.04%. And again in the FY year 2067/68 change in % ratio or growth rate decreased to (13.14%). This show the NIBL has recorded the

fluctuating trend of loan and advances in respect of total working fund. This too exhibits that NIBL has been utilizing approx 50% of the working fund as loan and advances

D. Investment on Government Securities to Total Working Fund Ratio:

Bank should diversify the risk, so that bank should not invest its all deposit in loan & advances & other credit. From the liquidity & security point of view bank, a government security is a safe medium of investment though it is not liquid as cash and bank balance. This ratio is very important to know the extent to which the banks are successful in mobilizing their total fund on different types of government securities to maximize its income. A high ratio indicates better mobilization of funds as invest on Government securities and Vice Versa.

We Have,

Invest on Government securities to total Working Fund Ratio

$$= \frac{\text{Investment on government securities}}{\text{Total Working Fund}}$$

The table below is the ratio of investment on Govt. securities to total working fund for five FY.

Table No 4.9

Investment on Government Securities to Total Working Fund Ratio (%)

Figure in Rs. (%)

	Ratio%	Yearly change in %
2064/65	9.49	
2065/66	8.15	-14.12
2066/67	11.07	35.83
2067/68	8.38	-24.30
2068/69	8.98	7.16
Mean	9.21	

Source: Annual report of Nepal Investment Bank Limited, Appendix 1 (I)

The table 4.9 reveals the increasing decreasing trend. In the 5-year study, the higher ratio is recorded in the FY 2067/67 i.e. 11.07% and lower of 8.15% in the FY 2065/66,

which is less than the mean ratio. The mean ratio of investment in government securities to total working fund is 9.21%. Maximum growth in investment in government securities is 35.83% in the FY 2066/67. In the FY 2067/68, the yearly change in % or growth rate of the ratio is -24.30% even though the ratio between investments in government securities to total working fund is higher. This clearly shows that ratio of it has fluctuating trend. NIBL has invested only limited percentage of total working fund in government securities. i.e. approx. 3%

E. Investment on Shares and Debentures to Total Working Fund Ratio:

Total investment has been broken down into two parts i.e. investment on shares & debentures. Now a day, a commercial bank is interested to invest its fund not only on Government securities but also shares and debentures of other different types of companies. Most of the commercial banks in Nepal have purchased shares of regional development banks. But some of these have purchased the shares of other companies too.

Investment on shares and debentures to total working fund ratio reflects the extent on which the banks are successful to mobilize their total assets on purchase of shares and debentures of other companies to generate incomes and utilize their excess fund. A high ratio indicates more portion of investment on shares and debenture out of total working fund and vice versa.

We have,

Investment on shares debentures to total working fund ratio

$$= \frac{\text{Investment on shares \& debentures}}{\text{Total Working fund}}$$

The table 4.10 is the ratio of investment in Share & Debenture to Total Working Fund from 2064/65 to 2068/69.

Table No 4.10

Investment on Share & Debenture to Total Working Fund Ratio (%)

Figure in (%)

	Ratio%	Yearly change in %
2064/65	11.21	
2065/66	15.69	39.96
2066/67	11.69	-25.49
2067/68	6.11	-47.73
2068/69	6.49	6.21
Mean	10.24	

Source: Annual report of Nepal Investment Bank Limited, Appendix 1(J)

The table 4.10 clearly shows that ratios of investment in share and debenture to working fund have fluctuating trend. In the FY 2065/66 it has maintained the higher ratio of 15.69%. The mean ratio of it is 10.24%, which is comparatively a small percentage of total working fund. The change in % or growth rate of ratio increased to maximum of 39.96% in the FY 2065/66. It reveals that NIBL is very less stable regarding investment in share and debenture. NIBL has invested only limited fund in share and debenture with respect to total working fund.

F. Total Off Balance Sheet Operation to Loan & Advances Ratio:

Commercial banks should always be careful in fee-based i.e. off balance sheet activities, which play an important role for the better performance of a bank. These fee based activities are very much dependent on mode of operation, management strategy, banking network with foreign banks. A total OBS operation to loan advances loan & advances of the banks.

We have,

Total off Balance Sheet Operation to Loan & Advances Ratio

$$= \frac{\text{Total off Balance Sheet Operation}}{\text{Loan \& Advances Ratio}}$$

The table 4.11 is the five-year ratio of Total off balance sheet to Loan & Advances.

Table No 4.11

Total Off-Balance Sheet to Loan & Advance Ratio (%)

Figure in. (%)

	Ratio%	Yearly change in %
2054/55	44.29	
2055/56	87.60	97.78
2056/57	60.31	-31.15
2057/58	40.66	-32.59
2058/59	27.61	-32.10
Mean	52.09	

Source: Annual report of Nepal Investment Bank Limited, Appendix 1(K)

In the table 4.11, the mean ratio of total off balance sheet to loan & advance is 52.09%. the NIBL has maintained higher ratio of 87.60% in the FY 2065/66 and in the succeeding year ratio has decreased consequently to 60.31% and 40.66% respectively. IN the last year of the 5 year study i.e. 2068/69 the ratio decreased to 27.61% which is the lowest ratio. The yearly change in the ratio % are decreasing expect in the FY 2065/66, where growth rate ratio is 97.78%. But in the succeeding, year change in % decreased to negative. This reveals that NIBL has recorded the decreasing trend in the total of balance sheet to loan & advance ratio. It means NIBL is very less stable and is not in better position regarding the proportion of fee based activities to loan & advances.

G. Investment in shares and debentures to paid up capital:

This ratio measures the percentage of investment in shares and securities with respect to paid up capital.

We have,

Investment in shares and debentures to paid up capital

$$= \frac{\text{Investment in shares and debentures}}{\text{Paid –up capital}}$$

The table 4.12 is the ratio of investment on shares and debentures to paid up capital for five FY

Table No 4.12

Investment in shares and debentures to paid up capital Ratio (%)

Figure in (%)

	Ratio%	Yearly change in %
2064/65	30.94	
2065/66	20.24	-34.58
2066/67	18.42	-8.99
2067/68	10.40	-43.54
2068/69	8.58	-17.5
Mean	17.72	

Source : Annual report of Nepal Investment Bank Limited, Appendix 1(L)

The table 4.12 clearly shows that ratios of investment in share and debenture to paid up capital have fluctuating trend. In the FY 2064/65 the ratio is 30.94%. In the year 2065/66 it decreased by 20.24% has maintained the higher ratio . In the succeeding year it maintain the same ratio as that of the previous year. The mean ratio of it is 17.72%. In the FY 2068/69 the ratio is 8.58%. It reveals that NIBL is stable regarding investment in share and debenture. NIBL has invested only limited fund in share and debenture according to the directive of NRB with respect to paid up capital.

H. Loan Loss ratio:

The ratio of loan loss provision to total loan & advance describes the quality of assets that the commercial banks are holding loan loss provision is the summation of provision made against all types of loans as per the NRB direction. The NRB directives direct to make the provision of 1%, 25% 50% & 100% for good loans, Sub-standard loans, doubtful loans & bad loan respectively. Loan loss provision, in fact is the cushion against future contingency created by the default of the borrowers. This loan loss provision occupies the larger shares in the total provision presented in the profit & loss A/C & definitely decreases the profit of the bank. The more of the loan loss provision, suggests two definite things more of total loan & advance or more of bad loan. Since, according to NRB directives, 1% provision is to be provided for all good loans too, it does acquire a huge portion of the total loan loss provision is to be provided for all good loans too. It does acquire a huge portion of the total loan loss provision. The lower ratio

signifies the good quality of assets in the total volume of loans & advances. Similarly, the higher ratio signifies relatively more risky assets the volume of loans and advance and also possibility of increment of non-performing loans in future.

We have,

$$\text{Loan Loss Ratio} = \frac{\text{Loan loss Provision}}{\text{Loan \& Advance}}$$

The table below shows the loan loss ratio (%) of NIBL for five year from 2064/65 to 2068/69

Table No 4.13

Loan Loss Ratio (%)

Figure in (%)

	Ratio%	Yearly change in %
2064/65	0.42	
2065/66	4.01	854.76
2066/67	4.94	23.19
2067/68	4.99	1.01
2068/69	4.89	-2.00
Mean	3.85	

Source: Annual report of Nepal Investment Bank Limited , Appendix 1 (M)

The table 4.13 clearly shows the loan loss provision of NIBL has fluctuating trend. The mean ratio is 3.85%. It has higher ratio of 4.99% in the FY 2067/68 and lower ratio of 0.42% in 2064/65. The loan loss provision ratio increased by 4.01% in 2065/66 which is the highest during the five-year study. Higher ratio of loan loss provision doesn't sound good. Lower loan provision represents better performance of the bank. In this regards, NIBL is not uniform and less stable. The performance of NIBL in terms of recovery of loan is not satisfactory and effort should be made for timely recovery of loan.

Non- Performing Loan:

Non – performing loan consists of loans and advances except good loans. It is that part of loans & advance that should be looked upon carefully for the timely recollection of

the repayment. According to NRB directives, sub-standard, doubtful and bad loans are categorized under non-performing loans. Non-performing loans are in fact is very crucial problems of banks. They require extra efforts for collection of repayment. They also create large amount of loan loss provision according to NRB directives.

The table below shows the non –performing loan of NIBL for three year from 2067/68 to 2069/70.

Non- Performing Loan

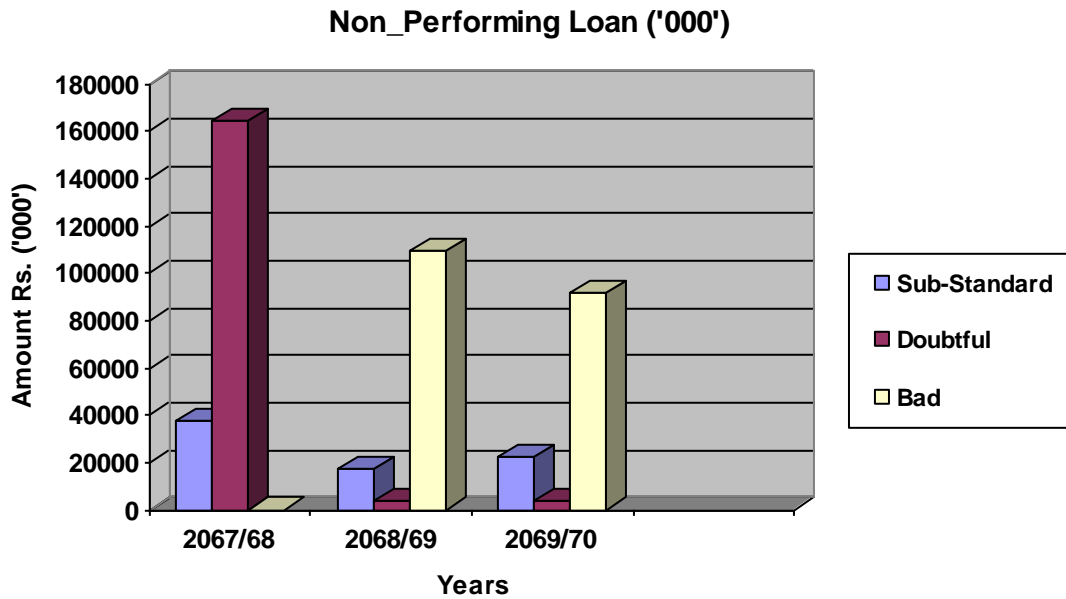
Figure in Rs. (000)

	2067/68	2068/69	2069/70	Mean
Sub- Standard	37375	17232	22030	25545.67
Doubtful	164058	3481	3594	57044.33
Bad	0	109581	91467	67016.00
				49868.67

Source: Annual report of Nepal investment Bank Limited

The non-performing loans of NIBL. The sub-standard loan is 37375 in the year 2067/68 which is higher than the mean value. The mean value of sub standard loan is 25545.67. In the year 2068/69 it decrease to 17232 but in the succeeding year it increased to 22030. Doubtful loan drastically decrease from 164058 in 2067/68 to 3481 and 3594 in 2068/69 and 2069/70 respectively. The mean value of doubtful loan is 57044.33. This exhibits that NIBL is making good effort in collection of repayment of doubtful loans Similarly, bad loans is 109581 in the year 2068/69, which decrease to 91467 in the year 2069/70. Decrease in bad loan is good for NIBL. Non-performing loans should be controlled timely, if not it might create the problem in the future

Fig 4.3



Loan Loss Provision for Non – performing loans:

Loan Loss Provision is the provision made against all types of loans as per the NRB directives. The NRB directs to make provision of 1%, 25%, 50% and 100% for good, sub-standard, doubtful and bad Loans respectively. According to NRB directives 1% provision is to be provided for all goods loans too. It does acquire a huge portion of the total loan loss provision.

The table below shows the loan loss provision for non-performing loan for three years from 2067/68 to 2069/70

Loan Loss Provision for Non – performing loans

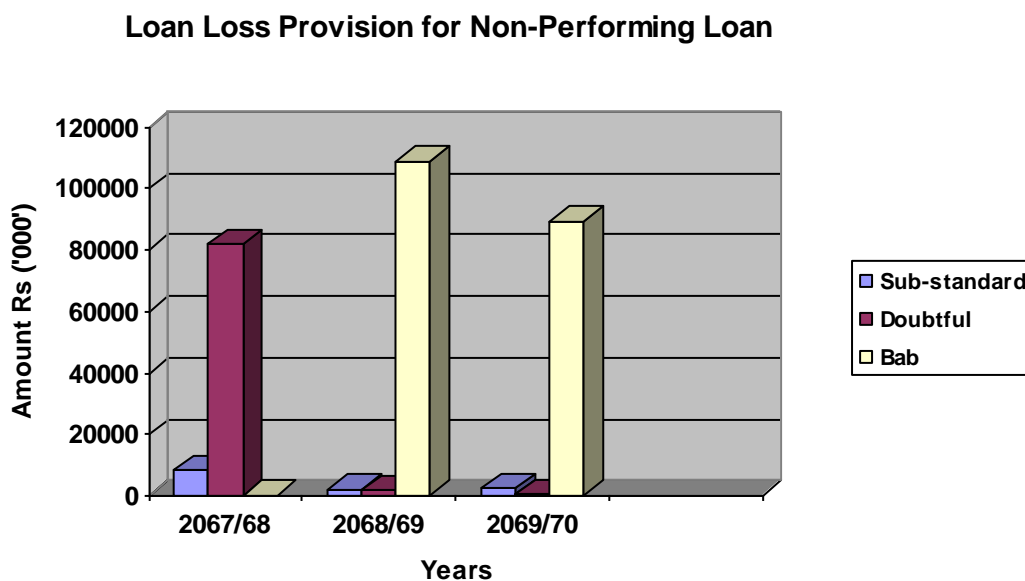
Figure in Rs. (000)

	2067/68	2068/69	2069/70	Mean
Sub- Standard	8329	2089	2491	4303
Doubtful	81697	1649	457	27934.33
Bad	0	108981	89492	66157.67
				32798.33

Source: Annual report of Nepal investment Bank Limited, Appendix 1(N)

In the year 2067/68, the loan loss provision of sub-Standard loan is 8329, which is higher than the mean value i.e. 4303. Loan loss provision decreases to 2089 and 2491 in 2068/69 and 2069/70 respectively. Similarly, loan loss provision for doubtful loan is 81697 in the year 2067/68. The mean value is 27934.33. The loan loss provision is 457 which is less than mean value. Similarly, loan loss provision of bad loan is nil in 2067/68 but in 2068/69 the loan loss provision is 108981. Loan loss provision slightly decrease to 89492 in the year 2069/70. This shows that loan loss provision of NIBL are in decreasing trend, which is good for the growth of the bank. This also reveals that NIBL is making an effort to decrease the non-performing loans of the bank.

Fig 4.4



Non- Performing Loans to Total Loan & Advances:

According to NRB directives, sub-standard, doubtful and bad loans are categorized under non-performing loans. Increase in non-performing loans increase loan loss provision, the result of which is deduction in profit. The banking sector is severely affected by the NPL (Non-Performing Loan) problem. There is no doubt that it has a serious implication on economic performance of the country.

The table shows the non-performing loans to total Loan & advances ratio of NIBL for three year from 2067/68 to 2069/70

Non- Performing Loans to Total Loan & Advances Ratio

Figure in Rs. (000)

	2067/68	2068/69	2069/70	Mean
Sub- Standard	1.53	0.68	0.39	0.87
Doubtful	6.67	0.14	0.07	2.33
Bad	0	4	1.59	1.87
				1.69

Source: Annual report of Nepal Investment Bank Limited, Appendix 1(N)

The combined mean ratio of non-performing loan to total loan & advances is 1.69%. The ratio of sub-standard loan is 1.53% in the year 2067/68. In the succeeding year the ratio decreases to 0.68% and 0.39% respectively. The ratio of doubtful loan is 6.67% in 2067/68, which is highest in the study. But the mean ratio is 2.33% as the ratio decrease to 0.14% and 0.07% respectively. Similarly, the ratio of bad loan is nil in the year 2067/68 but in 2068/69 the ratio is 4%, the ratio also decrease to 1.59% in the year 2069/70. The ratio of non-performing loans to total loan & advances of NIBL is following the decreasing trend which shows the good performance of the bank. This also exhibits that NIBL has not only made an effort in collection of repayment but also made necessary arrangement as according to NRB directives while providing loans & advances.

Loan Loss provision to Non-performing Loans:

The loan loss provision to loans & advances describes the quality of assets the bank is holding. NRB has directed the bank to categories its loan & advances into good, sub-standard, doubtful and bad loans and to make the provisions of 1%, 25%, 50% and 100% respectively as loan loss provision. Loan loss provision in fact is the cushion against future contingency created by the default of the borrowers. The lower ratio indicates the good quality of assets in the total volume of loans and advances. Similarly, the higher ratio indicates more risky assets and also possibility of increment of non-performing loans in future.

The table below shows the loan loss provision to non-performing loan ratio of NIBL.

Details in Appendix 2.

Loan Loss provision to Non-performing Loans:

Figure in Rs. (000)

	2067/68	2068/69	2069/70	Mean
Sub- Standard	22.28	12.12	11.31	15.24
Doubtful	49.79	47.37	12.71	36.62
Bad	0	99.46	97.85	65.77
				39.21

Source: Appendix 2

The loan loss provisions to non- performing loan ratio. The ration of sub –standard loan is 22.28% in 2067/68, which decrease to 12.12% in the year 2068/69 and 11.31% in 2069/70. The mean ratio is 15.24%, which is less than NRB directives i.e. 25%. The ratio of doubtful loans is 49.79% in 2067/68, which is approximately 50% as according to NRB directives. The ratio decrease to 47.37% in 2068/69 which is close to NRB directives but in 2069/70 the ratio decrease to 12.71% which is less than the NRB directives. The mean value is 36.32%. Similarly, the ratio of bad loans is nil in2067/68, but in 2068/69 and 2069/70 the ratio are 99.64% and 97.85% which is approximately 100% as according to NRB directives. This indicates that to some extent NIBL has followed the NRB directives and maintains the loan loss provision on the same basis but in the recent year 2069/70, NIBL fail to maintain the NRB directives for doubtful loan and sub-standard loan.

4.1.3. Profitability Ratio

Profitability ratio is very helpful to measure the overall efficiency of operation of financial institutions. Profit is the indicator of efficient operation of a bank. The banks acquire profit by providing different services to its customers or by making investment of different kinds. Sufficient profit is must to have good liquidity, grab investment opportunities, expand banking transaction, finance government in need of development fund, overcome the future contingencies and need fixed internal obligation for a bank. Profitability ratios measure the efficiency of bank. Higher the profit ratio, the higher will be the efficiency of the bank

A.Return on Total Working Fund Ratio:

It measures the profit earning capacity by utilizing available resources i.e. total assets return will be higher if the banks working fund is well managed and are efficiently utilized, minimization of taxes within the legal framework will also improve the return.

We have,

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

The table 4.14 is the ratio of net profit to total working fund for five FY from 2064/65 to 2068/69.

Table No 4.14

Net profit to Total working Fund Ratio (%)

Figure in (%)

	Ratio%	Yearly change in %
2064/65	2.09	
2065/66	2.90	3.87
2066/67	3.33	1.48
2067/68	2.29	-3.123
2068/69	2.08	-9.17
	1.94	

Source: Annual report of Nepal Investment Bank Limited , Appendix 1(O).

The table 4.14 clearly shows that net profit to total working fund ratio are fluctuating trend. In the five-year study, higher ratio of 3.33% is recorded in the first year i.e. 2069/67. In the FY 2067/68, the ratio decreased to 2.29% and similarly, in the FY2067/68 and 2068/69 again it decreased to 2.29% and 2.08% respectively which is less than the mean ratio. The mean ratio is 1.94%. In 2067/68, change in % ratio or growth ratio is negative (3.123%). This exhibits that net profit of NIBL is not stable and it is inconsistent.

B. Return on loan & Advances Ratio:

Return on loan & advances ratio measures the earning capacity of the commercial banks on its deposits mobilized on loan and advances. Mostly loan & advances includes loan cash credit, overdraft bills purchased and discounted.

We have,

$$\text{Return on loan \& Advances Ratio} = \frac{\text{Net Profit}}{\text{Loan \& Advances}}$$

The table 4.15 is the return on loan and advance ratio for five FY.

Table No 4.15

Net Profit to Loan & Advances Ratio (%)

Figure in .(%)

	Ratio%	Yearly change in %
2064/65	2.53	
2065/66	2.45	-3.16
2066/67	3.09	26.12
2067/68	2.86	-7.44
2068/69	2.42	-15.38
	2.67	

Source: Annual report of Nepal Investment Bank Limited, Appendix 1(P)

In table 4.15 it clearly shows that ratio is in decreasing trend. NIBL has recorded the highest ratio of 2.53% in the base year of the study. The lowest ratio of 2.42% is recorded in the FY 2068/69, which is less than the mean ratio. The mean ratio is maintained at 2.67%. In the FY 2065/66 the ratio decreased by (0.08%) and reached to 2.45%. But the ratio slightly increased by 0.64% and reached to 3.09% in the succeeding year. In the FY 2067/68 and 2068/69, the ratios are in the decreasing trend i.e. 2.86% and 2.42%. It reveals that change in % ratio or growth rate are in fluctuating trends. Net profit in respect to loan and advance is unstable and NIBL is not able to earn much from loan and advances.

C. Return on Equity (ROE):

If bank can mobilize its equity capital properly, they can earn high profit. Equity capital is the own capital of the bank. The return on equity capital measures the extent to which a bank is successful to mobilize its equity. Higher ratio indicates the sound investment policy for the mobilization of its equity capital.

We have,

$$\text{Return on equity} = \frac{\text{Net profit}}{\text{Total Equity Capital}}$$

The table 4.16 shows the ROE of NIBL for five FY in which 2064/65 is taken as base year.

Table No 4.16

Return on Equity (ROE)

Figure in (%)

	Ratio%	Yearly change in %
2064/65	1.89	
2065/66	2.43	28.57
2066/67	3.09	27.16
2067/68	2.51	-18.77
2068/69	1.99	-20.71
	2.38	

Source: Annual report of Nepal Investment Bank Limited ,Appendix 1(Q)

The table 4.16 exhibits that ratio of net profit to total equity capital has followed the fluctuating trends ranging from 1.89% to 2.43% during the study. The higher ratio of 3.09% is maintained in the base year of the study. The lower ratio of 1.89 is maintained in the FY 2064/65. The mean ratio of net profit to total equity capital is 2.38%. Yearly change in % or growth rate is also in fluctuating trend. In the FY 2068/69 the change in % decreased by (1.99%). In the FY 2066/67, growth rate increased by 27.16%. Again, in the succeeding year change in % decreased to negative. This

shows that NIBL has not efficiently utilized its equity capital and effort should be done to utilize the equity capital to earn more profit.

D.Total Interest Earned To Total outside Assets Ratio:

This ratio reflects the extent to which the bank is successful to earn interest as major income on all the outside assets. Higher ratio shows earning power of total outside assets. This is very important ratio, as the main asset is the outside Asset of a commercial bank.

The total asset includes loan & advances, investment on government securities, share and debentures and other all types of investment.

We have,

$$\text{Total interest earned to Total outside asset} = \frac{\text{Total interest earned}}{\text{Total outside asset}}$$

The table 4.17 Show the ratio of total interest earned to total outside assets from FY 2064/65 to 2068/69.

Table No 4.17

Total Interest Earned To Total outside Assets Ratio (%)

Figure in (%)

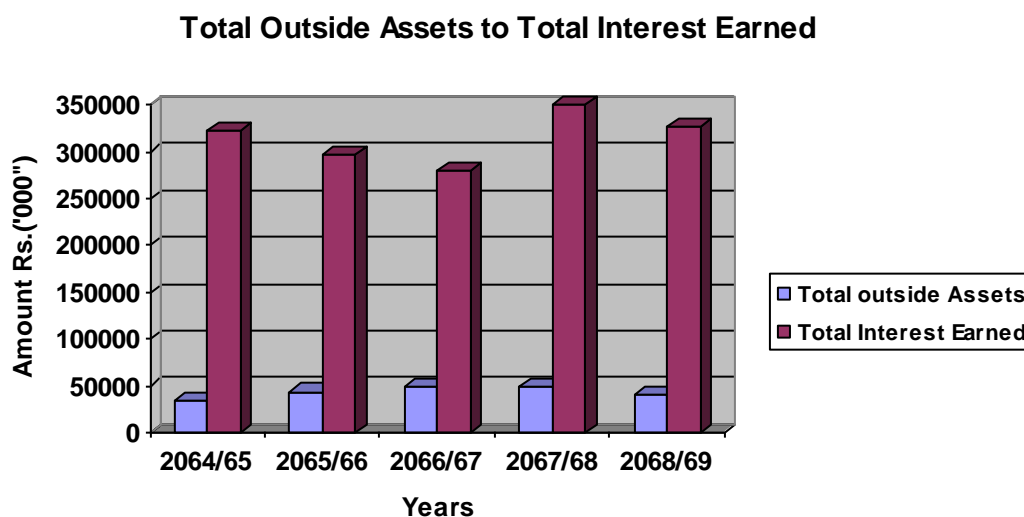
	Ratio%	Yearly change in %
2064/65	9.51	
2065/66	6.79	-28.60
2066/67	5.71	-15.91
2067/68	7.20	38.19
2068/69	8.08	12.22
Mean	7.46	

Source: Annual Report of Nepal Investment Bank Limited, Appendix 1 (R)

The table 4.16 clearly shows that ratio is in the decreasing trend. NIBL has recorded the higher ratio of 9.51% in the base year i.e. 2064/65. In the succeeding year the ratio of total interest earned decreased to 6.79% to 5.71% in the last year of the five-year study. The mean ratio of total interest earned against total outside assets is 7.46%. The Change

in % is in fluctuating trend. The growth rate decreased by (28.60%) in the FY 2065/66 and in the FY 2066/67 the ratio decreased by (15.91%). This reveals that NIBL is unable to utilize its total outside assets to earn interest. The ratio of total interest earned against total outside asset is unstable. Effort should be made to use its fund (outside assets) to earn high interest income.

Fig 4.5



E.Total Interest Earned to Total Working Fund Ratio:

This ratio reflects the extent to which the banks are successful in mobilizing its total assets to generate high income as interest. A high ratio is indicator of high earning power of the bank on its total working fund and vice versa. Total working fund represent total assets of the bank.

We have,

$$\text{Total interest earned to total working fund ratio} = \frac{\text{Total interest earned}}{\text{Total working fund}}$$

The table 4.18 is the total interest earned to total working fund ratio from 2064/65 to 2068/69.

Table No. 4.18

Total Interest Earned to Total Working Fund Ratio (%)

Figure in (%)

	Ratio%	Yearly change in %
2064/65	9.70	
2065/66	9.54	-1.74
2066/67	7.37	-22.69
2067/68	6.82	-7.46
2068/69	6.56	-3.85
Mean	8.00	

Source: Annual report of Nepal Investment Bank Limited, Appendix 1 (S)

The table 4.18 exhibits that the higher ratio of total interest earned total working fund is 9.70%. In the succeeding year the ratios are 9.54%, 7.37%, 6.82% and 6.56% respectively. The lower ratio of 6.56% is recorded in the FY2068/69, which is less than the mean ratio. The mean ratio is 8.00%. In the FY 2065/66, there is slightly decrease in ratio by -1.74%. Higher change in % or growth rate of -22.69% is recorded in the FY 2066/67. This shows that the growth rate ratio is negative and is in fluctuating trend. Since the total interest earned is decreasing, it does not sound good for the bank. So, the NIBL should carefully utilize its fund (working fund) to earn more interest.

F. Total Interest Earned to Total Operating Income Ratio:

This ratio reflects the extent to which the bank has successfully mobilized its fund in interest bearing assets. Interest earned to total operating income ratio measures the magnitude of interest income in total income. Total operating income includes the interest income, commission and discount, income from dividend, foreign exchange income and others.

We have,

$$\text{Total interest earned to Total operating ratio} = \frac{\text{Total interest earned}}{\text{Total operating income}}$$

The table 4.19 is the total interest earned to total operating income ratio for five FY from 2064/65 to 2058/59.

Table No 4.19

Total Interest Earned to Total Operating Income

Figure in (%)

	Ratio%	Yearly change in %
2064/65	81.02	
2065/66	83.82	3.46
2066/67	79.90	-4.67
2067/68	82.96	3.83
2068/69	83.74	0.94
Mean	82.29	

Source: Annual report of Nepal Investment Bank Limited, Appendix 1 (T)

In the table 4.19, the higher ratio of 83.82 is recorded in the FY 2065/66. In the succeeding year i.e. 2066/67 the ratio decreased by (4.67%) and the ratio is recorded at 79.90%, which is less than the mean ratio. The mean ratio total interest earned to total operating income is 82.29%. In the base year the ratio is 81.02%. Yearly change in percentage or the growth rate increased by 3.46%. Again, in the FY 2067/68 the growth rate increased by 3.83% than the previous year. Similarly, the change in % ratio increased just by 0.94% in the FY 2068/69. This clearly exhibits that total interest earned to total operating income ratio is in fluctuating trend. NIBL has earned more than 50% of the total interest in respect to total operating income. The magnitude of interest income to total is high though the investments in such fund-based investment are more risky than the fee based activities.

G. Total Interest paid to Total Working Fund Ratio:

Interest paid is the expenses of the every bank. This ratio measures the percentage of total interest expenses & its interest on fixed deposit, call deposits, saving deposits & interest on borrowing with respect total working fund. A high ratio indicates the higher interest expenses on total working fund and vice- versa.

We have,

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

The table 4.20 is the ratio of total interest paid to total working fund for five FY from 2064/65 to 2068/69 taking 2064/65 as the base year.

Table No 4.20

Total Interest Paid to Total Working Fund Ratio (%)

Figure in (%)

	Ratio%	Yearly change in %
2064/65	4.35	
2065/66	4.44	2.00
2066/67	3.18	-28.33
2067/68	3.27	2.75
2068/69	3.29	0.51
Mean	3.71	

Source: Annual report of Nepal Investment Bank Limited, Appendix 1 (U)

In the table 4.20, the ratio of 4.35% is recorded in the base year of the study. In the FY 2065/66 the ratio increased by 2% and the higher ratio of 4.44% is maintained. In the succeeding year the ratio decreased by (28.33%) and the lower ratio of 3.18% is recorded. The mean ratio of total interest paid to total working fund is 3.71%. In the year 2068/69 the ratio is recorded at 3.29%. This clearly reveals that total interest paid against total working fund is in fluctuating trend. Interest paid is the expenses of the every bank. A high ratio indicates high interest expenses on the total working fund which does not sound good for the bank and the vice versa.

4.1.4 Risk ratio:

Risk always sticks with return. If there is return, risk will definitely be there. Higher the risk, higher will be the return. Risk is very closely associated with investment possibility of risk has made the investment a challenging last. A bank has to take high risk if it expects high return on its investment. Therefore, bank has to accept & manage high risk to get high profit.

Risk ratio measures the level of risk.

A. Credit Risk Ratio:

This ratio is very important to a bank to scrutinize the project i.e. the risk involved in it to avoid default or non –payment of loan before making investment on them. Bank

makes investment by utilizing its collected fund. The credit risk ratio measures the risk behind making investment or granting loan. Actually, the proportion of non-performing assets shows credit risk ratio in total loan & advances of a bank, but unavailability of related data the ratio is calculated with the help of loan & advances and total assets.

$$\text{Credit risk ratio} = \frac{\text{Total loan \& advances}}{\text{Total assets}}$$

The table 4.21 shows the credit risk ratio of NIBL for five FY years taking 2064/65 as the base year.

Table No 4.21

Credit Risk Ratio (%)

Figure in Rs. (000)

	Loan & Advance	Total Assets	Ratio%	Yearly change in %
2064/65	27529305	38873306	50.37	
2065/66	36827157	53010803	45.43	-9.80
2066/67	40948440	57305413	54.54	20.04
2067/68	41095515	58356828	47.37	-13.14
2068/69	42912084	65756232	51.56	8.83
		Mean	49.86	

Source: Annual report of Nepal investment Bank Limited

In the above table 4.21, the credit risk ratio is calculated by dividing total loan and advance by total assets. NIBL has maintained the higher ratio of 54.54% in the FY 2066/67 and lower of 45.43% in the preceding year. In the base year the ratio is maintained at 50.37%. The mean ratio of credit risk is 49.86%. Growth rate or change in % of credit risk increased by 20.04% in the year 2066/67. Similarly, in the FY2068/69 the growth rate increased by 8.83% than the previous year and the credit risk is recorded at 51.56%. This shows that credit risk of NIBL has maintained the fluctuating trend.

4.1.5 Growth Ratio

Growth ratios are directly related to the fund mobilization and investment management of a commercial bank. It represents how well the commercial bank is maintaining the

economic and financial position. Under this topic, four types of growth ratios are studies, which are as follows.

1. Growth ratio of total deposit
2. Growth ratio of total loan and advance
3. Growth ratio of total investment
4. Growth ratio of total net profit

Table No 4.22

Growth Ratio of Total Deposit (%)

Figure in (%)

Year	Total Deposit	Yearly Change in %
2064/65	34451726	
2065/66	46698100	35.55
2066/67	50094725	7.27
2067/68	50138122	0.09
2068/69	57010604	13.70
	Mean	11.32

Source: Annual report of Nepal Investment Bank Limited, Appendix 1(V)

The table 4.22 represents the total deposit growth rate ratio of NIBL. The total deposit in the base year is Rs. 34451726 and in the last year of the study the deposit increased to Rs. 57010604. Although the total deposits are in increasing trend, the ratios are in the fluctuating trend. The yearly change in % or growth rate is maximum in the year 2065/66 i.e. 35.55%. In the last year of the study the change in % is almost negative i.e. (0.09%). In average, the growth rate ratio of total deposit is 11.32%. This shows that deposit collection ratio of NIBL are in fluctuating trend.

Table No 4.23**Growth Ratio of Loan & Advance (%)**

Figure in Rs. (000)

Year	Loan & Advance	Yearly Change in %
2064/65	27529305	
2065/66	36827157	33.77
2066/67	40948440	11.19
2067/68	41095515	0.35
2068/69	42912084	4.42
	Mean	9.95

Source: Annual report of Nepal investment Bank Limited

The table 4.22 represents the growth rate ratio of Loan and Advance of NIBL. In the FY 2066/67 the change in % or growth rate ratio of loan and advance decreased by 11.19% than the previous year. In the succeeding year, the growth rate ratio decreased to 0.35% and similarly, in the last year of the study the ratio decreased to 5.57%. The average growth rate ratio of loan & advance is 9.95%. Even though the loan and advance are in the increasing trend except in the FY 2065/66, the growth rate ratios are in the decreasing except in the FY 2066/67.

Table No 4.24**Growth Ratio of Total Investment (%)**

Figure in Rs. (000)

Year	Total Investment	Yearly Change in %
2064/65	6874024	
2065/66	7399812	7.65
2066/67	8635530	16.69
2067/68	7423107	-14.04
2068/69	10438487	40.62
	Mean	10.18

Source: Annual report of Nepal investment Bank Limited

The table 4.24 represents the growth rate ratio of total investment of NIBL. In the FY2065/66, the yearly change in % increased by 7.65% but in the succeeding year the growth rate ratio of total investment decreased to (16.69%). In the last year of the study the ratio increased to 40.62% than the previous year. The average yearly change in % of total investment is 10.18%. This shows that growth rate ratio of NIBL is in fluctuating trend.

Table No 4.25

Growth Ratio of Net Profit (%)

Figure in Rs. (000)

Year	Net profit	Yearly Change in %
2064/65	697501	
2065/66	901697	29.38
2066/67	1265950	40.39
2067/68	1176641	-7.05
2068/69	1039276	-11.67
	Mean	10.19

Source: Annual report of Nepal investment Bank Limited

The table 4.24 represent the yearly change in % or growth rate ratio of net profit of NIBL Net profit of NIBL is maximum in the base year of the study i.e. Rs697501. In the next year, the yearly change is (29.28%) than the previous year. In the year 2066/67, the net profit ratio increased by 40.39%. Similarly, in the last year of the study the net profit decreased slightly by -11.67% than the previous year. The average net profit ratio of NIBL is (10.19%). This clearly exhibits that the growth rate of net profit of NIBL is fluctuating and is not satisfactory.

From the above analysis, the performance of NIBL regarding deposit collection, granting loan & advance and investment is quite satisfactory but failed to maintained net profit during the study. Therefore, it is suggested to made investment or mobilize its fund in profitable sector to have better result of net profit.

4.2. STATISTICAL ANALYSIS

Under this chapter, Karl Pearson's coefficient of correlation is used to find out the relationship between deposit and loan & advances, deposit and total investment, current assets and current liabilities and total assets & net profit. Karl Pearson's coefficients between the variables have been tested with the help of probable error.

4.2.1. Coefficient of correlation between deposit and loan & advances:

Deposits have played a very important role in performance of a commercial bank and side-by-side loan & advances are important to mobilize the collected deposits. Coefficient of correlation between deposit and loan & advances measure the degree of relation between these two variables. In this analysis, deposit is independent variables (X) and loan & advances are dependent variable (Y). The main objective of computing 'r' coefficient of correlation between these two variables is to justify whether deposits are significantly used as loan & advances in the proper way or not.

(For detail see Appendix 3A)

Correlation Coefficient "r" can be calculated by using following formula

$$\begin{aligned} r &= \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{N \sum X^2 - (\sum X)^2} \sqrt{N \sum Y^2 - (\sum Y)^2}} \\ &= \frac{5 * 7371955578 - 238392.677 * 189312.501}{\sqrt{5 * 5705994370.98 - (164353.57)^2} \sqrt{5 * 2155623426.77 - (101488.33)^2}} \\ &= \frac{812442160}{38959.92 * 21868.57} \\ &= 0.9535 \end{aligned}$$

Calculation of Probable error (P.E.r)

$$\begin{aligned} \text{P.E.r} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.6745 * \frac{1-(0.9535)^2}{\sqrt{5}} \\ &= 0.0274 \end{aligned}$$

Significant of relationship = 6 P.E.r

$$= 6 * 0.0274$$

$$= 0.1628$$

In the above calculation, it is found that coefficient of correlation "r" between total deposit and total loan & advance is 0.9535. It shows that there is high degree of positive correlation between these two variables. Similarly, considering the value of "r" i.e. 0.9535 and comparing it with probable error 6 PEr i.e. 0.1628. We found that "r" is greater than the 6 PEr, which reveals that value of "r" is significant. i.e. there is significant relation between total deposits and total loan & advance of NIBL.

From the above analysis, we can conclude that there is positive and significant relationship between total deposit and total loan & advance. This indicates that NIBL has mobilized their deposits efficiently and in proper way as loan & advance.

4.2.2. Coefficient of correlation between deposit and total investment:

Coefficient of correlation between deposit and total investment measures the degree of relation between these two variables. In this analysis, deposit is independent variables (X) and total investment is dependent variable (Y). The main objective of computing 'r' coefficient of correlation between these two variables is to justify whether deposits are significantly used as investment in the proper way or not. (For detail see Appendix 3, B)

Correlation Coefficient "r" can be calculated by using following formula

$$\begin{aligned} r &= \frac{N \sum XY - (\sum X) (\sum Y)}{\sqrt{N \sum X^2 - (\sum X)^2} \sqrt{N \sum Y^2 - (\sum Y)^2}} \\ &= \frac{5 * 14466557219 - 238392.67 * 313763.2127}{\sqrt{5 * 116411155687 - (238392.67)^2} \sqrt{5 * 2327739396 - (313763.2127)^2}} \\ &= \frac{2466063928}{38959.92 * 12554.} \\ &= 0.7139 \end{aligned}$$

Calculation of Probable error (P.E.r)

$$\begin{aligned} \text{P.E.r} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.6745 * \frac{1-(0.7139)^2}{\sqrt{5}} \\ &= 0.1479 \end{aligned}$$

Significant of relationship = 6 P.E.r

$$\begin{aligned} &= 6 * 0.1479 \\ &= 0.8874 \end{aligned}$$

In the above calculation, it is found that coefficient of correlation "r" between total deposit and total investment is 0.7139. It shows that there is high degree of positive correlation between these two variables. Similarly, considering the value of "r" i.e. 0.9535 and comparing it with probable error 6 PEr i.e. 0.8874. We found that "r" is less than the value of 6 times PEr, which reveals that value of "r" is not significant. In other words, there is no significant relationship between total deposits and total investment.

From the above analysis, we can conclude that there is positive association between total deposit and total investment of NIBL but there is no significant relationship between these two variables as value of "r" is less than 6 times PEr. This exhibits that NIBL has no certain investment policy to invest their deposit.

4.2.3. Coefficient of correlation between current assets and current liabilities:

Coefficient of correlation between current assets and current liabilities measure the degree of relation between these two variables. In this analysis, a current asset is independent variables (X) and current liabilities are dependent variable (Y). The main objective of computing 'r' coefficient of correlation between these two variables is to justify whether there is significant relationship between these two variables or not.

(For detail see Appendix 3,C)

Correlation Coefficient "r" can be calculated by using following formula

$$\begin{aligned}
 r &= \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{N \sum X^2 - (\sum X)^2} \sqrt{N \sum Y^2 - (\sum Y)^2}} \\
 &= \frac{5 * 7478246167.67 - 265847.96 * 255547.551}{\sqrt{5 * 145183799 - (265847.96)^2} \sqrt{5 * 13367992815 - (255547.551)^2}} \\
 &= \frac{1601927900}{41797.54 * 38339.41} \\
 &= 0.9996
 \end{aligned}$$

Calculation of Probable error (P.E.r)

$$\begin{aligned}
 P.E.r &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\
 &= 0.6745 * \frac{1-(0.9996)^2}{\sqrt{5}} \\
 &= 0.006
 \end{aligned}$$

Significant of relationship = 6 P.E.r

$$\begin{aligned}
 &= 6 * 0.006 \\
 &= 0.036
 \end{aligned}$$

In the above calculation, it is found that coefficient of correlation "r" between current assets and current liabilities is 0.9996, which means there is high degree of positive correlation between these two variables. Similarly, considering the value of "r" i.e. 0.9996 and comparing it with probable error 6 PEr i.e. 0.0360. We found that "r" is highly greater than the 6 PEr, which reveals that value of "r" is significant. In other words, the degree of relationship between current assets and current liabilities is significant.

From the above analysis, we can conclude that there is positive and significant relationship between current assets and current liabilities as the value of "r" is greater

than 6 PEr. This indicates that NIBL has efficiently utilized its current assets to overcome the current liabilities.

4.2.4. Coefficient of correlation between total outside assets and net profit:

Coefficient of correlation between total assets and net profit measures the degree of relation between these two variables. Here, total asset is independent variables (X) and net profit is dependent variable (Y). The main objective of computing 'r' coefficient of correlation between these two variables is to find out whether the net profit is significantly correlated with total asset or not. (For detail see Appendix 3,D)

Correlation Coefficient "r" can be calculated by using following formula

$$\begin{aligned}
 r &= \frac{N \Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{N \Sigma X^2 - (\Sigma X)^2} \sqrt{N \Sigma Y^2 - (\Sigma Y)^2}} \\
 &= \frac{5 * 2239591071.8 - 215321.07 * 50810.75}{\sqrt{5 * 9429362965.43 - (215321.07)^2} \sqrt{5 * 536677317.4 - (50810.75)^2}} \\
 &= \frac{257330301.5}{288950461.9} \\
 &= 0.891
 \end{aligned}$$

Calculation of Probable error (P.E.r)

$$\begin{aligned}
 P.E.r &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\
 &= 0.6745 * \frac{1-(0.891)^2}{\sqrt{5}} \\
 &= 0.0621
 \end{aligned}$$

Significant of relationship = 6 P.E.r

$$\begin{aligned}
 &= 6 * 0.0621 \\
 &= 0.3724
 \end{aligned}$$

In the above calculation, it is found that coefficient of correlation "r" between total outside assets and net profit is 0.891. It shows that there is high degree of negative correlation between these two variables. Similarly, considering the value of "r" i.e. 0.891 and comparing it with probable error 6 PEr i.e. 0.3724. We found that "r" is greater than the 6 PEr, which reveals that value of "r" is significant. i.e. there is significant relation between total outside assets and net profit of NIBL

From the above analysis, we can conclude that there is positive and significant relationship between mobilization of funds and returns. This indicates that NIBL is not able to earn profit by mobilizing its total outside assets.

4.2.5. Coefficient of correlation between Loan loss Provision and Total Loans and Advances:

Coefficient of correlation between total assets and net profit measures the degree of relation between these two variables, loan loss provision and total loan and advances. In fact, loan loss provision is the product of loan and advances these variables are co-related. Increase in loan and advance is likely to increase the volume of loan loss provision. Here, total loans and advance is independent variables (X) and loan loss provision is dependent variable (Y). The main objective of computing 'r' coefficient of correlation between these two variables is to find out whether the loan loss provision is significantly correlated with total loans and advances or not.(For detail see Appendix 3,E)

Correlation Coefficient "r" can be calculated by using following formula

$$\begin{aligned}
 r &= \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{N \sum X^2 - (\sum X)^2} \sqrt{N \sum Y^2 - (\sum Y)^2}} \\
 &= \frac{5 * 3147015645 - 189312.501 * 77635.65}{\sqrt{5 * 7321165171 - (189312.501)^2} \sqrt{5 * 1489419228 - (77635.65)^2}} \\
 &= \frac{1037679156}{27687.59 * 37680.26} \\
 &= \frac{1037679156}{1043246160} \\
 &= 0.995
 \end{aligned}$$

Calculation of Probable error (P.E.r)

$$\begin{aligned} \text{P.E.r} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.6745 * \frac{1-(0.995)^2}{\sqrt{5}} \\ &= 0.003 \end{aligned}$$

Significant of relationship = 6 P.E.r

$$\begin{aligned} &= 6 * 0.003 \\ &= 0.018 \end{aligned}$$

In the above calculation, it is found that coefficient of correlation "r" between loan loss provision and total loan and advances is 0.995. It shows that there is moderated correlation between these two variables. Similarly, considering the value of "r" i.e. 0.995 and comparing it with probable error 6 PEr i.e. 0.003. We found that "r" is greater than the 6 PEr, which reveals that value of "r" is significant. i.e. there is significant relation between loan loss provision and total loan and advances of NIBL.

From the above analysis, we can conclude that there is positive and significant relationship between loan loss provision and total loan and advances as the value of "r" is greater than 6 PEr. This indicates that increase in loans and advances increase the volume of loan loss provision.

4.3. Trend Analysis and Projection for Next Five Years

A commercial bank may grant loan and advances, invests in government securities and share and debentures of other companies. The main objective of this topic, trend analysis of deposit collection, its utilization and net profit of INBL are forecasted for next five years. The projections are based on the following assumptions.

1. The main assumption is that other things will remain unchanged.
2. The forecast will be true only when the limitations of least square method are carried out.

3. The bank will run in present position.
4. The economy will remain in the present stage.
5. Nepal Rastra Bank will not change its guidelines to commercial banks.

4.3.1. Trend Analysis of Total Deposit

Under this topic, the trend values of deposit of NIBL has been calculated for five years from 2064/65 to 2068/69 and forecast for next five years from 2069/70 to 2074/75. The table no.35 and table no. 36 shows the trend value of total deposit for ten years from 2064/65 to 2068/69.

Table no. 4.26

Trend Value (Y= a+bx) of total deposit of NIBL

year	X	Total Deposit	
		Trend Value	Actual Value
2064/65	-2	37967100	34451726
2065/66	-1	42822878	46698100
2066/67	0	47678655	50094725
2067/68	1	52534433	50138122
2068/69	2	57390211	57010604
2069/70	3	62245988.8	
2070/71	4	67101766.6	
2071/72	5	71957544.4	
2072/73	6	76813322.2	
2073/74	7	81669100	

Note: For a sample calculation of trend equation line, refer Appendix 4

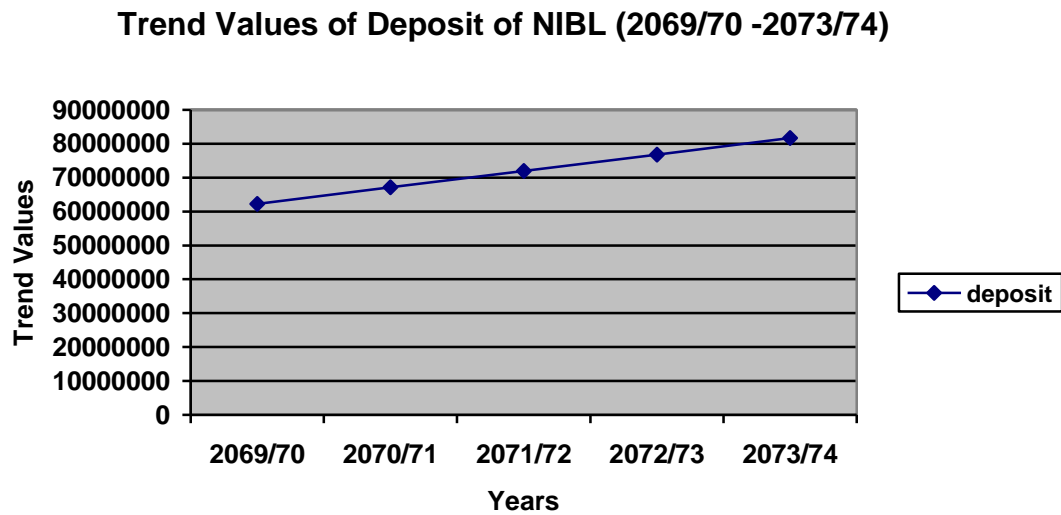
The equation of straight line trend is $Y_c = a + bX$

Trend Value of Total deposit of NIBL $Y_c = 3087071.40 + 5000242.40 X$

The above tables 4.26 show that trend values of deposits are in increasing trend. The trend value of total deposit of NIBL is 57390211 in the year 2068/69. If other things

remain the same, the total deposit of NIBL will be 81669100 in the year 2073/74 which is the highest deposit among the study period. The deposit collection of NIBL is better and is in increasing trend. The calculated trend values of total deposit of NIBL are fitted in the trend line given.

Fig 4.6



4.3.2 Trend Analysis of Loan & Advance

Here, the trend values of loan & advance of NIBL has been calculated for five years from 2054/55 to 2058/59 and forecast for next five years from 2059/60 to 2063/64. The table no.37 and table no. 38 shows the trend value of loan & advance for ten years from 2054/55 to 2063/64.

Table No.4.27

Trend Value (Y= a+bx) of loan and advance of NIBL

year	X	Laon and Advance	
		Trend Value	Actual Value
2064/65	-2	37862498	27529305
2065/66	-1	34359109	36827157
2066/67	0	37862500	40948440
2067/68	1	41365892	41095515
2068/69	2	44869283	42912084
2069/70	3	48372675	
2070/71	4	51876066.6	
2071/72	5	55379458.2	
2072/73	6	58882849.8	
2073/74	7	62386241.4	

Source : Appendix 4

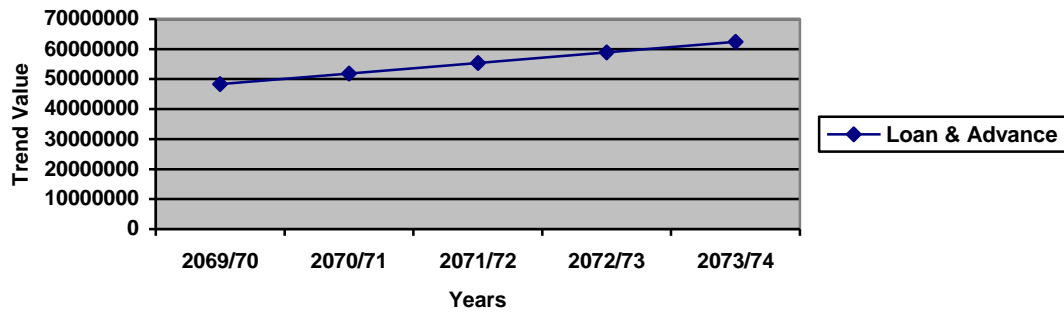
The equation of straight line trend is $Y_c = a + bX$

$$Y_c = 37862500.2 + 3503391.6X$$

The above tables 4.27 show that trend value of loan & advance are in increasing trend. The trend value of loan & advance is 44869283 in the year 2068/69. If other things remain the same, the loan & advance of NIBL will 62386241.4 in the year 2073/74 which is the highest loan & advance among the study period. The loan & advance of NIBL is better and is in increasing trend. The calculated trend values of total loan & advance of NIBL are fitted in the trend line given.

Fig 4.7

Trend Value of Loan & Advance of NIBL (2069/70-2073/74)



4.3.3. Trend Analysis of Total Investment

Under this topic, the trend values of total investment of NIBL has been calculated for five years from 2064/65 to 2068/69 and forecast for next five years from 2069/70 to 2073/74. The table no.39 and table no. 40 shows the trend value of total investment for ten years from 2064/65 to 2073/74.

Table No 4.28

Trend value ($Y=a+bx$) of total investment of NIBL

year	X	Total Investment	
		Trend Value	Actual Value
2064/65	-2	6723746.6	6874024
2065/66	-1	7438969.3	7399812
2066/67	0	8635530	8635530
2067/68	1	8869414.7	7423107
2068/69	2	9584637.40	10438487
2069/70	3	10299860.1	
2070/71	4	8440282.8	
2071/72	5	11730305.5	
2072/73	6	12445528.2	
2073/74	7	13160750.9	

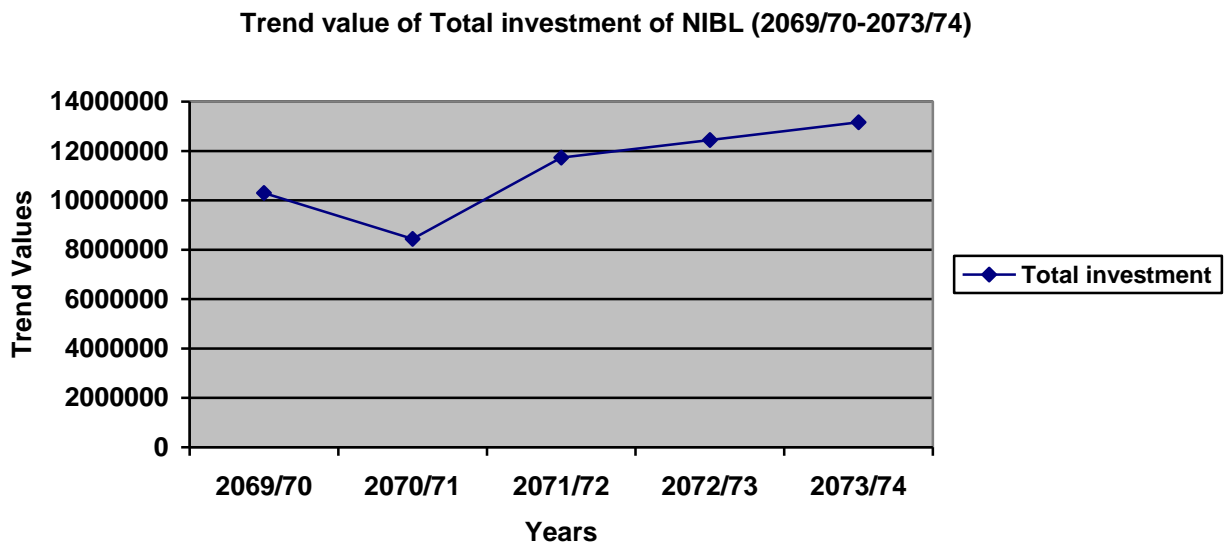
Source : Appendix 4

The equation of straight line trend is $Y_c = a + bX$

$$Y_c = 8154192 + 715222.70X$$

The table 4.28 shows that trend values of investment are in increasing trend. The trend value of investment is 9584637.40 in the year 2068/69. If other things remain the same, the total investment of NIBL will 13160750.9 in the year 2073/74 which is the highest investment among the study period. The total investment of NIBL is better and is in increasing trend. The calculated trend values of total investment of NIBL are fitted in the trend line given.

Fig 4.8



4.3.4. Trend Analysis of Net profit

Here, the trend values of net profit of NIBL has been calculated for five years from 2064/65 to 2068/69 and forecast for next five years from 2069/70 to 2073/74. The table no.41 and table no. 42 shows the trend value of net profit for ten years from 2064/65 to 2073/74.

Table No 4. 29

Trend value (Y=a+bx) of Net Profit of NIBL

year	X	Net Profit	
		Trend Value	Actual Value
2064/65	-2	824514.2	697501
2065/66	-1	920363.6	901697
2066/67	0	1016213	1265950
2067/68	1	2192854	1176641
2068/69	2	1207911.8	1039276
2069/70	3	130376102	
2070/71	4	1399610.6	
2071/72	5	1495460	
2072/73	6	1591309.4	
2073/74	7	1687158.8	

Source : Appendix 4

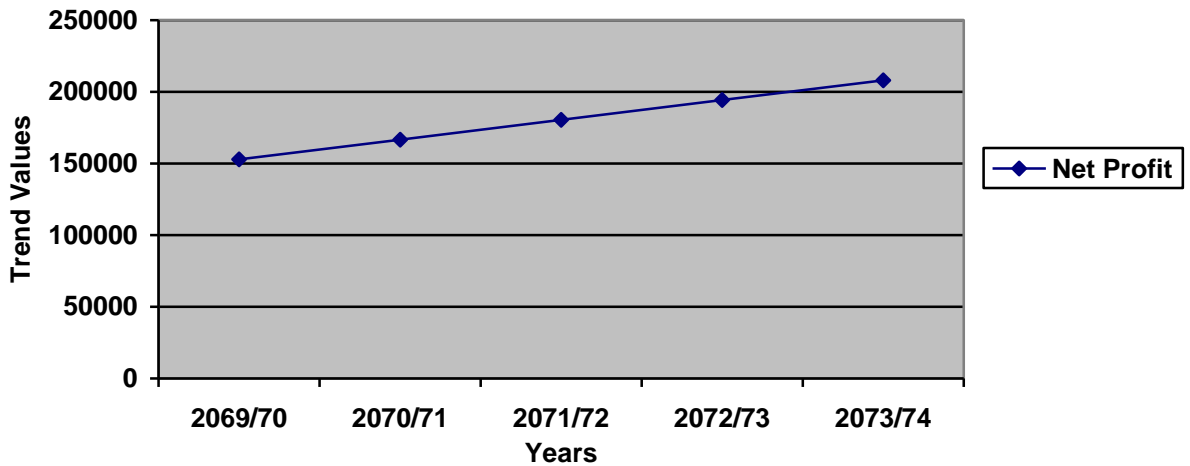
The equation of straight line trend is $Y_c = a + bX$

$$Y_c = 1016213 + 95849.4X$$

The table 4.29 show that trend values of net profit are in increasing trend. The trend value of net profit is 1207911.8 in the year 2068/69. If other things remains the same, the net profit of NIBL will 1687158.8 in the year 2073/74 which is the lowest profit among the study period. The profit of NIBL will be high in 2073/74 as trend value is increasing. Increasing trend value result may be due to the increase of net profit to approximately half from 824514.2 in 2064/65 to 920363.6 in the year 2065/66. So, again the trend value of net profit of NIBL has been calculated for three years only from 2066/67 to 2068/69 and forecast for next five years i.e. 2069/70 to 2074/75. The table below is the three year trend value of net profit of NIBL.

Fig 4.9

Trend Value of Net profit of NIBL (2069/70-2073/74)



4.4 Major Finding:

- From the analysis of current assets, it is found that bank have sound ability to meet the short term obligations. The mean ratio is 0.85.
- The mean ratio of cash and bank balance to total deposit is 15.69%. Analysis shows that the ratios are in the fluctuating trends.
- The mean ratio of cash & bank balance to current asset is 14.06%. The cash & bank balance to current assets ratios are in the fluctuating trends.
- The mean ratio of loans & advances to total deposits is 79.54%. The ratio of loan & advances of NIBL has fluctuating trend
- The total investment of NIBL has maintained the fluctuating trend in respect of total deposit. The mean ratio of it is 17.32%.
- The mean ratio of investment in government securities to total working fund is 3.19%.
- The mean value of sub standard loan is 25545.67. Doubtful loan drastically decrease from 164058 in 2067/68 to 3481 and 3594 in 2068/69 and 2069/70 respectively. Similarly, bad loan is decreasing, which is good for NIBL.

- Analysis shows that net profit to total working fund ratio are fluctuating trend. The mean ratio of net profit to total working fund is 1.94%. Analysis shows that net profit of NIBL is not stable and inconsistent.
- The mean ratio of net profit to loan & advance is 2.67%. NIBL has recorded the highest ratio of 3.08% in the base year of the study. The change in % ratio or growth rate is in fluctuating trends. Net profit in respect to loan and advance is unstable and NIBL is not able to earn much from loan and advances
- The mean ratio of credit risk is 49.86%. In the FY2068/69 the growth rate increased by 8.83% than the previous year and the credit risk is recorded at 51.56%. This shows that credit risk of NIBL has maintained the fluctuating trend.
- Coefficient of correlation between total deposit and loan & advances is positive and significant. This indicates that NIBL has efficiently mobilized their deposits efficiently as loan & advance.
- The trend value of total deposit of NIBL is 57010604 in the year 2068/69. The Total deposit of NIBL will be 81669100 in the year 2073/74 which is the highest deposit among the study period. The deposit collection of NIBL is in increasing trend.
- The trend value of loan & advance are in increasing trend. The trend value of loan & advance is 189312501 in the year 2068/69. IN the year 2073/74 the trend value of loan & advance of NIBL will be 62386241.4, which is the highest among the study period.
- The trend values of investment are in increasing trend. The trend value of investment is 1658271.20 in the year 2068/69. The trend value will increase to 2410404.70 in the year 2073/74 which is the highest investment among the study period.

CHAPTER 5

Summary, Conclusion and Recommendations

This chapter's focuses on facts and matters acquired from the various parts of the study. Analytical parts, which is the heart of the study makes the analysis of various aspects of investment of commercial bank by using some important financial as well as statistical tools. Data have been collected from annual report. Annual reports of the bank are presented in tabular form.

The basic objective of this study is to have insight over the investment policy of NIBL and to recommend some concrete suggestion for improvement and to take corrective actions to remove the weakness and continuity of profitable services in view of analysis.

5.1 Summary

Banks play significant role in the economic development of the country. It has come a very long way starting from 1994 B.S. to today status. Today, banks render numerous services to their customers but in general, it can be defined as a monetary intermediate between two types of its customer, depositors and creditors. NRB being central bank of Nepal almost governs all the function and give direction to all the financial institution including banks. Unlike the central bank, commercial banks mobilize the scattered saving of the public by providing credit to the needy firms, industries and people to get the productive use. Deposits and loans are the major parts of the banks. Deposits are that liability which is returnable in demand at any time by he banks. So, commercial banks must keep some liquid fund. Similarly, investment or mobilization of collected fund as credit is also necessary for the bank to survive. If the funds are optimally invested with out prior study, the bank may under go bankruptcy. So, the bank must have sound investment policy for the mobilization of the accumulated fund. Similarly, NRB has issued various directives to protect the bank being bankruptcy. NRB has made all the existing commercial banks to raise the capital fund to minimum Rs. 1000 million by the july 2009. It has made a provision of single borrower limit to reduce the risk. To inject the confidence in depositors regarding the safety of their deposited fund, NRB has also set a rule of cash reserve requirement. Similarly, NRB has made all the commercial

bank not to increase the interest rate spread with the maximum of 5%. Commercial banks cannot charge the interest rate more than 5 % than they give to the depositors. To improve the quality of assets of the commercial bank and to be safe from the default of the loan repayment, NRB has directed commercial bank to classify their loans on the basis of overdue aging and make loan loss provision there to.

Now a day, there is much competition in banking sector. In the case of NIBL, the bank is able to collect Rs.4174.76 million as deposit and mobilized as loan and advances of Rs.2564.42 million and Rs. 1822.16 million as investment in the F/Y 2058/59. The performance of NIBL regarding deposit collection, granting loan & advances and investment are in increasing trend and is quite satisfactory, but Net profit is fluctuating. To have better result of net profit, commercial banks must invest its fund in productive and profitable project. Hence to survive in this competitive market and to earn profit, banks need to keep optimum relation between deposit and credit policy. Deposit collections procedure and its mobilization should go hand to hand.

5.2 Conclusion

The main findings of the study are derived from the analysis and are briefly described below.

- From the analysis of current assets, it is found that bank have sound ability to meet the short term obligations. The mean ratio is 0.85. The current ratios of NIBL are unstable and in the fluctuating trend.
- The mean ratio of cash and bank balance to total deposit is 15.69%. Analysis shows that the ratios are in the fluctuating trends. The bank should not hold excessive cash since it is an idle assets and do not generate any income. An idle reserve ratio is 10% in any bank but vary according to the situation of the market. However, the liquidity position in this regard is good.
- The mean ratio of cash & bank balance to current asset is 14.06%. The cash & bank balance to current assets ratios are in the fluctuating trends. It indicates that liquidity position is unstable in this regard.

- The mean ratio of investment on government securities to current assets is 3.21%. Investment in govt. securities of the NIBL had followed an increasing trend from lower to the higher but in the last year of the study there is slightly decrease in the ratio%.
- The mean ratio of loan & advances to current asset is 71.46%. Analysis shows NIBL has followed the fluctuating trend in loans & advance to current assets ratio. This too depicts that NIBL have mobilized 50% of its funds as loans & advances with respect to current assets.
- The mean ratio of loans & advances to total deposits is 79.54%. The ratio of loan & advances of NIBL has fluctuating trend. In the five-year study, NIBL have mobilized more than 60% in average of total deposit in loans & advances, which sounds better.
- The total investment of NIBL has maintained the fluctuating trend in respect of total deposit. The mean ratio of it is 17.32%. NIBL has been able to utilize only approx 17% of the total deposit as investment.
- The mean ratio of the loan & advances to total working fund is 49.86%. Growth rate is higher in the FY 2066/67 i.e. 20.04%. The NIBL has recorded the fluctuating trend of loan and advances in respect of total working fund. Analysis shows that NIBL has been utilizing approx 50% of the working fund as loan and advances.
- Analysis shows that net profit to total working fund ratio are fluctuating trend. The mean ratio of net profit to total working fund is 1.94%. Analysis shows that net profit of NIBL is not stable and inconsistent.
- The mean ratio of net profit to loan & advance is 2.67%. NIBL has recorded the highest ratio of 3.09% in the base year of the study. The change in % ratio or growth rate is in fluctuating trends. Net profit in respect to loan and advance is unstable and NIBL is not able to earn much from loan and advances.
- The mean ratio of total interest earned against total outside assets is 9.30%. The Change in % is in fluctuating trend. This reveals that NIBL is unable to utilize its

total outside assets to earn interest. The ratio of total interest earned against total outside asset is unstable.

- The mean ratio of total interest earned to total working fund is 8.00%. Higher change in % or growth rate of (22.69%) is recorded in the FY 2066/67. Analysis shows that the growth rate ratio is negative and is fluctuating trend.
- The mean ratio total interest earned to total operating income is 82.29%. In the base year the ratio is 81.02%. The total interest earned to total operating income ratio is in fluctuating trend. NIBL has earned more than 50% of the total interest in respect to total operating income. The magnitude of interest income to total is high though the investments in such fund-based investment are more risky than the fee based activities.
- The mean ratio of total interest paid to total working fund is 3.71%. In the year 2068/69 the ratio is recorded at 3.29%. The total interest paid against total working fund is in fluctuating trend.
- Coefficient of correlation between total deposit and loan & advances is positive and significant. This indicates that NIBL has efficiently mobilized their deposits efficiently as loan & advance.
- The trend value of total deposit of NIBL is 57390211 in the year 2068/69. The Total deposit of NIBL will be 81669100 in the year 2073/74 which is the highest deposit among the study period. The deposit collection of NIBL is in increasing trend.
- The trend value of loan & advance are in increasing trend. The trend value of loan & advance is 44869283 in the year 2068/69. IN the year 2073/74 the trend value of loan & advance of NIBL will be 62386241.4, which is the highest among the study period.
- The trend values of investment are in increasing trend. The trend value of investment is 9584637.40 in the year 2068/69. The trend value will increase to 2410404.70 in the year 2073/74 which is the highest investment among the study period.

From the above analysis, it can be concluded that bank is in good position to meet the daily cash requirement as bank has maintain the average cash & bank balance in respect to total deposit. The bank has made enough investment on government securities. The performance of NIBL regarding deposit collection, granting loan & advance and investment is quite satisfactory but does not seem to follow a definite policy. NIBL has not efficiently utilized its equity capital hence return on equity capital is not satisfactory. The bank seems to be having lack of sound investment policy for the mobilization of its equity capital. The interest earned to total operating income of NIBL is high. However, the bank failed to maintained net profit during the study. Therefore, it is suggested to made investment or mobilize its fund in profitable sector to have better result of net profit. The bank must maintain its high profit margin for the well being in future. It can be concluded that total deposit collection and total loan & advance are increasing year by year. Lastly, in the case of growth rates of net profit is not satisfactory. However, NIBL is successful in increasing its sources of funds and its investment and mobilization but unable to earn more profit in respect to its sources and its mobilization.

From the above analysis, it can be concluded that there is positive and significant relationship between total deposit and loan & advances and current assets and current liabilities and loan loss provision and loan and advances but there is negative and no significant relationship between outside assets and net profit.

5.3 Recommendation

On the basis of analysis & findings of the study, following suggestions or recommendation can be forwarded to improve present fund mobilization and investment policy of NIBL.

Fluctuating ratio of NIBL shows that it has not formulated any stable policy in a consistence manner. Profitability ratio shows that NIBL's profit position is not satisfactory.

It has been revealed that NIBL has given more priority to invest its fund in government securities rather than to invest on share & debentures. Though securities issued by government are considered to be free of risk of default but such securities yield the lower interest rate of a particular maturity due to low risk feature. It's good to invest more on share & debentures as it encourages financial & economic development of the

country. A commercial bank must mobilize its fund in different sector such as to purchase share and debentures of other financial and non-financial companies out of the total working fund. The percentage of investment on shares & debentures is very nominal. So, NIBL is recommended not to give much importance to the government securities and diversify the investment policy on more yield base funds.

To get success in this competitive banking environment, deposit money must be utilized as loan & advances. Loan & advances is the largest item of the bank in assets side. While granting the loan it should be borne in mind that large number of borrowing customers may benefit from the banker's fund. Negligence in administering these assets could be the main cause of liquidity crisis in the bank & one of the main reasons of a bank's failure. It has been found from the study that NIBL is strongly recommended to follow liberal lending policy and invest more & more percentage of total deposit in loan & advances and similarly maintain more stability on the investment policy.

Investment sectors should be in an equilibrium state. It is found that, bank focuses in one sector leaving other sectors untouched. So, it is further recommended to follow the saying " Do not put all eggs in one basket as most of the banks of the world follows. Diversification is necessary from the viewpoint of security as it reduces the risk of recovery when something goes wrong in one particular field or section. So, it is recommended to touch all the sectors and balance it effectively so as to have the optimal performance of the bank.

In relation to the investment in loan & advance, the bank should play safe by disbursing more of its funds on short term rather than long term, which are normally risky. Again, at times the bank has to take risks in order to increase the profitability position, as freezing of fund can never yield returns which can affect the profitability position considerably. NIBL should come up with good schemes for the customers and maintain the continuity in order to be in the race.

NIBL being a private sector bank having the share holding by the public, it should be always careful in increasing profit in a real sense to maintain the confidence of shareholders, depositors and its customers and the goodwill of the bank. Profitability position is not satisfactory. NIBL seems to fail to maintain growth rate of net profit. This shows that management is failure to strategic investment policy. So, NIBL is

strongly recommended to utilize its risky assets and shareholders fund to gain highest and goodwill of the bank.

Similarly, recovery of loan is another important factor of investment policy. NIBL is suggested to implement a sound collection policy, which should ensure rapid identification of fake loans, immediate contact with borrower and continual follow up until a loan is recovered in full. The recovery of loan loss is the most challenging aspects to a bank. Therefore, the bank must be very careful in formulating credit collection policy, which should be associated with some legal procedure.

Portfolio condition of a bank should be regularly revised from time to time. It should always try to maintain the equilibrium in the portfolio condition of the bank. Basically, portfolio management refers to the allocation of the funds into different components of its assets, having different degree of risk and different rate of return in such a way that conflicting goal of maximum yield with minimum risk can be achieved. The bank should always try to make continual effort to explore competitive and highly yielding investment opportunity to optimize its investment portfolio.

Project oriented approach has to be encouraged in lending business of bank. Although there is high risk in such projects, the important things regarding project is that project itself should be capable of generating their own funds and to repay the loan on a timely basis. So, the chance of loan loss in the project oriented approach can be minimized there of.

Finally, it can be said that in such a vigorous competitive environment sustain upon its financial strength and sound internal management. To be competitive in such situation, NIBL is recommended to have efficient management structure keeping in view the investment and productivity, collection of resources, profitability and also emphasizing on professionalism in the management.

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Appendix 1

A. Current ratio times

Figure in Rs. (000)

	Current Assets	Current Liabilities	Ratio	Yearly change in %
2064/65	37625617	37156904	1.01	
2065/66	51559023	49851422	1.03	1.98
2066/67	55769728	53998753	1.03	
2067/68	56808992	53625525	1.06	2.91
2068/69	64084600	60914947	1.05	0.94
		Mean	0.85	

B. Cash and Bank Balance to Total Deposit Ratio (%)

Figure in Rs. (000)

	Cash & Bank Bal.	Total Deposit	Ratio%	Yearly change in %
2064/65	3754942	34451726	10.90	
2065/66	7918003	46698100	0.17	-98.44
2066/67	6815890	50094725	13.60	7900
2067/68	8140371	50138122	16.24	19.41
2068/69	11803751	57010604	20.70	27.46
		Mean	15.69	

C. Cash & Bank Balance to Current Assets Ratio (%)

Figure in Rs (000)

	Cash & Bank Bal.	Current Assets
2064/65	3754942	37625617
2065/66	7918003	51559023
2066/67	6815890	55769728
2067/68	8140371	56808992
2068/69	11803751	64084600

D. Investment of Government Securities to Current Asset Ratio (%)

Figure in Rs
(000)

	Inv. In Govt. Securities	Current Assets
2064/65	31550000	37625617
2065/66	25313000	51559023
2066/67	42018500	55769728
2067/68	42946000	56808992
2068/69	44653700	64084600

E. Loan & Advances to Current Assets Ratio (%)

Figure in Rs. (000)

	Loan & Advances	Current Assets
2064/65	27529305	37625617
2065/66	36827157	51559023
2066/67	40948440	55769728
2067/68	41095515	56808992
2068/69	42912084	64084600

F. Loans & Advances to Total Deposit (%)

Figure in Rs. (000)

	Loan & Advances	Total Deposit
2064/65	27529305	34451726
2065/66	36827157	46698100
2066/67	40948440	50094725
2067/68	41095515	50138122
2068/69	42912084	57010604

G. Total Investment to Total Deposit Ratio (%)

Figure in Rs. (000)

	Total Investment	Total Deposit
2064/65	6874024	34451726
2065/66	7399812	46698100
2066/67	8635530	50094725
2067/68	7423107	50138122
2068/69	10438487	57010604

H. Loan & Advances to Total Working Fund Ratio (%)

Figure in Rs. (000)

	Loan & Advances	Total Working Fund
2064/65	27529305	3322266
2065/66	36827157	3106155
2066/67	40948440	3796705
2067/68	41095515	5127366
2068/69	42912084	4973890

I. Investment on Government Securities to Total Working Fund Ratio (%)

Figure in Rs. (000)

	Inv. In Govt. Secu.	Total Working Fund
2064/65	31550000	3322266
2065/66	25313000	3106155
2066/67	42018500	3796705
2067/68	42946000	5127366
2068/69	44653700	4973890

J. Investment on Share & Debenture to Total Working Fund Ratio (%)

Figure in Rs. (000)

	Inv.Share & Debt.	Total Working Fund
2064/65	37244200	3322266
2065/66	48718100	3106155
2066/67	44369800	3796705
2067/68	31304600	5127366
2068/69	32296400	4973890

K. Total Off-Balance Sheet To Loan & Advance Ratio (%)

Figure in Rs. (000)

	T. Off-bal.Sheet	Loan & Advances
2054/55	741249	27529305
2055/56	1236285	36827157
2056/57	1248915	40948440
2057/58	987554	41095515
2058/59	707910	42912084

L. Investment in shares and debentures to paid up capital Ratio (%)

Figure in Rs. (000)

	Investment in share & debentures	Paid up capital
2064/65	37244200	1203915
2065/66	48718100	2407069
2066/67	44369800	2409098
2067/68	31304600	3011372
2068/69	32296400	3766155

M. Loan Loss Ratio (%)

Figure in Rs. (000)

	Loan Loss Provision	Loan & Advances
2064/65	114932	27529305
2065/66	1477056	36827157
2066/67	2021482	40948440
2067/68	2050000	41095515
2068/69	2100095	42912084

N. Non-Performing Loan to Total Loan & Advance

Sub-Standard Loan to Total Loan & Advance

	Sub-Standard Loan	Total Loan & Advance	Ratio%
2067/68	37375	2429026	1.54
2068/69	17232	2564423	0.67
2069/70	22030	5772140	0.38
		Mean	0.86

O. Net profit to Total working Fund Ratio (%)

	Net Profit	Total working Fund
2064/65	697501	3322266
2065/66	901697	3106155
2066/67	1265950	3796705
2067/68	1176641	5127366
2068/69	1039276	4973890

P. Net Profit to Loan & Advances Ratio (%)

	Net Profit	Loan & Advances
2064/65	697501	27529305
2065/66	901697	36827157
2066/67	1265950	40948440
2067/68	1176641	41095515
2068/69	1039276	42912084

Q. Return on Equity (ROE)

	Net Profit	Total Equity Capital
2064/65	697501	368203
2065/66	901697	370359
2066/67	1265950	410243
2067/68	1176641	469093
2068/69	1039276	523468

R. Total Interest Earned To Total outside Assets Ratio (%)

	Total Interest Earned	Total Outside Asset
2064/65	322375	33870.670
2065/66	296173	43641.020
2066/67	279864	48953.890
2067/68	349755	48518.620
2068/69	326223	40330.920

S. Total Interest Earned to Total Working Fund Ratio (%)

	Total Interest Earned	Total working Fund
2064/65	322375	3322266
2065/66	296173	3106155
2066/67	279864	3796705
2067/68	349755	5127366
2068/69	326223	4973890

T. Total Interest Earned to Total Operating Income

	Total Interest Earned	Total operating Income
2064/65	322375	114932
2065/66	296173	1477056
2066/67	4653521	2021482
2067/68	5803440	2050000
2068/69	5982641	2100095

U. Total Interest Paid to Total Working Fund Ratio (%)

	Total Interest Paid	Total working Fund
2064/65	144585	3322266
2065/66	137884	3106155
2066/67	2553847	3796705
2067/68	3620337	5127366
2068/69	3814411	4973890

V. Growth Ratio of Total Deposit (%)

Figure in Rs. (000)

Year	Total Deposit
2064/65	34451726
2065/66	46698100
2066/67	50094725
2067/68	50138122
2068/69	57010604

Appendix 2

Loan Loss Provision to Non – Performing Loan

Loan Loss Provision to Sub-standard

	Loan Loss Provision	Sub-standard	Ratio%
2067/68	8329	37375	22.28
2068/69	2089	17232	12.12
2069/70	2491	22030	11.31
		Mean	15.24

Loan Loss Provision to Doubtful

	Loan Loss Provision	Doubtful	Ratio%
2067/68	81697	164058	49.80
2068/69	1649	3481	47.37
2069/70	457	3594	12.72
		Mean	36.63

Loan Loss Provision to Bad Loan

	Loan Loss Provision	Bad Loan	Ratio%
2067/68	0		
2068/69	108981	109581	99.45
2069/70	89492	91467	97.84
		Mean	65.76

Appendix 3

A. Calculation of correlation between Total Deposit and Total Loan & Advance of NIBL

Figure in

'00000'

Year	Total Deposit (X)	Total loan&advance (Y)	X ²	Y ²	XY
2064/65	34451.726	27529.305	1186921424	757862633.8	984432072.8
2065/66	46698.100	36827.157	2180712544	1356239493	1719758260
2066/67	50094.725	40948.440	2509481473	1676774738	2051276272
2067/68	50138.122	41095.515	2513831278	1688841353	2060451945
2068/69	57010.604	42912.084	3250208968	1841446953	2446443828
	ΣX = 238392.677	ΣY = 189312.501	ΣX ² = 5705994370.98	ΣY ² = 7321165171	ΣXY = 7371955578

Correlation Coefficient "r" can be calculated by using following formula

$$\begin{aligned}
 r &= \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{N \sum X^2 - (\sum X)^2} \sqrt{N \sum Y^2 - (\sum Y)^2}} \\
 &= \frac{5 * 7371955578 - 238392.677 * 189312.501}{\sqrt{5 * 5705994370.98 - (164353.57)^2} \sqrt{5 * 2155623426.77 - (101488.33)^2}} \\
 &= \frac{812442160}{38959.92 * 21868.57} \\
 &= 0.9535
 \end{aligned}$$

Calculation of Probable error (P.E.r)

$$\begin{aligned}
 P.E.r &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\
 &= 0.6745 * \frac{1-(0.9535)^2}{\sqrt{5}} \\
 &= 0.0274
 \end{aligned}$$

Significant of relationship = 6 P.E.r

$$\begin{aligned}
 &= 6 * 0.0274 \\
 &= 0.1628
 \end{aligned}$$

B. Calculation of correlation between Total Deposit and Total Investment of NIBL

Figure in

'00000'

Year	Total Deposit(X)	Total Investment (Y)	X ²	Y ²	XY
2064/65	34451.726	6874024	1186921424	4725220595	2368219914
2065/66	46698.100	7399812	2180712544	5475721764	3455571608
2066/67	50094.725	8635530	2509481473	7457237838	4325867370
2067/68	50138.122	7423107	2513831278	5510251753	3721793878
2068/69	57010604	10438487	3250208968	108962010.8	595104449
	$\Sigma X=238392.67$ 7	$\Sigma Y=31376$ 3.2127	$\Sigma X^2 = 11641155687$	$\Sigma Y^2=2327739396$	$\Sigma XY=$ 14466557219

Correlation Coefficient "r" can be calculated by using following formula

$$r = \frac{N \Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{N \Sigma X^2 - (\Sigma X)^2} \sqrt{N \Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 * 14466557219 - 238392.67 * 31376.2127}{\sqrt{5 * 11641155687 - (238392.67)^2} \sqrt{5 * 2327739396 - (31376.2127)^2}}$$

$$= \frac{2466063928}{38959.92 * 12554.05}$$

$$= 0.7139$$

Calculation of Probable error (P.E.r)

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

$$= 0.6745 * \frac{1-(0.7139)^2}{\sqrt{5}}$$

$$= 0.1479$$

Significant of relationship = 6 P.E.r

$$= 6 * 0.1479$$

$$= 0.8874$$

C. Calculation of correlation between Current Assets and Current Liabilities of NIB

Figure in '00000'

Year	Current Assets (X)	Current Liabilities (Y)	X ²	Y ²	XY
2064/65	37625.617	37156.904	1415687055	1380635515	1398051439
2065/66	51559.023	49851.422	2658332853	2485164275	2570290613
2066/67	55769.728	53998.753	3110262561	2915865326	3011495767
2067/68	56808.992	53625.525	3227261572	2875696932	3046412021
2068/69	64084.600	60914.947	4106835957	3710630768	3903710013
	$\Sigma X=265847.96$	$\Sigma Y=255547.551$	$\Sigma X^2=1451837998$	$\Sigma Y^2 = 13367992815$	$\Sigma XY=7478246167.67$

Correlation Coefficient "r" can be calculated by using following formula

$$r = \frac{N \Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{N \Sigma X^2 - (\Sigma X)^2} \sqrt{N \Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 * 7478246167.67 - 265847.96 * 255547.551}{\sqrt{5 * 145183799 - (265847.96)^2} \sqrt{5 * 13367992815 - (255547.551)^2}}$$

$$= \frac{1601927900}{41797.54 * 38339.41}$$

$$= 0.9996$$

Calculation of Probable error (P.E.r)

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

$$= 0.6745 * \frac{1-(0.9996)^2}{\sqrt{5}}$$

$$= 0.006$$

Significant of relationship = 6 P.E.r

$$= 6 * 0.006$$

$$= 0.036$$

D.Calculation of correlation between Total outside Assets and Net Profit of NIBL

Figure in '00000'

Year	Totaloutside Assets(X)	Net profit (Y)	X ²	Y ²	XY
2064/65	33870.67	6975.01	1147222286.25	48650764.5	236248261.957
2065/66	43641.02	9016.97	1904538626.64	81305747.98	393509768.109
2066/67	48953.84	12659.50	2396478450.75	160262940.3	619731137.48
2067/68	48518.62	11766.41	2354056486.7	138448404.3	570889975.554
2068/69	40336.92	10392.76	1627067115.09	108009460.4	419211928.699
	ΣX 215321.07	$=\Sigma Y$ 50810.75	$=\Sigma X^2$ 9429362965.43	$=\Sigma Y^2$ 536677317.4	$=\Sigma XY$ =2239591071.8

Correlation Coefficient "r" can be calculated by using following formula

$$r = \frac{N \Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{N \Sigma X^2 - (\Sigma X)^2} \sqrt{N \Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 * 2239591071.8 - 215321.07 * 50810.75}{\sqrt{5 * 9429362965.43 - (215321.07)^2} \sqrt{5 * 536677317.4 - (50810.75)^2}}$$

$$= \frac{257330301.5}{288950461.9}$$

$$= 0.891$$

Calculation of Probable error (P.E.r)

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

$$= 0.6745 * \frac{1-(0.891)^2}{\sqrt{5}}$$

$$= 0.0621$$

Significant of relationship = 6 P.E.r

$$= 6 * 0.0621$$

$$= 0.3724$$

E. Calculation of correlation between Loan loss Provision and Total Loans and Advances of NIBL

Figure in

'00000'

Year	Total Loans and Advances(X)	Loan loss Provision (Y)	X ²	Y ²	XY
2064/65	27529.305	1149.32	757862633.8	1320936.462	31639980.8
2065/66	36827.157	14770.56	1356239493	218169442.7	543957732
2066/67	40948.440	20214.82	1676774738	408638947.6	827765344
2067/68	41095.515	2050000	1688841353	420250000	842458058
2068/69	42912.084	21000.95	1841446953	441039900.9	901194530
	$\Sigma X = 189312.501$	$\Sigma Y = 77635.65$	$\Sigma X^2 = 7321165171$	$\Sigma Y^2 = 1489419228$	$\Sigma XY = 3147015645$

Correlation Coefficient "r" can be calculated by using following formula

$$r = \frac{N \Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{N \Sigma X^2 - (\Sigma X)^2} \sqrt{N \Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 * 3147015645 - 189312.501 * 77635.65}{\sqrt{5 * 7321165171 - (189312.501)^2} \sqrt{5 * 1489419228 - (77635.65)^2}}$$

$$= \frac{1037679156}{27687.59 * 37680.26}$$

$$= \frac{1037679156}{1043246160}$$

$$= 0.995$$

Calculation of Probable error (P.E.r)

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

$$= 0.6745 * \frac{1-(0.995)^2}{\sqrt{5}}$$

$$= 0.003$$

Significant of relationship = 6 P.E.r

$$= 6 * 0.003$$

$$= 0.018$$

Appendix 4

A sample calculation of 'Straight Line trend'.

Let straight line trend between dependent variable (total deposit) and the independent variable (Time) be x,

$$Y = a+bx$$

Then to find out the value of a and b, we have

$$a = \frac{\sum Y}{N} \quad \text{Where } (\sum X = 0)$$

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

Fitting of trend line by least square method

Trend of total deposit of Nepal Investment Bank Limited

Figure in Rs. (000)

Year (t)	Total Deposit(Y)	X = t - 2000	X ²	XY	Y _c = a + bX
2064/65	34451726	-2	4	-68903452	37967100
2065/66	46698100	-1	1	-46698100	42822878
2066/67	50094725	0	0	0	47678655
2067/68	50138122	1	1	50138122	52534433
2068/69	57010604	2	4	114021208	57390211
	$\sum Y$ 238393277	= $\sum X = 0$	$\sum X^2 = 10$	$\sum XY$ 48557778	=

$$a = \sum Y/N = 238393277/5 = 47678655.4$$

$$b = \sum XY/\sum X^2 = 48557778/10 = 4855777.8$$

The equation of straight line trend is

$$Y_c = a + bX$$

$$Y_c = 3087071.40 + 5000242.40 X$$

Trend of Loan and Advances.

Figure in Rs. (000)

Year (t)	Loan & Advances(Y)	$X = t - 2066/67$	X^2	XY	$Y_c = a + bX$
2064/65	27529305	-2	4	-55058610	37862498
2065/66	36827157	-1	1	-36827157	34359109
2066/67	40948440	0	0	0	37862500
2067/68	41095515	1	1	41095515	41365892
2068/69	42912084	2	4	85824168	44869283
	ΣY =189312501	$\Sigma X = 0$	$\Sigma X^2=10$	ΣXY =35033916	

$$a = \Sigma Y / N = 189312501 / 5 = 37862500.2$$

$$b = \Sigma XY / \Sigma X^2 = 35033916 / 10 = 3503391.6$$

The equation of straight line trend is $Y_c = a + bX$

$$Y_c = 37862500.2 + 3503391.6X$$

Trend of total investment

Figure in Rs. (000)

Year (t)	Total Investment (Y)	$X = t - 2066/67$	X^2	XY	$Y_c = a + bX$
2064/65	6874024	-2	4	-13748048	6723746.6
2065/66	7399812	-1	1	-7399812	7438969.3
2066/67	8635530	0	0	0	8635530
2067/68	7423107	1	1	7423107	8869414.7
2068/69	10438487	2	4	20876974	9584637.40
	ΣY =40770960	$\Sigma X = 0$	$\Sigma X^2=10$	ΣXY =7152221	

$$a = \Sigma Y / N = 40770960 / 5 = 8154192$$

$$b = \Sigma XY / \Sigma X^2 = 7152221 / 10 = 715222.70$$

The equation of straight line trend is $Y_c = a + bX$

$$Y_c = 8154192 + 715222.70X$$

Trend of Net profit

Figure in Rs. (000)

Year (t)	Total Net Profit (Y)	X = t - 2066/67	X ²	XY	Y _c = a + bX
2064/65	697501	-2	4	-1395002	824514.2
2065/66	901697	-1	1	-901697	920363.6
2066/67	1265950	0	0	0	1016213
2067/68	1176641	1	1	1176641	2192854
2068/69	1039276	2	4	2078552	1207911.8
	∑Y = 5081065	∑X = 0	∑X ² = 10	∑XY = 958494	

$$a = \frac{\sum Y}{N} = \frac{5081065}{5} = 1016213$$

$$b = \frac{\sum XY}{\sum X^2} = \frac{958494}{10} = 95849.4$$

The equation of straight line trend is $Y_c = a + bX$

$$Y_c = 1016213 + 95849.4X$$