

**LENDING STRENGTH ANALYSIS OF COMMERCIAL
BANKS IN NEPAL
(A CASE STUDY OF NEPAL INVESTMENT BANK LIMITED)**



A Thesis

**Submitted to:
Office of the Dean
Faculty Management
Tribhuvan University
Nepal**

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**In partial fulfillment of the requirement for the degree of Master of Business
Studies (MBS)**

**Kathmandu, Nepal
July 2012**

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ACKNOWLEDGEMENT

First of all, I would like to take this opportunity to express my sincere thanks to my respected thesis supervisors' Prof. Dr. K.D Manandhar, lecturer Mr. Shankar Thapa and Mr. Indra Bdr. Bohara. I owe them lots of gratitude for having guided in selecting the subject, formulating the methodology and deciding the analytical basis.

I would like to express my heartfelt gratitude to respected sir Mr. Sharbesh Dutta Bhattarai for his kind co-operation, support and providing me with the valuable suggestions for necessary improvement.

I would also like to take this opportunity to thank my friends Mr. Akash Shrestha and Mr. Ashok Kafle, my cousins Mr. Sunil Ban and Mr. Sanjay Ban whose co-operation, support and invaluable suggestions provided me effective way outs to start and continue this study.

Lastly but chiefly, I must unreservedly acknowledge my deep debt of gratitude to my family members, colleagues, friends and well wishers whose suggestions, encouragement, criticisms, and judgment have been indispensable for composition of this thesis.

July, 2012

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DECLARATION

I hereby declare that the work reported in this thesis entitled “LENDING STRENGTH ANALYSIS OF COMMERCIAL BANKS IN NEPAL (A Case Study of Nepal Investment Bank Limited)” submitted to the Office of the Dean, Central Department of Management is my original work done in the form of partial fulfillment of the requirement of master’s degree in business studies under the supervision of Prof Dr. K.D Manandhar, lecturer Mr. Shankar Thapa and Mr. Indra Bdr. Bohara.

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ACRONYMS AND ABBREVIATIONS

%	: Percent
σ	: Standard Deviation (SD)
r	: Karl Pearson's Correlation Coefficient
r^2	: Coefficient of Determination
A.D.	: Anno Domini (English Calendar)
BR Act	: Banking Regulations Act
B.S.	: Bikram Sambat (Nepalese Calander)
CV	: Coefficient of Variation
EPS	: Earning Per Share
F/Y	: Fiscal Year
GDP	: Gross Domestic Product
GNP	: Gross National Product
GNI	: Gross National Income
GON	: Government of Nepal
HBL	: Himalayan Bank Limited
Ktm	: Kathmandu
Ltd	: Limited
m	: Million
NIBL	: Nepal Investment Bank
NPA	: Non Performing Assets
NPL	: Non Performing Loan
NPV	: Net Present Value
NRB	: Nepal Rastra Bank
P.Er.	: Probability of Error
Rs.	: Rupees (Nepalese Monetary Unit)
RBB	: Rastriya Banijya Bank
SPSS	: Statistical Package for the Social Science
TU	: Tribhuvan University
USD	: United State Dollar

CHAPTER I

INTRODUCTION

1.1 General Background

Bank is an institution, which deals with money by accepting various types of deposit from the depositors under various deposit schemes there by allowing interest on them & also rendering loans on mortgage to deficit unit for productive use by charging interest. They are expected to support their local communities with an adequate supply of credit for all legitimate business and consumer financial needs and to price that credit reasonably in line with competitively determined interest rates. Indeed making loans as the principal economic function of banks to fund consumption and investment spending by businesses, individual, and units of government. How well a bank performs its lending function has a great effect on the economic health of its region, because bank loans support the growth of new business and jobs within the bank's trade territory and promote economic vitality.

The issue of development always rests upon the mobilization of resources. Bank's function of lending ensures required volume of capital to resources mobilization. Thus, the foundation of resources mobilization is pillared on the bank's function of lending. The primary issue of economic development is to increase the investment in productive sector. The increase in investment affects positively in every sector of economy such as employment, production, income, government revenue, international trade etc. What roles can a bank play to assist the economic development is the main issue that the banking sector in Nepal and sectors around the world is facing today.

For most banks, loans accounts half or more of their total assets and about half to two thirds of their revenues. Moreover, risk in banking tends to be concentrated in the loan portfolio. When a bank gets into serious trouble, its problems usually springs from loans that have become uncollectible due to mismanagement, illegal manipulation of loans, misguided lending policies, or an unexpected economic downturn. A detailed analysis of the documentation and collateral for the largest loan, a review of a sample of small loans and an evaluation of the bank's loan policy should be properly monitored to ensure that it is sound and prudent in order to protect the public's funds. Thus it becomes necessary that the funds of the bank, which has been granted as loans, into various sectors be thoroughly inspected to guarantee the protection of the bank against unforeseen risks.

In the present context, the role of money in the economy has become very important. Proper and well-planned management of money – directs, determines and enhances the health and productivity of total financial sector and performance of financial sector affects the growth of the economy. Bank collects, disperses and controls the flow of money. This way, whole infrastructure of national development, direction of economy, rate of progress and even the habit of people is being the function of the banking system. Therefore, the existence of bank is for the change in every aspect of human beings and its presence is for the enrichment of the people.

Nepal is one of the least developed countries in the world. Majority people of the total population are still in the rural areas and most of them are still deprived of the physical facilities that are necessary for any human being. However, Nepalese economy is predominantly agriculture; i.e. agriculture is backbone of Nepalese economy. More than 90% of the population still directly or indirectly depends upon it for their livelihood. The poor structure of Nepalese economy, slow paced industrial sector, low rate of employment, majority of non organized financial sector, lack of organized capital markets etc. have always been demanding an efficient, competent, and liberalized banking industries. The existence of an ideal commercial banking system regularizes the scattered fund form public. Lending to productive sector reduces the idle saving of the country. Commercial banks, if successful in increasing the banking habit of people,

would have great power in multiplying the deposits by way of credit creation and this would multiply the investment more than the limit granted by the national savings.

The Nepalese banking, if worked efficiently in pursuit of its ideologies, would be the people's hope towards prosperity and economic dynamism. In addition, the very essence of people's hope towards the banking system is dependent on its efficiency to implement its lending and investment activities. "The two essential functions of commercial banks may best be summarized as the borrowing and lending of money. They borrow money by taking all kinds of deposits. Then they provide the collected fund to those who are in need of it by granting overdrafts to fixed loan or by discounting bills of exchange or promissory notes. By discharging this function efficiently, a commercial banker renders a valuable service to the community by increasing the productive capacity of the country and thereby accelerating the pace of economic development" (Shekhar & Shekhar, 2000).

Lending is the most important function of a bank. The pace of time has changed the portfolio of banking business from its primary functions to other functions, such as merchant banking, credit card business, documentary credit, traveler check business etc. Nevertheless, the importance of lending in banking business is undoubtedly unchanged and remained vital as it was in early day of this business. The classical economic functions of bank and other financial intermediaries all over the world have remained virtually unchanged in modern times. What have been changed are the institutional structure, the instruments, and the techniques used in performing these functions (Bhattacharya, 1998).

Lending is not only the most important function of a bank; it also determines the future of banking institutions. The quality of loan, quality of borrower and quality of securities determines the health of any bank. The efficiency of bank lies in how it multiplies the deposits of depositors. Hence, lending should be accompanied by some basic principles and practices. No banker would willingly give a loan, unless he has sufficient confidence in the borrower that it will not be necessary to seek help of court for recovery. Safety of funds, liquidity of funds, purpose of loan, security for loan, profitability, spread of loan portfolio and compliance with national interests are some of the principle that a banker

should follow while granting a loan. Besides these the character of person receiving credit, the capacity of the borrower to utilize the fund, the percentage of borrower stake in the business etc. are the basic element which measures the quality of the borrower and ultimately the quality of the loan.

Lending policy is a study in determining the importance of the bank's lending policy towards National Economic Development because it ensures efficient allocation of funds to achieve the material and economic well being of the society as a whole. In this regards loan disbursement pattern has been a major catalyst in achieving priority of industries in the context of Nepal's economic development.

All thirty two Commercial Banks in Nepal have their own lending policy apart from government policy and Central Bank's rules. Timely evaluation and reform of lending policy is utmost important for strengthening the position of banks.

This study is mainly focused to explore the lending strength of Nepal Investment Bank Limited and its impact on profitability of the bank.

1.1.1 A Brief Introduction of Nepal Investment Bank Limited

Nepal Investment Bank Limited (NIBL), previously known as Nepal Indosuez Bank Ltd, was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital of NIBL) was Credit Agricole Indosuez, a subsidiary of one the largest banking group in the world. With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, industrialists and businessmen on April 2002 acquired the 50% shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd. The name of the bank thus was changed to Nepal Investment Bank Ltd. upon approval of bank's Annual General Meeting, Nepal Rastra Bank and Company Register's office with the following shareholding structure.

Table No 1.1: Share Holding Pattern of NIBL

PARTICULARS	PERCENTAGE
1. Domestic Ownership	100%
1.1 Government of Nepal	
1.2 Commercial Bank (Rastriya Banijya Bank)	15%
1.3 Finance Companies (Rastriya Beema Sansthan)	15%
1.4 Nepalese Business Groups	50%
1.5 General Public	20%
1.6 Others	
2. Foreign Ownership	
Total	100%

Source: NIBL

NIBL was awarded the “Bank of the year 2003”, “Bank of the year 2005”, “Bank of the year 2008”, “Bank of the year 2010” by London based “Financial Times group – The Banker”. Experienced people from the field of banking and business compose the team of NIBL. The NIBL management team has efficiently managed the bank’s investments, assets, profits, management and the available technologies. NIBL has accomplished a number of objectives consistent with other national objectives and satisfying their customers. In a business organization, change in structure and management is essential and a need as well. NIBL has also been involved for such changes as per its need. Time to time it has update the organizational structure of the bank and has maintain its management strength and good service delivery. NIBL’s major policy is to open and maintain accounts and transact with individuals and organizations of good reputation that engage in business transactions of integrity. We believe that every financial institution should be aware of the possibility that their institution may be misused. For this each organization should have an excellent management team and working staff. Banks are the service industries and human resource is the backbone of service industries.

Thus NIBL has also understood this theory and has given considerable focus to update and develop its organizational structure. NIBL maintains a strict adherence to all NRB banking regulations as they apply to its activities throughout the Kingdom of Nepal. All officers including at the branch level are responsible for assuring that the receptive area under their supervision adheres to all regulatory guidelines. NIBL is responsible for ensuring that all units and branches adhere to federal regulations, and all regulatory requirements are disseminated throughout the bank in a timely manner.

NIBL altogether has forty one branches including the head office. The current network of branches of NIBL is shown in Appendix 1.

1.2 Statement of the Problem

In recent years, banking sector saw the mushrooming of banks especially in the urban areas. Despite this banking expansion, the rural sector is still deprived of banking service. The main reasons behind the private banks are not interested to establish their branch in remote area is due to lack of confidence in security level. In fact, government is responsible to maintain peace and propriety in the country, but unfortunately the government is not able to perform its job. So, blaming only to the banks for not feeling their responsibility for the remote area will not be the fair judgment. Moreover, establishment of branches in the remote area even after taking risk do not generate profit to the banks because government also has not given emphasis to the remote area for its economic development.

There were few commercial banks in the past years and the majority of economy was dominant by unorganized financial sector. The banking sector had access in major cities and municipalities only. The scene has remained unchanged except there is a dramatic increase in number of commercial banks only. Moreover, if we add inflation rate and the devaluation of Nepalese rupee with US dollar, it would reflect poorer performance of the commercial banks in both deposits and loans and advances. Leading contribution made by Nepal Bank Limited and Rastriya Banijya Bank in the above increment and judging

the performance of other commercial banks only, gives another aspects of failure of private sector banks in fund mobilization. The allegation does not point towards these private banks only but to the other factors of economy such as instable political situation, immature economy, invasion of foreign products, lack of sound lending policy and uncertainty in economic performances of industries due to uncertain Indian product invasion. This way, commercial banks in Nepal has been facing several challenges, some of them arising from lack of smooth functioning of economy, some of them arising due to confused policies and many of them arising due to default of the borrows. Liberalization in the economy has produced some degree of opportunities and more than that it has created chaos and uncertainty.

NIBL has the policy of expanding its branches in the remote areas of the country to serve the poor people. It has been providing commercial services to the remote sectors. In the light of the very facts, as commercial bank is the backbone of the economy, it is highly useful to make the present study on Nepal Investment Bank. Moreover, this study is felt needed as to know the pattern to lending status of the bank and other banking services provided to the people. One advantage behind this study also lies in the fact that it helps in bringing into notice the lacks and deficiencies that has to be accomplished by the bank. In addition to these, following are some grossly noted problematic aspects of the study:

It has been apparent that there is a difficulty for long term and medium term loan as the procedure to provide such facilities to the customers is very lengthy. On the other hand, due to the lack of deposit habit of the Nepalese people, a low rate of deposit formation has been observed, which ultimately has been affecting the lending procedure of the bank. Moreover the absence of strong protection by law of recovery of lending or investment has made it difficult for the banks to indulge in lending activities. Banks have to hugely depend on mortgage of properties, however, in case of default the bank is incapable to get back its funds promptly and effectively due to the lack of proper legal procedures.

1.3 Objective of the Study

The main target of this study is to observe the loan disbursement of Nepal Investment Bank. The general objective of this study includes analysis of the actual lending position, its strength and its weaknesses. The specific purposes of the study are:

1. To study the amount of loan invested in industrial areas.
2. To analyze whether the loans disbursement pattern is in compliance with the NRB regulations.
3. To Provide recommendations for initiating correct measures to improve the lending policy of NIBL.

1.4 Research Question

1. What has been the pattern of loan distribution of NIBL to the priority and the deprived sectors?
2. Out of the total deposits what has been the percentage of the loan disbursed?
3. Lending in industrial sector has been risky project. (This is because most of the industries in the country are running in crisis both financially and technically. The share price of those industries in the market is below par. In this scenario, these industries do not hold the required standard of credit rating unless the government guarantees them). In this perspective, how to deploy the fund to ensure intact liquidity, high profitability and low risk?

1.5 Worth of the Study

Bank's performance hugely depends on the amount and the types of loan it provides. Rather it is believed that the sound health of the bank relies on the optimum lending position of the bank, which mean better the lending position of bank, higher will be the return to the stakeholder of the bank.

This study reveals the role of NIBL in the industrial development as well as identifies the contribution of the bank to the economic development of the country. However, there has been little research done on the loan disbursements of the banks. Since most of the population of our country depends on agriculture, it has become essential that these studies are conducted, in order to provide insights to the people as to what measures are being taken by the banks to facilitate people to carry out expensive ventures and at the same time provide the citizens with economic support. Moreover, the loan disbursement outline of NIBL will be in accordance to people's economic enlistment along with identification of the weaknesses of the loan disbursed in various sectors of the country. The study is conducted with a purpose of determining the trend of the pattern of loan distributed since the past five years, while trying to create a vision of what the trend of loan disbursement would be in the near future.

1.6 Limitations of the Study

This study has been conducted appropriately however there were several complications. As this research tries to justify the events in accordance with the well known or already established tools and techniques, emphasis is not given to fundamental and decision oriented study.

There are certain drawbacks on the present study of loan disbursement of NIBL, which emerged as limitations of the study. Following limitations were observed during the course of study:

1. The entire study is based on secondary data.
2. The study is based on NIBL only as a commercial bank.
3. The study concentrates only on the loan procedures of a bank.
4. The report is mainly based in the financial statement published by the bank.
5. The data only focuses on the time period of the last 5 years i.e. from 2006 to 2011.
6. Time constraint has had an impact on shaping up the study conducted.

The listed points have in some way or other affected the proper conduct of study. The impact of these may be positive or negative based on their nature. However, effort has been put to minimize the error that may have emerged due to these limitations and discrepancies have been reduced to the minimum.

1.7 Organization of the Study

The overall study conducted has been organized in following manner:

Chapter One presents the light overview of Bank, Banking system in Nepal and introduction of Nepal Investment Bank, subject institution of the study in general.

Chapter Two devoted for the brief review of literature, report and journal available with the support of accepted theories and practices. Review from books, journals (articles), thesis etc are included in this chapter.

Chapter Three presents the sample taken out from population and methodology used to present and analyze the collected data relevant for the study.

Chapter Four analyzes the data collected from various relevant sources using various statistical and non-statistical methods. Tables, Bar Graph, Pie Chart, Line Graph etc are used for presentation of data. Various financial tools like Ratio Analysis, Assets/Liability Management Ratio, Activity Ratio, Profitability Ratio and statistical tools like Standard Deviation, Coefficient of Variation, Correlation Coefficient, Multiple Regression Analysis, Time Series etc has been used for analysis of data.

Chapter Five is for summary, conclusions of the study and to express recommendations to improve any time of lacking, if found in the subject during the study.

Finally, Bibliography of books, published and unpublished reports, journals and literatures along with Appendixes containing elaborated calculation and presentation of data will be jotted down at the end of the report.

CHAPTER II

REVIEW OF LITERATURE

2.1 Origin and Development of Commercial Bank

Banks are one of the most important financial institutions and Banking is an essential industry which has become an integral part of every economy. Banks are the principal sources of credit for millions of individuals and families and for many units of governments (schools, districts, cities, countries etc.). Worldwide, banks grant more loans to consumers than any other financial institutions. They are amongst the most important sources of fund for working capital requirement for businesses and have become active increasingly in recent years in making long term business loans for new business plants.

Today banking is an industry in change, rather than being something in particular. It is continually becoming something new, offering new services, merging and consolidating into much larger and more complex form, adopting new technologies that change rapidly, and facing a new and changing set of rules to regulate and supervise the banks that serve their citizens. Thus, banking has become one of the most heavily regulated businesses in the world.

When did the first bank appear? The Old French word banquet and the Italian word banca were used centuries ago to mean a “bench” or “money changer’s table”. This describes quite well what historians have observed concerning the first bankers, who lived more than 2000 years ago. They were money changers, situated usually at a table or in a small shop in the commercial district, aiding travelers who came to the town by exchanging foreign coins into local money or discounting commercial notes against some fees in order to supply merchants with working capital (Rose, 1989).

The origin of commercial banking can be traceable from the early times of human history. In the ancient Rome and Greece, the practice of storing precious metals and coins at safe places and loaning out many for public and private purposes on interest was prevalent. In England, banking had its origin with the London Goldsmiths who in the 17th century began to accept deposits from merchants and others for safekeeping of the money and other valuables. As public enterprise, banking made its first appearance in Italy in 1157 A.D when the 'Bank of Venice' was founded (Shekhar & Shekhar, 2000).

The history of modern banking system is not very old in Nepal. From the very ancient times, limited transactions were used. But the concept of modern banking could be traced out at the time of Malla Regime; King Jayasthiti Malla classified the people of Kantipur in 64 castes on the basis of their occupation. "Tanka Dhari" caste was one among 64 castes that handled International Trade, Business Credit & Family Credit etc. During the period of 1877-1885 B.S., Rana Prime Minister Ranodhip Singh established "Tejarath Adda" in Kathmandu, which was the first step towards the institutional development of banking in Nepal. Tejarath Adda did not collect deposit from the public but granted loan to their employees at rate of 5% & general public against the bullion (Timilsina, 2053).

Afterwards with feeling of necessity of commercial banks, Nepal Bank Limited, the first commercial bank in Nepal, was established in 1937 A.D. The central bank of Nepal, Nepal Rastra Bank was established on 2013 BS (1955 AD) under Nepal Rastra Bank Act 2012, which has helped to make banking system more systematic and dynamic during that time. As the time passed, a government owned bank, Rastriya Banijya Bank, established in 2022 B.S. in order to play a major role not only in domestic banking but also in the foreign trade. Later on, many private and joint venture banks are established in order to fulfill the requirement of financial transaction. Now, there are 32 commercial banks in Nepal. In addition to this, many other small-scale banks confined to few works of banking system called Development Banks and other financial institutions like finance companies and loan co-operatives have been established.

2.1.1 Commercial Banks – Concept and Definitions

Although banks can be categorized into different types on the basis of their functions and objectives, the word “Bank” is synonymous with the commercial banks. Commercial banks perform some functions similar to those of saving institutions and credit unions; that is they accept deposits (Liabilities) and make loan (Assets). However they differ in the composition of assets and liabilities, which are much more varied. Commercial bank’s liabilities include several types of non-deposit source of funds, while their loans are broader in range, including consumer, commercial and real estate loans. Commercial banking activity is also regulated separately from the activities of savings institutions and credit unions. Within the banking industry the structure and composition of assets and liabilities also vary significantly across banks of different assets size.

Principally, Commercial Bank accepts deposits and provides loans, primarily to business firms thereby facilitating the transfer of funds in the economy (Rose, 1989).

The primary sources of fund for commercial bank are capital (fund form shareholders), reserve (retained earnings) and various types of deposits. Basic uses of fund are loans, advances and investments.

2.1.2 Role of Commercial Bank in Economic Development

A well-developed banking system is a necessary re-condition for economic development in a modern economy. Besides providing financial resources for the growth of industrialization, banks can also influence the direction in which these resources are to be utilized. In a modern economy, banks are to be considered not merely as dealers in money but also the leaders in development. They are not only the storehouses of the country’s wealth but also utilize resources necessary for economic development. It is the due to the growth of commercial banking in 18th and 19th centuries that facilitated the occurrence of industrial revolution.

The main objective of commercial banks is to mobilize idle resources for productive use after collecting them from different places. It brings about greater mobility of resources to meet the emerging necessity of the economy. There are various roles played by a commercial bank for the development of an economy, which are capital formation, encouragement to entrepreneurial innovations, influencing economic activity, promotion of trade and industry, development of agriculture and other neglected sectors.

The major problem in almost all underdeveloped countries like Nepal is lack of capital formation and their proper mobilization. In such countries, commercial banks should act as a development bank. Nepal is a small and poor country but she has sufficient natural resources. To utilize those resources, capital is required. Commercial banks gather monetary resources from different areas in the form of deposits and provide loan to investing areas like industry, agriculture etc. Therefore, the fate of the country is greatly determined by the active role of commercial banks. Banks provides facilities to their customers by providing loans, remitting funds, purchase and sale of bills and other market information. These services help to run the business and other economic activities rapidly as well as smoothly which ultimately helps in economic development.

2.2 Review of Relevant Study

Many researchers have conducted their research on the field of ‘Commercial Banks’, especially on their financial performance, and fund mobilization policy, compliance with NRB directives etc . Besides these, there are several books, articles, thesis and other relevant study concerned with the Lending and Investments. Some of the relevant studies, their objectives, findings and conclusions and other literature regarding the topic have been reviewed below:

2.2.1 Theoretical Review

The primary business of banks is accepting deposits and lending money. Banks accept deposits from customers who want the safety and convenience of deposits service and the opportunity to earn interest on their excess funds. Banks put their depositors' funds to other individuals to businesses and to federal, state and local governments (Halter, 1999).

Banks lend out money to the needy customers as forms of loans and advances with proper evaluation of customers' business status. This evaluation is called credit appraisal. So, credit appraisal plays a vital role in order to maintain the bank's strength on lending.

Hrishikes Bhattacharya in his book 'Banking Strategy, Credit Appraisal and Lending Decisions' have put the recommendation of Tandon Committee from the report submitted to this committee. The committee has prepared this report in 1975, however these recommendations still deserve great significance in the sector of credit appraisal and lending.

Breaking away from the traditional methods of credit appraisal, the system proposed by the committee enjoined upon the banker:

1. To assess the need based credit of the borrower on a rational basis.
2. To ensure proper end use of bank credit by keeping a closer watch on the borrower's business and thus to ensure safety of the bank's funds.
3. To improve the financial discipline of the borrower.
4. To develop healthy banker-borrower relationship

The Committee examined the existing system of lending and recommended the following broad changes in the lending system:

1. The credit needs of borrowers should be assessed on the basis of their business plans.
2. Borrowers should be required to hold inventory and receivables according to norms prescribed by the Reserve Bank of India from time to time.
3. Credit should be made available in different components only, depending upon the nature of holding of various current assets.
4. In order to facilitate a close watch on the operations of borrowers, they are required to submit, at regular intervals, data regarding their business and financial operations, both for the past and future periods.

The committee said that at any time a business is required to hold the following current assets for operations of the business:

- Raw Material including stores and other items uses in the manufacturing process.
- Stocks-in process.
- Finished Goods.
- Receivables.
- Spares.

(Bhattacharya, 1998)

In India, the definition of the business of banking and the large number of permissible functions for banks are given in the banking regulation Act 1948 (BR Act):

1. According to Section 5(c) of the BR Act, 'a banking company is a company which transacts the business is banking in India'.
2. Section 5(b) of the Act defines banking as, 'accepting, for the purpose of Lending of Investment, of deposits of money from the public, repayable on demand or otherwise, and withdrawable, by checks, drafts, orders or otherwise.'

As per this definition, banking in India signifies:

1. Accepting of deposits form public,
2. For the purpose of Lending and Investment.
3. Repayable on demand or otherwise, and
4. Withdraw able by checks, drafts, orders or otherwise.

Section 7 of the BR Act makes it compulsory for every company carrying on the business of banking in India to use as part of its name, at least, one of the following words –'bank', 'banking' or 'banking company' (Singh & Singh, 1983).

Bank growth and profitability are the result of carefully forecasting funding needs, competitively attracting funds, efficiently borrowing funds, and effectively investing funds in safe but profitable earning assets. Depending in a bank's size and location and on local and national economic conditions, a bank may have adequate, relatively stable sources of low cost funds, or it may have to compete regularly and aggressively for funds at high market prices. For an increasing number of banks, the second situation is becoming the norm, as more and more banks face increasing pressures to attract adequate funds at reasonable costs (Halter, 1999).

The investment (credit) policies of banks are conditioned to great extent, by the national policy framework; every banker has to apply his own judgment for arriving at a credit decision, keeping of his banker's credit policy also in mind. (Singh & Singh, 1983)

The traditional 'bread and butter' market is no longer in a position to sustain the banking structure in an era of deregulation and globalization. The dismantling of cartels for interest rate determination or withdrawal of the administered rate regime, which provided an umbrella to the banks for long, is no longer in existence. Interest rate risk has emerged as one of the dominant risk elements with such a force that a number of well-known international banks suffered heavily due to mismanagement of this risk. Due to all these, commercial banking (lending and retail and retail deposit taking), is now moving down to

the third position with investment banking and asset management moving up, respectively to number one and number two activities of the banks. The accent is now on off balance sheet business or 'sweeteners' as is the current terminology in the banking market. The irony of this decade was that competition coexisted with control. In order to withstand competition in the face of control, attempts were made to circumvent it by cartelization and subsidiarizing on one hand and dilution of credit standards on the other hand. The latter was possible because in most of the banks, whether they were global giants or country banks, a well-documented loan policy did not exist. The next decade of banking beginning in 1970 had to suffer from the follies of the past (Bhattacharya, 1998)

2.2.2 Review of Journals

Among the various reviews of various journals pertaining to the study, the major and most contributing to the study has been outlined below.

Non-Performing Loans (NPLs) reduces the liquidity of banks, credit expansion, it slows down the growth of the real sector with direct consequences on the performance of banks, the firm which is in default and the economy as a whole. According to the theory of finance, there are various risks facing financial institutions. They include: credit risk, liquidity risk, market risk, operating risk, reputation risk and legal risk. The system is highly sensitive while the activities of the operators need to be conducted within the laid down and agreed rules and procedures, in order to achieve a reasonable level of efficiency.

Lending involves the creation and management of risk assets and is an important task of bank management. As in liquidity and portfolio management, effective management of the lending portfolio requires an articulated lending policy. The policy should set out the bank's lending philosophy and objectives including the modalities for implementation, monitoring appraisal and review. Since lending means taking risks and assessing the risks of defaults and movements in interest rates, a written policy would act as a signpost to guide management and lending institutions. Well-conceived lending policies and careful lending practices are essential in facilitating efficient credit system and minimize risk in lending.

It is worthy to clearly point to the fact that risks are major intents of banking business. The degree of success of a bank greatly depends on the ability of management to ensure that the practice of risk management mitigates the impact of risk in such a way, and to such an extent that recorded surplus is not only robust and covers the interests of various stakeholders, but also assures the health integrity of the bank

One of the major components of bank's assets is loans and advances, and the effective management of such loan portfolio has been a problem. The failure of many banks is not because of their inability to mobilize adequate deposits from the surplus sector to the deficit sector of the economy, but mainly because their lending portfolio have been poorly managed. The banking sector is seen to have an important role to play in the economic development of the country. This is mostly pronounced in the realm of financial intermediation. However, previous studies on the sector showed that little success was recorded in this regard. Some banks find it difficult to meet their obligations to their customers and owners due to fault or weakness in managing their lending portfolio and the shortcomings which could render them either illiquid or insolvent (Somoye, 2010).

In a rational profit-maximizing world, banks should maintain a credit policy of lending if and only if borrowers have positive net present value projects. Why then are changes in credit policy seemingly correlated with changes in the condition of those demanding credit? This paper argues that influence and are influenced by other banks and demand side conditions. This leads to a theory of low frequency business cycles driven by bank credit policies. Evidence from the banking crisis in New England in the early 1990s is consistent with the assumptions and predictions of the theory.

Why do the bank credit policies fluctuate? Why are changes in credit policy seemingly correlated with changes in the condition of those demanding credit? In a rational profit-maximizing world, banks should maintain a credit policy of lending if and only if borrowers have positive net present value (NPV) projects. Therefore, a change in the level of bank credit quality of borrowers-the demand side. In the absence of central bank

induced changes in the money supply, bank credit policy, the supply side should not exert an independent influence on the level of credit. That the supply side does not affect the level of credit seems at variance with reports in the financial press and the opinions held by bankers. Also, economist have expressed a spectrum of opposing viewpoints. The most moderate argue that bank credit policy changes are correlated with changes in fundamental business (Rajan, 1994).

2.2.3 Review of Relevant NRB directives

NRB is the apex institution in the money and capital market of Nepal. Being the nation's central bank, it directs, supervises and controls the functions of the commercial banks and other financial institutions. NRB has issued various directives and circulars in orders to develop a healthy, competitive, and secured banking and economic system to ensure national development. The following are some of the relevant directives that the NRB has circulated to the commercial bank.

2.2.3.1 Directives to maintain minimum paid up capital of Rs. 2 billion (NRB Licensing Policy, 2063)

NRB had directed all the commercial banks established to operate in Katmandu valley to maintain compulsorily the minimum capital fund of Rupees 2 billion by the end of the fiscal year 2069/70. The amount under the headings of the paid-up capital, general reserve, share premium non-redeemable preference share and retained earnings would be considered for calculating minimum capital fund. The commercial bank could not use the retained earnings to include in the core capital fund to the extent of the minimum capital funds to make it Rupees 2 billion. However, if already established commercial banks could not increase their paid-up capitals up to Rs 2 billion till the end of fiscal year 2069/70, then there are some provisions made by NRB in terms of punishment. Such as banks would not be allowed to declare and distribute dividend and bonus; can not open new branched; can not collect further deposits etc. However, in case of new commercial bank to be established following minimum criteria should be completed. There is different rule for establishment of bank in Kathmandu valley and outside.

Table 2.1: Capital Requirements to establish a Financial Institution.

Grade / Operation level	Minimum Paid-up capital required			
	National Level	Regional Level	4-10 districts	1-3 districts
‘Ka’ Grade	2 billion			
‘Kha’ Grade	640 million		200 million	100 million
‘Ga’ Grade	200 million			100 million
‘Gha’ Grade	100 million	60 million	20 million	10 million

Source: NRB Licensing Policy, 2063

‘Gha’ Grade is for co-operatives and/or micro-finance companies only.

2.2.3.2 Maintenance of Capital Funds (NRB Unified Directives, 2068)

The total capital fund is the sum of core capital and supplementary capital. On the basis of the risk-weighted assets, the financial institutions should maintain the prescribed proportion of minimum capital funds as per the following timetable.

Table 2.2: Required Capital Fund on Risk-weighted Assets

Type of Institution	Core Capital	Capital Funds
“A” Class	6%	12%
“B & “C” Class	5.5%	11%
“D” class	4%	8%

Source: NRB Unified Directives, 2068

The core capital is comprising of paid up capital, proposed bonus share, share premium, irredeemable preference shares, general reserve fund, accumulated profit/loss, capital redemption reserve, capital adjustment fund, call in advance, other free reserve . However, the amount of goodwill should be deducted for the propose of calculation of the core capital.

2.2.3.3 Classification of Outstanding Loans and Advance on the basis of Aging (NRB Unified Directives, 2068)

Banks should classify outstanding principal amounts of loans and advances on the basis of aging. Loans and advances should be classified into the following four categories:

Pass

Loans and advances whose principal amount are not due or are past due for a period up to 3 months should be included in this category. Loans under this classification are known as performing loans.

Sub standard

All loans and advances that are past due for a period from 3 months to 6 months are included in this category.

Doubtful

All loans and advances that are past due for a period of 6 months to 1 year are included in this category.

Loss

All loans and advances that are past due for a period of more than 1 year as well as loans and advances which have least possibility to recovery of considered unrecoverable and those having thin possibility of even partial recovery in future are be included in this category.

Loans under Sub-standard, Doubtful and Loss category are known as Non-performing loans.

Classification loans and advances under the currently exiting arrangement are required to be classified as per the following timetable in four phases

Table 2.3: Categories classifying the Loans and Advances

Category	Type of Loans
Pass	Loans and Advances not past due and past due up to 3 months
Sub standard	Loans and Advances due over 3 months and less than 6 months
Doubtful	Loans and Advances past due over 6 months and less than 1 year
Loss	Loans and Advances past due over 1 year

Source: NRB Unified Directives, 2068

Loans and advances falling in the category of sub-standard, doubtful and loss are classified and defined as Non-performing loans. Loans and advances fully secured by gold, silver, fixed deposits receipts and GON securities should be included in the “pass” category. However, where collateral of fixed deposit receipt or GON securities to NRB bonds is placed as security against loan for other purpose, such loan has to be classified on the basis of aging. If it is appropriate in views of the bank management, there is no restriction in classifying the loans and advances from low risk category to high risk category. For instance loans falling under sub-standard may be classified into doubtful may be classified into loss category.

Principal and interest on loans and advances should not be recovered by overdrawing the borrowers current account or where overdrawing facilities has been extend by over drawing such limit. However, this arrangement should not be construed as prohibitive for recovering the principal and interest by debiting the costumer’s account up to the limit granted by banks as overdraft. Where a system in the bank exists as to recovery of such principal and interest by debiting the costumer’s account and recovery is made as such resulting in overdraft. Those, which are not settled within 1 month of such overdrawn, the overdrawn principal amount, should also be liable to be included under the outstanding loan and such loan should be downgraded by one step from its current classification.

The loan loss provisioning should be allocated as per the given percentage on the basis of the outstanding loans and advances and bills purchase.

Table2.4: Classification of Loan and required provisioning

Classification of Loans	Loan Loss Provision
Pass	1%
Sub-standard	25%
Doubtful	50%
Loss	100%

Source: NRB Unified Directives, 2068

Loan loss provision set aside for performing loans is defined as “General Loan Loss Provision” and loan loss provision set aside for non-performing loan is defined as “Special Loan Loss Provision”, where the loan is extended only against personal guarantee, a statement of the assets, equivalent to the personal guarantee amount not claimed by any other should be obtained and this should be classified as per above and where the loan fall under the category of pass, Sub-standard and doubtful, in addition to the normal loans provision applicable for the category, an additional provision by 20% should also be provided. Classification of such loans and advances should be prepared separately.

2.2.4 Review of Unpublished Thesis

Ms Anju Khadka (2007) in her thesis regarding ‘Investment policy of commercial banks’ has highlighted that banks are not emphasizing for investment even if there are opportunities in the market. Banks are mainly focusing for the lending, which means banks are giving priority for the lending. It has been observed that due to this vision of the banks, they are loosing secured and more profitable business. All banks under study shows high ratio between Loans and Investment. Banks should also focus for investment of available fund if it gives comfortable or equal return as of loans.

Though, Ms Khadka emphasized her view towards investment rather lending, we must say banks by their nature are the institution which provide loan to the general public and organized institutions for the economic upliftment. So, banks should focus on lending rather than the investment. So far the return generated by investment and loan is concerned; banks should give priority to lending after analyzing its risk factor and putting themselves to the safe side.

Mr. Ram Prasad Sharma (2002) with the objectives of highlighting the priority sector investment and repayment state of Commercial Banks in Nepal through intensive banking program and to show the repayment position of the sector has concluded that commercial Banks should improve the repayment trend of loan by generating the income of rural farmers. Reinvestments and right utilizations of bank loan are the assets of the commercial banks. Since there is a need to increase in assets, by better arrangement of institutions and organization, the manager and loan staff of the branches should be provided with adequate training so that they could identify right borrowers, right projects and ensure correct project appraisals. Reinvestment is the available sources to increase in paying capacity of the borrowers.

Mr. Santosh Pandey (2002) on 'NRB directives - their implementation and impact on the Commercial Banks; a case study of Himalayan Bank Limited' has put some outshining description in the performance of the joint venture Commercial Banks.

The directives, if not properly addressed, have potential to wreck the financial system of the country as they are the only tool of the NRB to supervise and monitor the financial institution. The directives in themselves are not that important unless properly implemented. The implementation part depends in the commercial banks. So it is felt that there is a need to find out if the directions are being followed. In case the commercial banks are making such huge profits with full compliance of the directives, then the commercial banks would deserve votes of praise because they would then be instrumental in the economic development of the country.

He has concluded that all the changes in NRB directives made impacts on the bank and the results are the following:

1. Increase in operational procedures of the banks, which increase the operational costs of the banks.
2. A short term decrease in profitability, which results to lesser dividends to shareholders and lesser bonus to the employee reduction in the loan exposure of the bank, which decreases the interest income but increases the protection to the depositors' money.
3. Increased protection to the money of the depositors through increased capital adequacy ratio more stringent loan related directives.
4. Increased demand for shareholders' contributions on the banks by forgoing dividends for loan loss provisions and various other resources to increase their core capital.

He has further concluded that if all the aforesaid results lead to one direction; the bank will be financially healthier and stronger in the future. HBL will be able to withstand in tougher economy situation in the future with adequate capital and provision for losses.

2.3 Research Gap

On review of various studies related to lending, investment, fund mobilizing and financial performance of various banks, it has been noticed that studies are focusing on the policies implemented by banks for their financial performance but none of them have given focus to actual position of banks due to their financial position as revealed by the data. This has resulted the lack of criticism to the banks, which helps them to improve their performance by minimizing the areas of weakness because banks do not provide their actual internal policies. Due to this, study will not be complete and helpful to explore the main objective.

So, this study is entirely focused to expose the actual position of NIBL in term of its lending. Only analysis of lending has been chosen in order to minutely explore the lending status of the bank as revealed by the actual data of bank and its impact to the profitability and shareholders' investment as well. From this study we can see whether the bank has been properly utilizing the fund collected from public as deposits or not.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction

The very common meaning of research is "a search for knowledge". Research refers to search of knowledge through objectives.

According to John W. Best, research can be defined as "the systematic and the objective analysis and recording of controlled observation that may lend to development of generalizations, principles or theories resulting in predictions and perhaps ultimate control of events". 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 various aspects of human life etc. are the variables that determine the research methodology of that particular project.

3.2 Research Design

Research design is a planned structure and strategy of investigation conceived to obtain answers to research objective through analysis of data. The first step of the study is to collect necessary information and data concerning the study. Therefore, research design means the definite procedures and techniques, which guide the study and propounds ways of doing research. In this way, a descriptive and analytical survey will be done. The justification of the choice of these methods is preferred because it includes reliable data and information covering long time and avoids numerous complex variables.

The research covers one of the major commercial bank in Nepal, particularly in its practice of lending. The research has its basic objective to figure out problem therein and provide them with some recommendation. The literature has been reviewed especially from the past thesis conducted on same aspects of commercial banks. The data for the research are of secondary type.

3.2.1 Sources of Data

The study is mainly focused in analytical part. The main objective of the study is to find the lending strength of NIBL on the basis of past and present performance of the bank. So, the data presented in this study are from secondary sources. The annual reports of the bank are the major sources of the data for the study. However, besides the annual reports of the subjected bank the following sources of data shall also be used in the respective corner of the study:

1. NRB Reports
2. Various publications dealing with the subject matter of the study
3. Various articles published in magazines
4. Websites of different institutions

Besides the above, any kind of other sources, such as assertions, interviews, remarks by the specialist of the subject, those are capable in providing valuable data and conclusion, shall be considered in the study.

3.3 Population and Sample

The population refers to the entire field and industries of the same nature, which represent and have the similar type of services and products in general. A sudden mushrooming of commercial banks has seen a total of thirty two commercial banks in the country. Thus, the total commercial banks, which are operating in the country, shall constitute the population of the data and the bank under study constitutes the sample of the study which is shown in Appendix 2.

So, among the thirty two commercial banks operating under the banking industry, Nepal Investment Bank Limited only has been taken as sample for the study in order to focus the study to the large extent. Only one bank has been taken as a sample for the study because banks are the organization with vast exposure and turn over and taking many banks as sample for the study will not truly generate a fair result and conclusion due to various reasons like time limit for the study, level of the study, size and portfolio of the banks etc.

3.4 Data Collecting Procedures

The annual reports of NIBL were obtained from Kathmandu Branch of the bank, and the bank's website www.nibl.com.np especially for the purpose of the study. NRB publications, such as quarterly economic bulletin, banking and financial statistics, economic report, annual reports of NRB etc. have been collected from the website of NRB, www.nrb.gov.np The data on some of the aspects of the bank was obtained from the website www.nepalstock.com.np of Nepal Stock Exchange.

3.5 Analysis of Tools

For the purpose for the study of the data that has been collected, various financial, accounting and statistical tools have been used to achieve the objective of the study. The following tools are used to analyze the presented data.

3.5.1 Financial Tools

3.5.1.1 Ratio Analysis

A ratio is simply one number expressed in terms of another and as such it expresses the quantitative relationship between any two numbers. Ratio can be expressed in terms of percentage, proportions and as a coefficient. 'Logarithmic Graph', and 'break even

chart' are the graphic forms of expressing a ratio. The technique of ratio analysis is a part of the whole process of analysis of financial statement of any business of industrial concern especially to take output and credit decisions. Through this technique comparative study can be made between different statistics concerning varied facets of a business unit. Just as the blood pressure, pulse and temperatures are the measures of the health of an individual, so does ratio analysis measures the economic and financial health of a business concern. Thus, the technique of ratio analysis is a considerable significance in studying the financial stability, liquidity, profitability and the quality of the management of the business and industrial concerns (Kothari, 1994).

"The relationship between two accounting figures, expressed mathematically, is known as financial ratio". As far as we are concerned about the financial ratio, a ratio between two relevant figures, which provides a certain relation, and have negative or positive correlation between them only will be studied. Since comparing two in comparable figures and their ratio gives no idea and judgment on analysis and it remains as an absurd figure. Thus, ratio analysis is useful only as aids to judgment but as mechanical substitutes for thinking and judgment, it is worse than useless.

Asset/Liability Management Ratio

Asset/Liability Management Ratio measures the proportion of various assets and liabilities in balance sheet. The proper management of assets and liability ensures its effective utilization. The banking business converts the liability into assets by way of lending and investing functions. Asset and liability management ratio measures its efficiency in multiplying various liabilities in performing assets. The following are the various ratios relating to asset liability management, which are used to determine the lending strength of the bank:

- a) Total Assets to Total Liabilities Ratio
- b) Loans and Advances to Total Assets Ratio
- c) Loans and Advances to Shareholders' Equity Ratio

- d) Priority Sector Loans to Loans and Advances Ratio
- e) Portfolio Ratio of Loans Advances

Activity Ratio

Activity Ratio measures the performance efficiency of an organization from various angles of its operations. These ratios indicate the efficiency of activity and enterprise to utilize available funds, particularly short-term funds. The following activity ratio measures the performance efficiency of an organization to utilize its short-term funds. These ratios are used to determine the efficiency, quality and the contribution of loans and advances in the total profitability:

- a) Provision for Loan Loss to Total Loans and Advances Ratio
- b) Non-performing Loans to Total Loans and Advances Ratio
- c) Interest Income to Total Income Ratio
- d) Interest Income to Interest Expense Ratio

Profitability Ratio

Profit is the difference between the revenues and the expenditure over a period. Profit is the main elements that make an organization to survive in long run. The profit, on the other hand, measures the management ability regarding how well they have utilized their funds to generate surplus. Thus, measuring the profitability ratio also is significant in this study and shall reflect the various aspect of the problem of the study.

These ratios have been used to determine the efficiency of the lending and its quality and contribution in total profitability:

- a) Total Income to Total Assets Ratio
- b) Net Profit to Shareholders' Equity
- c) Earning per Share

3.5.2 Statistical Tools

3.5.2.1 Standard Deviation

The standard deviation measures the absolute dispersion. It is said that higher the value of standard deviation, higher the variability and vice versa. Karl Pearson's introduced the concept of standard deviation in 1823 and is denoted by the Greek letter σ (read as sigma).

The formulas to calculate the Standard Deviation are given below:

$$\sigma = \sqrt{\frac{\sum x^2}{N}}$$

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

$$\sigma = \sqrt{\frac{\sum fx^2}{N}}$$

Where $x=(X - \bar{X})$ and 'f' denotes frequency

$$\sigma = \sqrt{\frac{\sum fd^2}{N} - \left(\frac{\sum d}{N}\right)^2}$$

3.5.2.2 Coefficient of Variation

The standard deviation calculated in the above formulas give the absolute measure of dispersion. Hence, where the mean value of the variables is not equal, it is not appropriate to compare two pairs of variables based on standard deviation only. The coefficient of variation measures the relative measures of dispersion, hence capable to compare two variables independently in terms of their variability.

The coefficient of variation (C.V.) is given by the following formula and is expressed in terms of percentage.

$$\text{C.V.} = \frac{\sigma}{\bar{X}} \times 100$$

3.5.2.3 Correlation Co-efficient Analysis

We examine the relation between the various variables. The correlation between the different variables of a bank is compared to measures the performance of the bank. The correlation coefficient between the two variables describes the degree of relationship between those two variables. The reliability of the value of coefficient of correlation is measured by probable error (P.Er).

Correlation refers to the degree of relationship between two variables. If increase or decrease in one variable impacts the increase or decrease in another, then such variables are correlated variables. This, measures of correlation, calculates the mathematical relationship between two variables. "The measures of correlation called the correlation coefficient or correlation index summarizes in one figure the directions and degree of correlation (Gupta, 1989).

The Karl Pearson's Coefficient of Correlation is given by the following formula

$$\text{Coefficient of correlation (r)} = \frac{\sum XY}{N \sigma_x \sigma_y}$$

Where,

- X = (x – Mean x); Y = (y – Mean y)
- σ_x = Standard Deviation of Series x
- σ_y = Standard Deviation of Series y
- N = Number of Observations

And,

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

The Karl Pearson's Coefficient of Correlation (r) always falls between –1 to +1. The value of correlation in minus signifies the negative correlation and the + value signifies the positives correlation. As the value of correlation coefficient reaches near to the value of zero, it is said that there is no significant relationship between the variables.

The coefficient of correlation shall be interpreted based on probable error (P.Er). If the value of correlation coefficient is greater than 6 times the value of P.Er, the coefficient correlation is deemed as significant and reliable. If the value of correlation coefficient is less than probable error, the coefficient correlation is said to be insignificant and there is no evidence to predict the correlation between the variables. Karl Pearson's Coefficient of Correlation has been used to determine the relationship between the different variables related to lending of NIBL

3.5.2.4 Time Series

When a series of data pertaining to a series of continuing periods should be studied, its characteristics and its future direction is based estimated by the time series. Time series analyses a series of data keeping in mind the various short-term and long-term fluctuations.

The data of the last five years has been used in measuring the trend analysis. The Least Squares method has been adapted to measure the trend behaviors of this bank. Trend analysis The method is widely used in practices. The straight –line trend of a series of data is represented by the following formula:

$$Y = a + bX$$

Here, Y is used to designate the trend values 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 trend 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. While analyzing the Time Series, the Propensity of Growth and Growth Rate have been examined based on the value of trend value of Least Square Method. The Growth Rate has been measured from fiscal year 2006/07 to 2010/11 (five years) to reveal the real status of the study period. However, under the calculation of trend analysis, a forecast of the next five years shall be made i.e., till 2015/16 so as to determine the trends that the bank is likely to face in the pattern of loan and advances, earning per share etc.

3.5.2.5 Multiple Regression Analysis

Multiple regression analysis studies the statistical relationship between a dependent variable with two or more independent variables. The multiple regression equation describes the average relationship between the dependent variable and two or more

independent variables and this relationship is very much useful for estimating the dependent variable. Thus a multiple regression equation of X_1 on X_2 and X_3 is an equation for estimating a dependant variable X_1 from two independent variable X_2 and X_3 .

The regression equation of dependant variable X_1 on X_2 and X_3 is given by

$$X_1 = a_1 + b_1 X_2 + b_2 X_3$$

Where,

$a_1 = X_1$ intercept = the value of X_1 when two independent variables X_2 and X_3 are zero

$b_1 =$ the partial regression coefficient of X_1 on X_2 when X_3 is held constant

$b_2 =$ the partial regression coefficient of X_1 on X_3 when X_2 is held constant

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This chapter represents the data collected from various sources and also presents and analyzes them to measure the various dimensions of the problems of the study.

4.1 Measuring the Lending Strength (Asset/Liability Management Ratio)

The lending strength of a bank is measured in relative measures on this section. The relationship between various assets and liabilities of the balance sheet has been established to show the relative strength of lending of the bank comparatively. An attempt is made to determine the lending strength in absolute figure of the bank, regarding to the volume of deposit, loans and advances and other variable.

4.1.1 Measuring the Lending Strength in Relative Term

4.1.1.1 Total Assets to Total Liabilities Ratio

The ratio of total asset to total liabilities measures the volume of total liability in total asset of the firm. The banking organization creates credit by way of lending activity and multiplies their assets many times, than their liability permits.

Table No 4.1: Total Assets to Total Liabilities Ratio

Rs. in million

Fiscal Year	NIBL			Industry		
	Total Assets	Total Liabilities	Ratio	Total Assets	Total Liabilities	Ratio
2006/07	28073.52	26195.36	1.07	490638.1	494787.6	0.99
2007/08	39405.96	36719.17	1.07	566736	556775.3	1.02
2008/09	53596.38	49688.91	1.08	812165.9	781766.4	1.04
2009/10	57935.55	53350.15	1.09	787300.9	746581.1	1.05
2010/11	59149.01	53989.25	1.10	878364.5	819300.1	1.07

Table 4.1 explains that one unit of liability in the concerned year has tabulated value of assets. The bank has however had the ratio in the similar range for the five years' period of time. The Total Assets to Total Liabilities Ratio has observed an increasing trend from 2006/07 to 2010/11. The ratio ranges from 1.07, the lowest in the year 2006/07 to 1.10, the highest in the year 2010/11 indicating an absolute variation. The ratio of the bank indicates a poor performance; the ratio should not be below 2 times in a developing country like Nepal. This represent that the bank has not been able to successfully convert its liability into asset but comparing with the industry ratio NIBL seems to be in good position because in all 5 years the ratio of NIBL is higher than the industry ratio. Looking at the facts and figures the performance in the year 2010/11 can be regarded as the best, compare to other years, the ratio in other years depicts that the banks liability was not effectively used as compared to the year 2010/2011.

4.1.1.2 Loans and Advances to Total Assets Ratio

Loans and advances of any commercial bank represent the major portion in the volume of total assets. The ratio of loans and advances to total assets measures the volume of loans and advances in the structure of total assets. The high degree of this ratio indicates the good performance of the banks in mobilizing in the funds by way of lending function. However, in its reserve side, the high degree of this ratio is representative of low

liquidity. Granting the loan and advances always carries the certain amount of risk. Thus, these assets of banking business are regarded as risk assets. This ratio measures the management attitudes toward risk assets. The low ratio is indicative of low productivity and high degree of safety in liquidity and vice versa. The interaction between risk and return determines this ratio.

Table No 4.2: Loans and Advances to Total Assets Ratio

Rs in million

Fiscal Year	NIBL			Industry		
	Loan and Advances	Total Assets	Ratio	Loan and Advances	Total Assets	Ratio
2006/07	17769.1	28073.52	0.63	228951.9	490638.1	0.47
2007/08	27529.31	39405.96	0.70	302913.4	566736	0.53
2008/09	36827.15	53596.38	0.69	398143	812165.9	0.49
2009/10	40948.44	57935.55	0.71	467107.2	787300.9	0.59
2010/11	41887.69	59149.01	0.71	522853.3	878364.5	0.60

Table 4.2 represents the five years trend of loans and advances to total assets ratio. The ratio has observed an increasing trend except for the year 2008/2009, where the ratio decreased by 0.01 making it 0.55. The absolute indicators of the ratio range from 0.63, the lowest, in the year 2006/07 to 0.71, the highest, in the year 2009/2010 & 2010/11 the best performance of the bank according to its ratio was in the year 2009/2010 & 2010/11.

The bank has increased its loans and advances almost twice since the past 5 years. This indicates that the bank has been following a policy of high lending. At the same time the assets of the bank has almost doubled in the five years time period. The ratio cannot be deemed as outstanding, can be mentioned satisfactory but while comparing it with the industry the ratio can be deemed outstanding because it has maintain the ratio higher than the industry ratio in all the years.

4.1.1.3 Loans and Advances to Shareholders' Equity Ratio

Shareholders' equity consists of share capital, share premium, reserves and retained earnings. The ratio between loans and advances to shareholders' equity provides the measures regarding how far the shareholders' equity has been able to generate assets to multiply its wealth. The shareholders' equity refers to the net shareholders' intake in the business. Thus, this ratio measures the size of the business and its success in converting liabilities into assets.

Table No 4.3: Loans Advances to Shareholders' Equity Ratio

Rs in million

Fiscal Year	NIBL			Industry		
	Loan and Advances	Shareholders' Equity	Ratio	Loan and Advances	Shareholders' Equity	Ratio
2006/07	17769.1	1878.12	9.46	228951.9	(4149.50)	0.00
2007/08	27529.31	2686.89	10.25	302913.4	9960.7	30.41
2008/09	36827.15	3907.84	9.42	398143	30399.5	13.10
2009/10	40948.44	4585.39	8.93	467107.2	40719.8	11.47
2010/11	41887.69	5159.76	8.12	522853.3	59064.4	8.85

Table 4.3 explains that the ratio has observed a fluctuating trend for the different fiscal years. The ratio ranges from 8.12, the lowest in the year 2010/11 to 10.25, the highest in the year 2007/08. After 2007/08 in which the ratio is 10.25, the highest, decreased to 8.12 in the year 2010/11 which indicates a poor performance. As compared to the industry performance also the bank performance is poor because in all the years the banks ratio is lower than the industry ratio except in the year 2006/07 in which the industry ratio was negative. The reason for the decreasing trend and poor performance may be because of the bank not being successful in generating proportionately higher volume of loans and advances. Thus it has affected the NIBL performance amongst the banking industry.

4.1.1.4 Priority/Deprived Sector Loans to Total Loans and Advances Ratio

NRB has directed all the commercial banks to flow 3% of their total outstanding credit to priority sector loans. The loan provided to agriculture cottage industries, deprived sector, other sector of national priority, hydroelectricity and minimum power sector is deemed as the priority sector loans. The ratio of priority sector to total loans and advances refers to the portion of the total outstanding loans and advances that is out flowed in the priority sector.

Table No 4.4: Priority Sector Loans to Total Loans and Advances Ratio

Rs. in million

Fiscal Year	NIBL			Industry		
	Priority Sector Loans	Loan and Advances	Ratio	Priority Sector Loans	Loan and Advances	Ratio
2006/07	514.6	17769.1	0.03	33799.4	228951.9	0.15
2007/08	673.7	27529.31	0.02	6601	302913.4	0.02
2008/09	1119.6	36827.15	0.03	10083.9	398143	0.03
2009/10	1334.7	40948.44	0.03	16728.9	467107.2	0.04
2010/11	1339.0	41887.69	0.03	19386.95	522853.3	0.04

According to the above table, the average amount lent to the priority sector by NIBL over the past five years is 0.028 times of the total loan. The table represents that the bank has been able to maintain the NRB directives of lending out at least 3% of its total lending to the priority/deprived sector. The tabulated value shows that the bank has increased its lending loan to the priority sector from 2006/07 to 2010/11. It can be seen that during 2007/08 alone, there was a decrease in the ratio by 0.01times. This represents that the bank has not only focused on the industrial sector alone, rather, it has been giving equal importance to the priority sector as well. There has also been an increase in the total amount lent out to the priority sector. However, there is constant rate in terms of ratio to total loans and advances. Banks were required to lend at least 3% to Priority Sector, so on

that basis, NIBL had also tried to maintain its required level. It has met the requirement in all the years and comparing with the industry it can be deemed as a satisfactory performance . There may be many factors due to which NIBL has been reluctant to lend towards priority sector. Most of the industries, which are not been able to perform well and are given a chance to re-establish and also categorized to this sector and lending to such units are quite risky. So, banks cannot go easily to provide loan to priority sector.

4.1.2 Measuring the Lending Strength in Absolute Term

Under this topic, the various variables in their absolute value are measured. Unlike ratio analysis, different variables are measured individually. The volume of variable and its variability are measured. The value of individual variables enables to measure the gross contribution of the bank in the respective years. Though the ratio analysis solely describes the ratio between the two variables, it does not tell about the absolute value of those variables. Therefore, in this chapter, some of the important individual variables in their absolute value of mean and standard deviation is examined. At the same time, to measure the relative measure of variability of data; the coefficient of variation is also measured. The absolute value of bank for different years is compared to judge its contribution and its practices.

4.1.2.1 Net Assets

Net assets of a firm refer to total assets minus outsider's liability. This figure measures shareholders' wealth in a firm. Higher the amount, higher will be the volume of business and vice versa.

Table No 4.5: Net Assets and Percentage Changes

Rs in million

Fiscal Year	2006/07	2007/08	2008/09	2009/10	2010/11
Net Assets	1878.12	2686.78	3907.84	4585.39	5159.76
Increase/(Decrease) in Net Assets	0	808.66	1221.06	677.56	574.36
Percentage Change	0.00	43.06	45.45	17.34	12.53
Average Growth Per Annum in percentage:			23.67		

Table 4.5 reflects the net assets of NIBL in the past five years. The net assets of the bank have increased drastically from Rs. 1878.12m to Rs. 5159.76m indicating a total increase of Rs. 3281.64m, and overall growth of 118.38%. This indicates that the bank has been effectively initiating the shareholders' wealth to mobilize loans and clearing its liabilities, a percentage decrease in the year 2009/10 can be depicted where the percentage change in the net assets of the bank falls to 17.34% from 45.45%, that of the previous year. But even with the fall in the percentage of this particular year, the average growth of the net assets throughout five years is measured at 23.67% indicating the bank has had substantial success in maintaining the satisfaction to its shareholders and also has been able to increase the volume of its business.

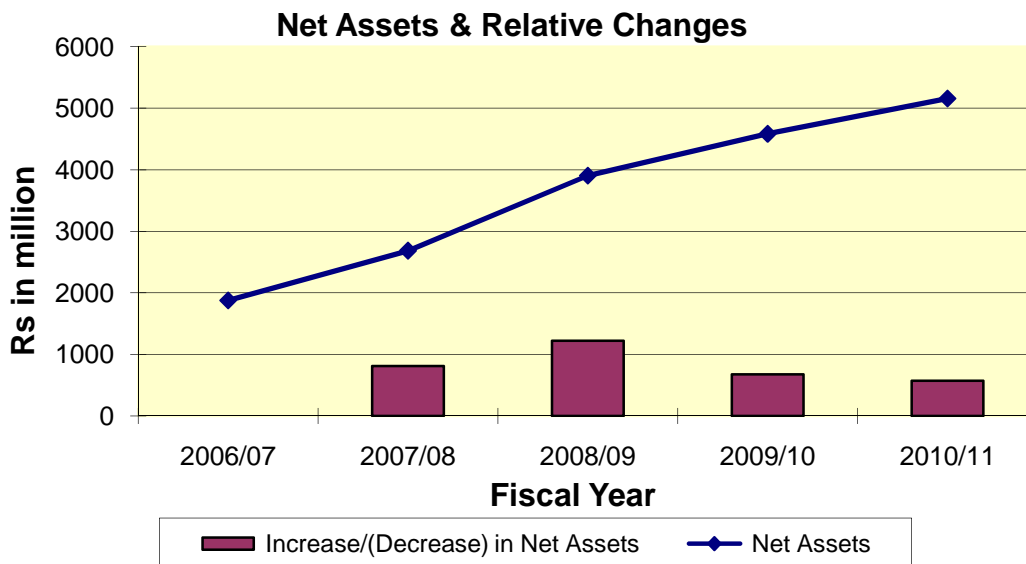


Figure No 4.1

The graph indicates the net assets of the bank. By the graphic it can be seen that the net assets has increased since the five years. However, the graph represent that the lowest increase in the net assets was during the year 2010/2011, this was resulted due to the burden of outsider's liability that is the bank has owed a relatively larger amount to the outsiders in proportion to other years. A conclusion can be derived from herein that the banks capability to meet the shareholders' demands in the near future would be satisfactory, i.e. the bank will be able to meet the stakeholders' expectation in the time to the come.

Mean, Standard Deviation (SD) and Coefficient of Variation (CV) of Net Assets

The mean, standard deviation and the coefficient and the variation of net assets have been calculated to evaluate the dispersion of the net assets for the given years. The detail calculation is presented in Appendix 4, Calculation 1.

Table No 4.6: Mean, SD and CV of Net Assets for five years

Rs in million

Mean	Standard Deviation	Coefficient of Variation
3,643.58	1,207.31	33.14%

In the table 4.6, the mean measured for net assets of the bank hold at Rs. 3643.58 million, which shows that at an average the bank must have net assets worth Rs. 3643.58 million every year, with the increasing trend of the net asset the standard deviation for the bank is Rs. 1207.31 million, it means that the banks manages to keep its net worth intact with a dispersion of Rs. 1207.31 million. The flexibility of deficit or surplus is limited by the aforementioned amount. Another important measure of depression, the coefficient of variation, measured at 33.14 %, indicates that the bank has some extent of variability in its net assets with the moderate value. The overall trend of net assets is increasing. Thus, the volume of net assets of NIBL permits it to expand its business in higher degree.

4.1.2.2 Loans and Advances

Commercial bank's main function is to create credit from its borrowed fund. The bank doing so converts its liability into assets, loans and advances are the assets coming from such activities. The high volume of loans and advances is indicative of good performance in credit sector. Since the survival of banking business is depended on good performance of its lending function. The high volume of well performing loans and advances in economy is a symbol of healthily banking business.

Table No 4.7: Total Loans and Advances and percentage changes

Rs in million

Fiscal Year	2006/07	2007/08	2008/09	2009/10	2010/11
Loan and Advances	17769.10	27529.31	36827.15	40948.44	41887.69
Increase/(Decrease)	-	9760.21	9297.84	4121.29	939.25
Percentage Change	-	54.93	33.77	11.19	2.29
Average Growth Per Annum in percentage:			20.44		

Table 4.7 shows the total loans and advances made during the five years. It has been observed that the bank has been able to increase its lending activity by 2 times since 2006/07. It is evident that as a commercial bank, NIBL has been performing its lending activity, by increasing the loans and advances since the last five years. A major increase in the amount of the loan was during the years 2007/08, where the percentage increase in the total loans and advances increased by 54.93%, from Rs. 17769.10 m in the year 2006/07 to Rs. 27529.31m in the year 2007/08. Loans and advances made during the year 2006/07 was somewhat lesser in comparison to other years because during that year the deposit were low and since deposit were low, proposed mobilization of funds could not be initiated. But the hindering part for the bank during that period was that even though the loans and advances for the past years were increasing, the bank could not continue and steady growth of loans and advances. However, there is good average growth of 20.44 percent over past five years.

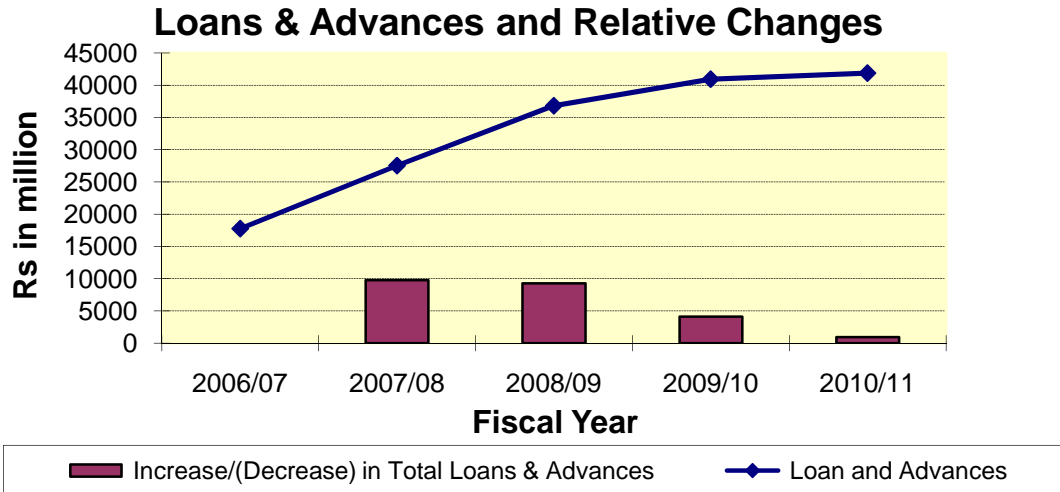


Figure No 4.2

The graphical representation of the loans and advances show that there has been an increase in the loans and advances of the bank. The bank has an overall growth of 102.18% from the year 2006/07 from Rs. 17769.10m, to Rs. 41887.69m in the year 2010/11. An increase in the loans and advances of the bank can be highlighted in the graph as the line representing loans and advances is increasing till it reaches the year 2010/11, which, for a bank, is considered as a healthy growth rate in terms of the funds it lends out. This indicates that the volume of loans and advances provided by NIBL is increasing every year.

Mean, Standard Deviation (SD) and Coefficient of Variation (CV) of Loans and Advances

To evaluate the dispersion of the loan and advances for five years, the mean, standard deviation and the coefficient and variation of loans and advances have been calculated. The detail calculation is presented in Appendix 4, Calculation 1.

Table No 4.8: Mean, SD and CV of Loans and Advances for five years

Rs in million

Mean	Standard Deviation	Coefficient of Variation
32,992.34	9,151.22	27.74%

Table 4.8 describes the figure of mean contribution made by the bank and also its standard deviation and the coefficient of variation. The mean contribution is Rs. 32992.34m, where this amount indicates that at an average the bank is lending out the mentioned funds as loans and advances to various sectors of the country. A standard deviation of Rs. 9151.22m represents that the bank by this mentioned amount has been deviating from in average or the mean loans and advances. Similarly a coefficient of variation of 27.74% indicates that there is a variability of 27.74% in the loans and advances that the bank has been giving out. The major reason for this variability is due to the increasing trend that has picked up in providing loans and advances by the bank.

4.1.2.3 Industrial Sector Loans

Industrial sector loan falls within the category of productive sector. Thus, this resembles a portion of productive sector loans. Industrial sector includes loans that are made mainly for Industries like food production, refining, packaging and processing and production of other goods and equipments or assembling of materials.

Table No 4.9: Industrial Sector Loans and Changes for Respective Years

Rs in million

Fiscal Year	2006/07	2007/08	2008/09	2009/10	2010/11
Industrial Sector Loans	5858.35	8353.73	10753.67	12046.3	13871
Increase/Decrease	-	2,495.38	2,399.94	1,292.63	1,824.70
Percentage Change	-	42.60	28.73	12.02	15.15
Average Growth Per Annum in percentage:			19.70		

The table 4.9 represents the increase in the industrial loans that the bank has provided over the past five years. The bank has an increasing trend in the industrial sector loan during the last five years, where the bank increased its overall loan disbursement by Rs. 8012.65m, to take its total industrial sector loans to Rs. 13871m, in the year 2010/2011. The bank has displayed highest increment in the year 2007/2008 by 42.60% over last year's exposure. The bank grabbed an average growth of 19.70% per year in the industrial sector loans during last five-year's duration.

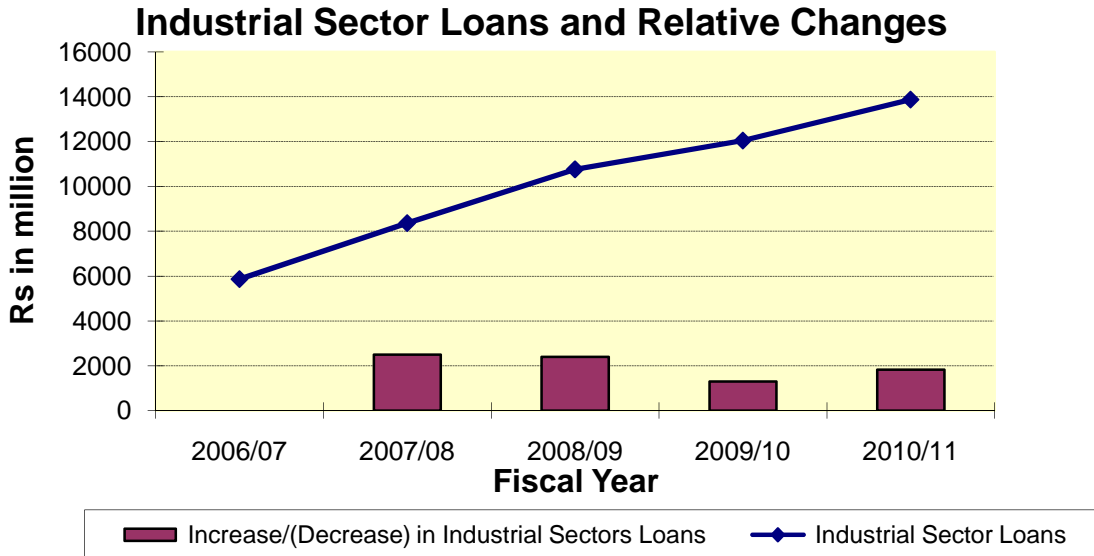


Figure No 4.3

In the figure 4.3, the graphical representation makes it easier to assess the performance of the bank in the industrial sector. It can be noted that the increasing trend persists in the lending to the industrial sector. The line, representing the industrial sector, always has upward direction and almost seeps during final year. The bank has been able to double its loan contribution to the industrial sector during the period of last five years. A diminishing rate of increase was observed during the year 2009/10. And it stood up in the year 2010/11. The highest degree of increment is seen in 2007/08. Increases in the industrial sector loans help explain why there was an increase in the productive sector loans provided by the bank.

Mean, Standard Deviation (SD) and Coefficient of Variation (CV) of Industrial Sector Loans

To further calculate the consistency, variability of NIBL, the mean, standard deviation and the coefficient of variation for the industrial sector loans have been calculated. The detail calculation is presented in Appendix 4, Calculation 1.

Table No 4.10: Mean, SD and CV of Industrial Sector Loans for five years

Rs in million

Mean	Standard Deviation	Coefficient of Variation
10,176.61	2,808.83	27.60%

The mean, standard deviation and the coefficient of variation have been calculated in table 4.10. The mean contribution made by the bank is Rs, 10176.61m while it has a variation of 27.60%. Such high degree of variation indicates that there has been an increase of the volume of loan provided by the bank. Similarly, standard deviation of Rs. 2808.83m indicates that there is a deviation from the mean at the average amount being lent out by the aforementioned amount. The bank does not portray consistency, but rather, variance suggests that it is open to change and is initiating considerable amount of loan into industrial sector.

4.1.2.4 Priority/Deprived Sector Loans

Priority Sector Loan constitutes the loans provided to prioritized sectors such as the agriculture sector, cottage and small industries sector, service sector, hydropower and power generation sector and deprived sector.

Table No 4.11: Priority Sector Loans and Changes for Respective Years

Rs in million

Fiscal Year	2006/07	2007/08	2008/09	2009/10	2010/11
Priority Sector Loans	514.60	673.70	1,119.60	1,334.70	1,339.00
Increase/(Decrease)	-	159.10	445.90	215.10	4.30
Percentage Change	-	30.92	66.19	19.21	0.32
Average Growth Per Annum in percentage:			23.33		

Table 4.11 shows that loans to the priority sector have increase since the past few years. The major reason behind the increase in the loans to the priority sector is because of the

increase in the total loans and advances of the bank. As a regulation of the Nepal Rastra Bank, commercial banks are required to grant loan to priority and deprived sector up to 3% of its total loans and advances. According to the data, there has been an increase of Rs. 824.2m during last five years. The bank has managed to keep increasing trend of lending to priority sector although that is to the minimum level. However, it has been noticed that the highest percentage of increment is during 2008/09 and similarly, lowest increment is during 2010/11. The table shows that the bank is not lending its fund to the priority sectors aggressively. The main reason behind this is high risk to this sector due to instability in the country. Small-scale industries and business are passing through tough time due to economic crisis influenced by political crisis.

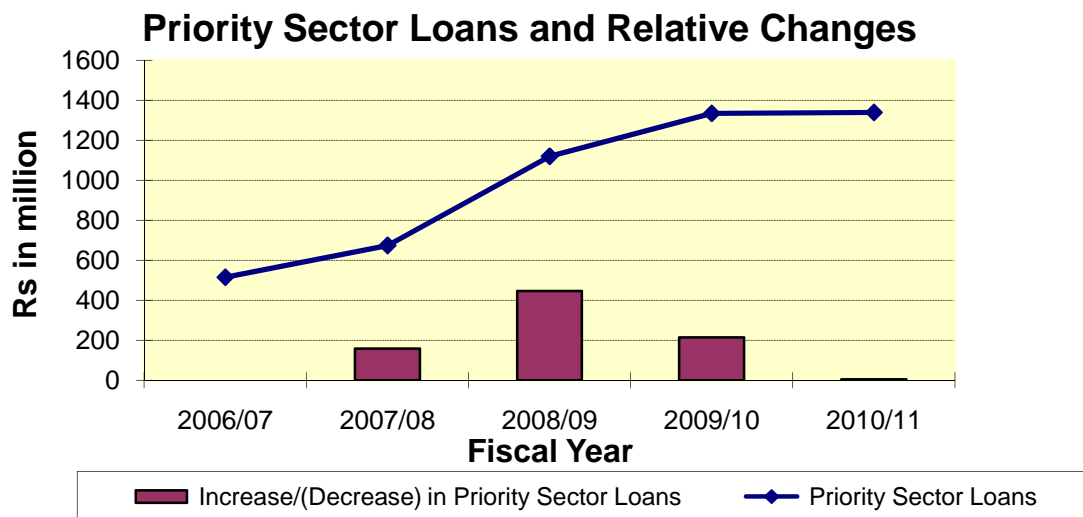


Figure No 4.4

The graph shows the relative trend of the loans given by NIBL to the priority sector. The increasing line of the loan disbursement to the priority sector, as mentioned earlier, is because of the increase in the total Loan of the bank and at the same time the line has moved up from 2006/07 to 2008/09. But there is little slow improvement in the year 2009/210. There was a total increase of Rs. 824.2m since the initial period of the year of study to the last. An average increase of loan to priority sector was obtained at 23.33% per year.

Mean, Standard Deviation (SD) and Coefficient of Variation (CV) of Priority Sector Loan

The mean, standard deviation and the coefficient of variation of the priority sector loans for NIBL has been shown as represented below by table 4.12. The detail calculation is presented in Appendix 4, Calculation 1.

Table No 4.12: Mean, SD and CV of Priority Sector Loan for five years

Rs in million

Mean	Standard Deviation	Coefficient of Variation
1,016.32	342.13	33.66%

The table 4.12 is a representation of the mean, standard deviation and the coefficient of variation of the priority sector loan provided by NIBL. According to the figures obtained, the mean contribution of Rs. 1016.32m is moderate. This represents that the yearly average of loan to the priority sector amounts to Rs 1016.32m, however the standard deviation for the bank is obtained as Rs 342.13. This shows that there is deviation of data from mean amount by around Rs 342.13m. Further, it has been calculated variation of 33.66%. This percentage proves that there is variation of data in each year.

4.1.2.5 Interest Income

Volume of interest income measures the bank's ability to generate income from lending and investment activities. The high volume is indicative of favorable contribution of lending and investment activities. Interest income for a bank is one of the major sources of income. Interest income relates to those interests that are charged by the bank on the loan it provides.

Table No 4.13: Interest Income and Changes for Respective Years

Rs in million

Fiscal Year	2006/07	2007/08	2008/09	2009/10	2010/11
Interest Income on Loan & Advances	1,584.98	2,194.28	3,267.94	4,653.52	5,803.34
Increase/(Decrease) in Interest Income	-	609.30	1,073.66	1,385.58	1,149.82
Percentage Change	-	38.44	48.93	42.40	24.71
Average Growth Per Annum in percentage:			30.90		

The above table represents the interest that have been earned form loans and advances given out as well at the interests form the investments made by the bank. The pattern of the interest earned is in increasing up to the year 2010/11. During these past year, it can be seen that there were significant growth in lending and investment of the bank and market was on the track of increasing the effective interest rates. There is good average growth of 30.90 percent over past five years. This growth is due to increased loans.

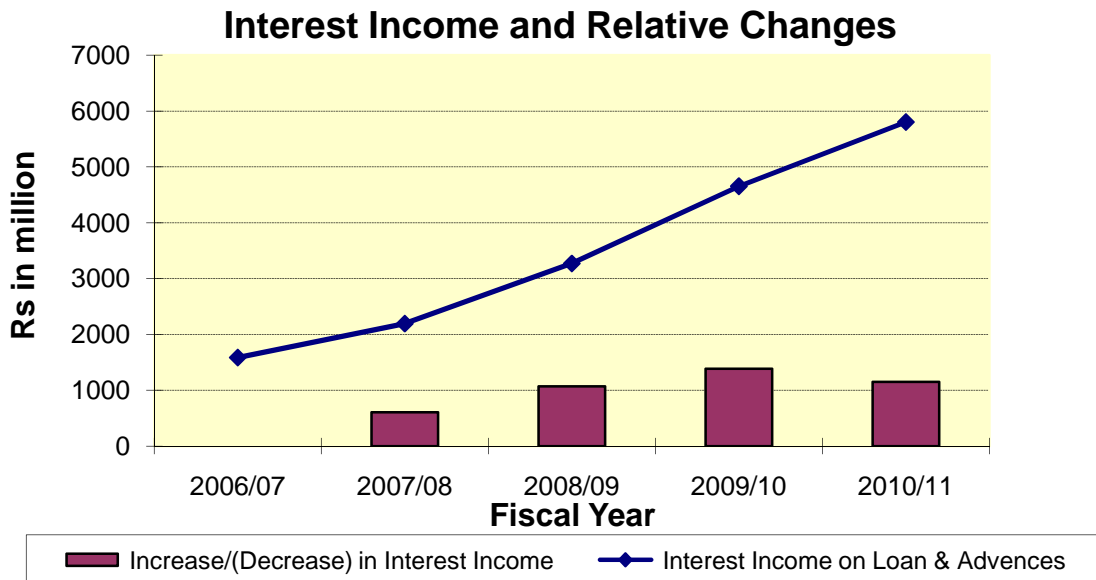


Figure No 4.5

Figure 4.5 explains the interest income from loans and investments over five years and level of its increment/decrement. Trend line and bars shows a steady growth over the years. According to the figure, the bank had earned a maximum interest during the fiscal year 2010/2011, where as the highest level of increment is during the year 2009/2010. The reason for the overall increase in the interest income lies in the fact that the lower interest earned through investment has been offset by the higher interest earned through loans and advances and vice versa. But the graph indicates that the increase in the interest income is not radical. One other major factor contributing to the fluctuating rate of collection of interest could be because of the uncollected interest during yearly closing, which is counted towards expenses or receivables. Bank suffers through a high credit risk, which could have hampered the collection of the interest from the clients. However, an average growth of 30.90% looks satisfactory in term of earning.

4.1.2.6 Net Interest Income

Net interest income is the overall interest income of bank after deduction of all interest expenses on deposits. Following table shows the exposure of NIBL in term of Net Interest Income. The detail calculation is presented in Appendix

Table No 4.14: Net Interest Income and Changes for Respective Years

Rs in million

Fiscal Year	2006/07	2007/08	2008/09	2009/10	2010/11
Net Interest Income (NII) of NIBL	899.45	1,202.12	1,580.97	2,099.67	2,183.10
Increase/(Decrease) in NII	-	302.67	378.85	518.70	83.43
Percentage Change	-	33.65	31.52	32.81	3.97
Average Growth Per Annum in percentage:			20.39		

Table 4.14 figures the net interest income of NIBL during last five years period. It shows an increasing trend in net interest income although in the year 2010/11 the net interest income didn't increase as expected to other years. Even though its increase is minimum, it should be taken positively because the bank has been able to maintain income-expense ratio of interest to the positive side. However, an average growth of 20.39% looks satisfactory.

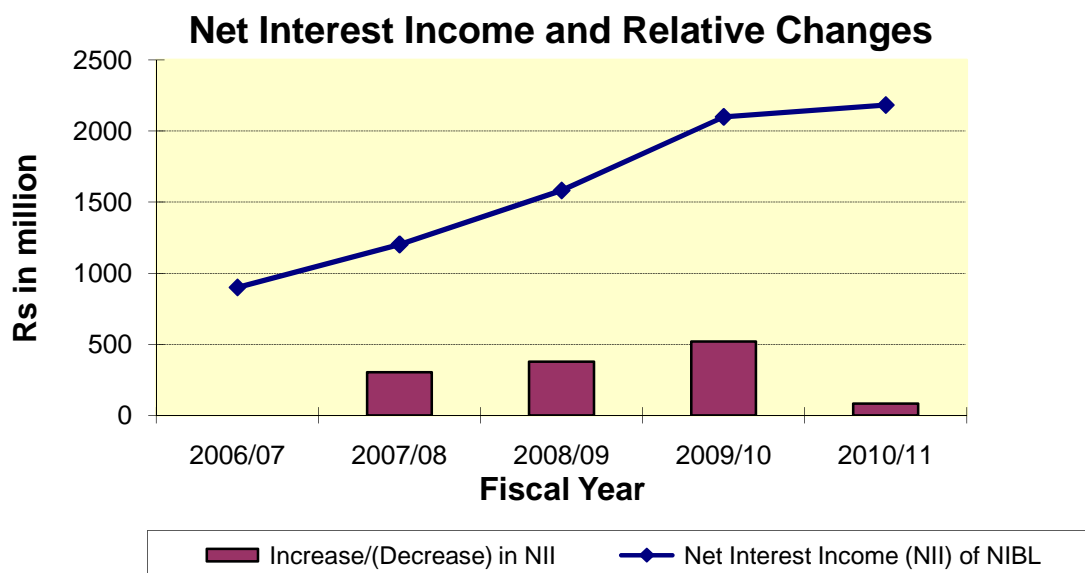


Figure No 4.6

Figure shows Net interest income and its respective growth over last five years. The highest growth rate is reported in 2007/08 and lowest is in 2010/11. The bank has an average growth in NII by 20.39% per annum.

4.1.2.7 Provision for Loan Loss

As per directions given by Nepal Rastra Bank, all banks and financial institutions are required to make provision of all loan and advances granted to their customers. This regulation is imposed by NRB in order to minimize the liquidation risk of banks and financial institutions. Provision is to be made as per delay in payment of interest and/or principal of the loan after its due date. The amount of provision increases proportionately when the due date increases.

Table No 4.15: Provision for Loan Loss and Changes for Respective Years

Rs in million

Fiscal Year	2006/07	2007/08	2008/09	2009/10	2010/11
Provision for Loan & Advances	482.67	532.65	585.95	630.13	792.18
Increase/(Decrease) in Provision	-	49.98	53.30	44.18	162.05
Percentage Change	-	10.35	10.01	7.54	25.72
Average Growth Per Annum in percentage:			10.72		

Table 4.15 represents the amount that has been allotted for provision for loans loss. As the table shows, there has been an increase in the provision for the loans since 2006/2007. There has been an increase in the provision for loan loss and the highest increase in the provisions amounted to Rs. 162.05m, a percentage increase of 25.72%. On the other hand, the increase in the year 2009/2010 was minimal. There was an increase of only 7.54% during this year i.e. an increase of Rs. 44.18m compare to other years. Just in contrast, higher the increment of provision poorer will be the performance of the bank. However, there will automatically be an increment of provision, in case there is an increment of loan and advances. Highest increment of provision is seen in 2010/2011 i.e. Rs. 162.05. This may be the result of either increase in bad debt of the bank or increase in loans and advances

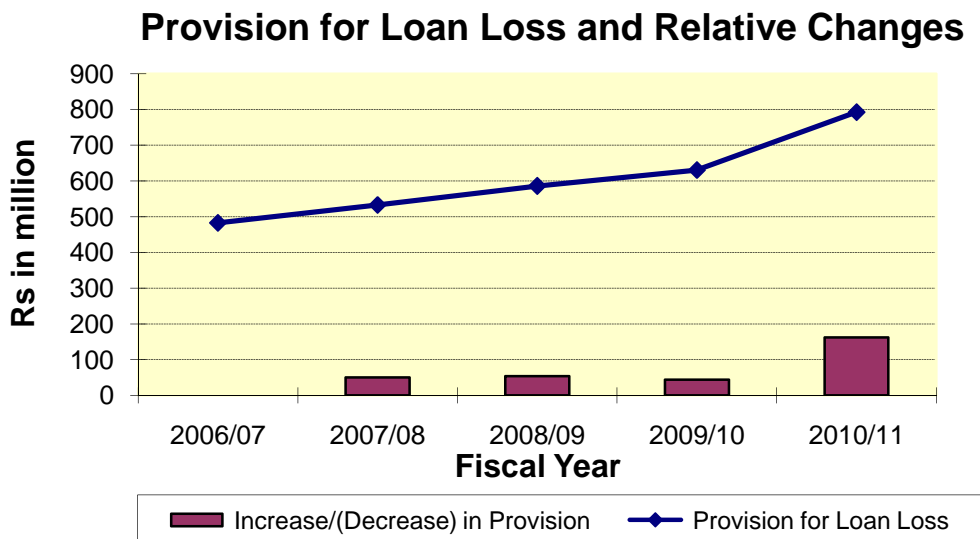


Figure No 4.7

As the figure depicts it can be seen that there has been an increase in the provisioning by the bank. The total percentage increases from the year 2006/07 till 2010/2011 was 53.62%. However, Provisioning if decreased is favorable to the bank as it decreases the liability of the bank, but on the other hand if the provisioning stays the same, that will be the result no additional business by the bank. Although, least increment of provisioning with an increase in the loans and advances of the bank is very good. Hence, the minimal increase in the provisioning of the loans and advances shows a positive effect on the bank's performance.

4.1.2.8 Net Profit

Net profit after all types of deductions such as bonus to employees, taxes and provisions has been used in this analysis. The volume of net profit measures the success of a firm in every aspect of its operation and strategy.

Table No 4.16: Net Profit and Changes for Respective Years

Rs in million

Fiscal Year	2006/07	2007/08	2008/09	2009/10	2010/11
Net Profit	501.40	696.73	900.62	1,265.95	1,176.64
Increase/(Decrease) in Net Profit	-	195.33	203.89	365.33	(89.31)
Percentage Change	-	38.96	29.26	40.56	(7.05)
Average Growth Per Annum in percentage:		20.35			

The pattern of net profit of the bank has increased all over the years except for the year 2010/2011 in which the net profit decrease by Rs 89.31m. The highest increment in net profit was Rs 365.33 in the year 2009/10 in which the growth rate was 40.56%.The lowest growth was in 2010/11, that was negative for the period. However, growth of NIBL can be termed as excellent for past years except for 2010/11, if we consider other factors constant and observe in term of net profit only. There is a regular increment over the past years.

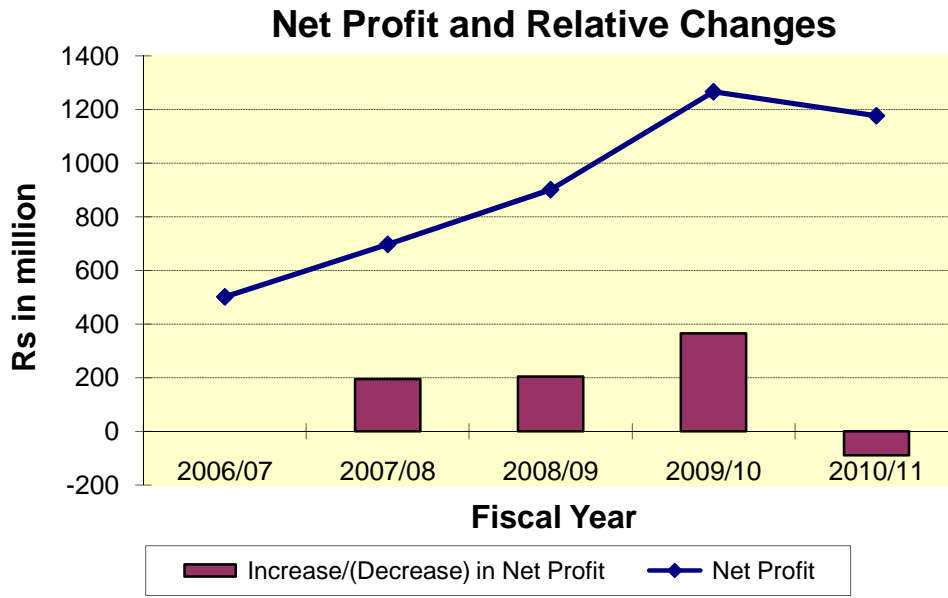


Figure No 4.8

In the figure 4.8, the graph represents the net profit of NIBL. It reveals the highest net profit in the year 2009/2010 and the lowest in the year 2006/2007. As represented by the graph, the net profit increased in tremendously in 2009/2010. The bank has been able to take up its net profit level from Rs 501.40 in 2006/07 to Rs. 1176.74 in 2010/2011 reporting growth of almost 134.68% over past five years of study. The bank, the increment in the total deposits with lesser cost and increment in fees and commissions because of the increment in the loan and advances made the reason there was an increase in the net profit of the bank. The data shows that the bank has achieved annual average growth of 20.35% in net profit.

4.2 Analyzing the portfolio behaviors of Loans and Advances

So far, we have analyzed the relationship between loans and advances with various assets and liabilities of respective bank. In this section, we examine the portfolio management of loans and advances. Bank provides loans to various sectors of the economy and to various types of borrowers. Similarly, it invests fund in various types of securities and shares. In this section, the ratio of loans and advances granted to various sector of the economy and for various purposes to total volume of loans and advances are measured.

4.2.1 Sector wise Loan Classification

The total loans and advances have been classified into various sectors as per the nature of the business. The main classification can be termed as Agriculture, Manufacturing & Assembling, Trading (including Import & Export), Construction, Service and other social and personal use. The classification explains the contribution made by the bank for different sector of the business. The classification shows the lending trend of the banks for particular sector.

Table No 4.17: Sector wise Loan classification

Rs in million

Sector / Fiscal Year	2006/07	2007/08	2008/09	2009/10	2010/11	Mean
Agriculture	156.87	142.71	176.10	253.60	308.50	207.56
Mining	5.44	-	-	3.00	24.20	6.53
Manufacturing	5,858.35	8,353.73	10,753.67	12,046.30	13,871.00	10,176.61
Construction	771.80	1,335.39	1,889.89	1,699.30	1,522.50	1,443.78
Metal prod.,Machinery,Elec. equip., & Assembling	144.44	325.44	297.71	486.70	221.60	295.18
Prod. & Assemble of Transportation equip.	11.42	51.17	110.92	-	-	34.70
Transportation, Comm. & Public utilities	861.02	1,191.57	1,701.85	1,200.60	978.90	1,186.79
Wholesalers & Retailers	3,264.43	4,077.65	4,572.56	5,272.90	5,998.50	4,637.21
Finance, Insurance & Real State	961.73	2,799.93	4,479.26	6,219.40	6,029.90	4,098.04
Service Industries	2,125.48	3,123.34	3,294.07	2,220.80	2,531.20	2,658.98
Consumption loan	-	269.18	455.68	1,327.80	1,254.80	661.49
Elec., Gas, Water	-	-	-	347.70	213.10	112.16
Tourism, Hotel, Entert.	-	-	-	2,522.70	2,309.10	966.36
Others	3,608.12	5,859.19	9,095.45	7,347.50	6,624.50	6,506.95
Total	17,769.10	27,529.30	36,827.16	40,948.30	41,887.80	32,992.33

From the above table, it can be seen that there is fluctuation in sector wise loan granted by NIBL. For Agriculture, there is increasing term except in the year 2007/08 which it was decreased by Rs 14.16 m from previous year. For mining, it is the least contribution

of loan regarding to other sector with a mean contribution of Rs 6.53 m. Mean contribution in Manufacturing sector is significantly dominant in the loan composition of NIBL as it covers nearly half of the total loans provided by NIBL. In construction, it is gradually increasing up to the year 2008/09 after that it saw an decreasing trend. In metal production, machinery etc, there is fluctuation in providing loan.

In production and assemble of transportation it saw an increasing trend up to the year 2008/09 whereas after that no loan has been provided. Transportation, communication and public utilities sector also saw a fluctuation trend while in the Wholesale & retailer it saw an increasing trend up to the year 2010/11. In finance, insurance and real estate it saw tremendous increase. From Rs 961.73m in the year 2006/07 it dramatically increase to Rs 6029.90m in the year 2010/11. Wholesales etc and finance etc, these are the most two preferable sector after manufacturing sector.

Thus through the mean representation of the bank's total lending to different purpose wise sector can be marked by indication that the bank has made the highest loans to the manufacturing & assembling, which mean s that the bank has prioritized its lending to Manufacturing & assembling, wholesale & retailer, services, finance, insurance & real state, transportation, construction, and agriculture respectively.

Sectorwise Mean Contribution of NIBL

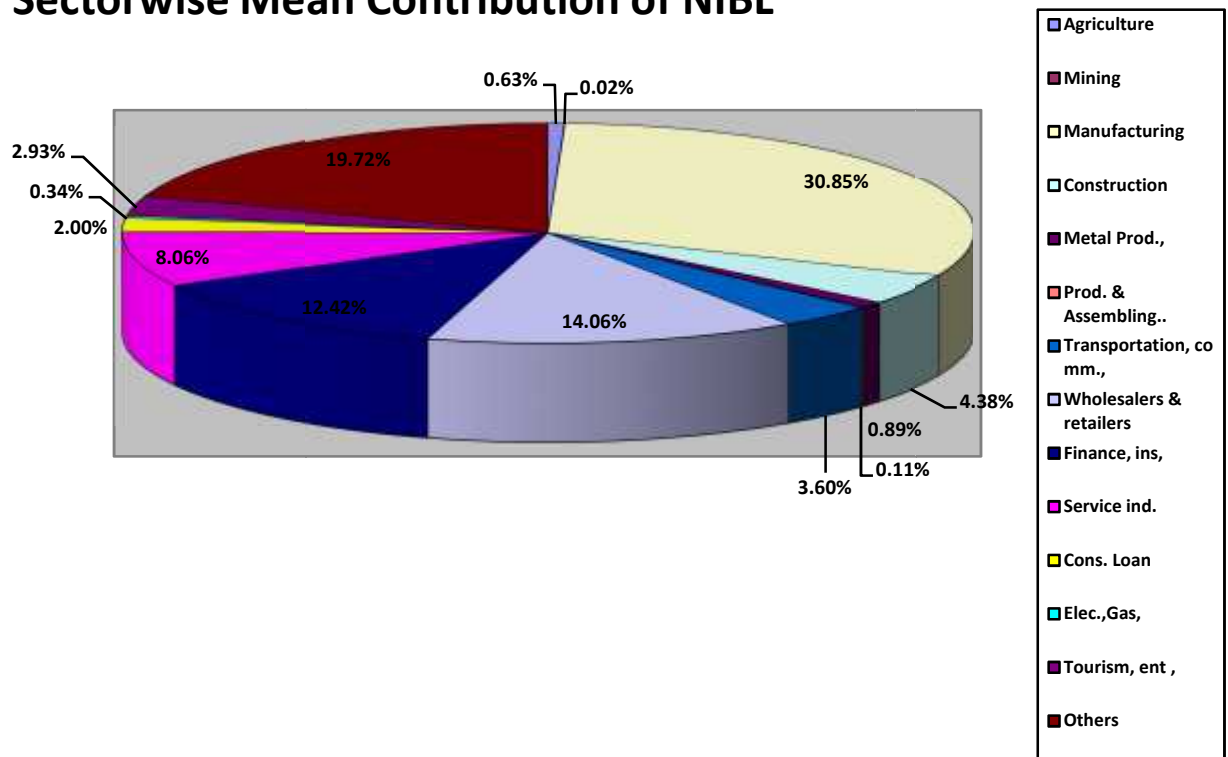


Figure No 4.9

The diagrammatic representation above shows the mean contribution of various purpose wise loan to the total loan and advances of NIBL over the five years period of time. According to the calculations made loans to agriculture sector has been the minimal with just 1%. The bulk of the loans made have been made to manufacturing & assembling, which consists of 30.85% of the total loan amount. Regarding the loan provided in other miscellaneous sector which consist of 19.72% of the loan Wholesale & retail is the most preferable sector that the loan has been given out. A total of 14.06% of the loan was given to this sector, thus showing that loans for the purpose of wholesale & retail were given second priority by NIBL. Another sector which NIBL has given priority is the finance insurance and service sector which consist of 12.42% of the total loan. With a total loan disbursed to service sector being 8.06%, this purpose in the economy was given less priority over last five years. Loan in construction, transportation etc, consumption loan, tourism etc were 4.38%, 3.60%, 2% and 2.93% respectively. And in other mentioned sector in the figure the loan provided by NIBL is minimal which less than 1%

of the total loan is. Thus, through the mean representation of the bank's total lending to different purpose wise sector can be marked by indicating that the bank has made highest loans to manufacturing and assembling, wholesale and retail, , finance insurance and real estate, service sector, construction, transportation, agriculture respectively.

4.3 Analyzing the Lending Efficiency and its Contribution in Total Profitability (Activity Ratio)

In this section the lending efficiency in term of quality and turn over is measured. For this purpose, the relationship of different variables of balance sheet and profit and loss account is established.

4.3.1 Provision for Loan Loss to Loans & Advances Ratio

This ratio of provision for loan loss to loans and advances describes the quality of assets that a bank is holding. NRB has directed the commercial banks to classify its loans and advances into the category of pass, substandard, doubtful and loss and to make the provision of 1% for pass category, 25% for substandard category, 50% for doubtful category and 100% for loss category. NRB has classified the pass loan as performing loans and all the other types of loans as non-performing loans. The provision created against the pass loan is called general loan loss provision and the provision against all other category is called the special loan loss provision. Provision for loan loss in the balance sheet represents the profitability from total loan of banks. Provision for loan loss, on the other hand, signifies the cushion against future contingencies created by default of borrowers. The low rate signifies the good quality of assets in the total volume of loans and advances. The high ratio signifies the relatively more risky assets in the volume of loans and advances.

Table No 4.18: Provision for Loans and Advances to Loan & Advances Ratio

Rs in million

Fiscal Year	NIBL			Industry		
	Provision for Loan Loss	Loan and Advances	Ratio	Provision for Loan Loss	Loan and Advances	Ratio
2006/07	482.67	17769.1	0.03	28485.1	228951.9	0.12
2007/08	532.65	27529.31	0.02	24730.6	302913.4	0.08
2008/09	585.95	36827.15	0.02	23682.5	398143	0.06
2009/10	630.13	40948.44	0.02	21631.8	467107.2	0.05
2010/11	792.18	41887.69	0.02	21340.1	522853.3	0.04

Above table explains the provision for loan loss of NIBL over past five years. As per NRB directives, provisions against all type of loans should be done and booked under separate accounts. This type of regulations has been imposed by NRB in order to minimize the risk of loan and advances flowed by the banks. In case of NIBL, we can see that some loans have been crossed the rating of good loan. Good loans are those loans, which do not default for repayment and account conduct is found satisfactory. Thus, from the table se can say that NIBL has provisioned more than 1% for some of its loans, which shows that defaulters are present in NIBL. However, ratio of five years predict that provisioned amount does not exceed 3% of total loan of NIBL, which proves NIBL has been putting its effort and is conscious to minimize the risky loans. While comparing with the industry, it can be deemed as excellent because the industry ratio shows provision for loan loss is more than 3% in all the years. In case of NIBL, In 2006/07, 3% of total loan has been provisioned towards LLP and then after only 2% has been booked for that. Thus, NIBL has to improve the category of its loan and try to minimize the bad loans, which fall under Non-performing Loan.

4.3.2 Non-performing Loans (NPL) to Total Loans and Advances Ratio

NRB has directed all commercial banks to formulate a special loan loss provision against the substandard, doubtful and bad loans. But most of the commercial banks do not willingly provide data on non-performing loans. Few of the banks do not even show the figure of specific reserve made on doubtful and bad debts in their profit and loss account. All banks show the total provision amount in the balance sheet. As per NRB's prescribed format of report, banks publish category wise loans and advances.

Table No 4.19: Non-Performing Loans to Total Loans & Advances Ratio

Rs in million

Fiscal Year	NIBL			Industry		
	Non Performing Loans	Loan and Advances	Ratio	Non Performing Loans	Loan and Advances	Ratio
2006/07	421.97	17769.1	0.02	24215.85	228951.9	0.11
2007/08	309.47	27529.31	0.01	18648.5	302913.4	0.06
2008/09	213.91	36827.15	0.01	13574.64	398143	0.03
2009/10	274.33	40948.44	0.01	11223.34	467107.2	0.02
2010/11	395.28	41887.69	0.01	16871.58	522853.3	0.03

Table 4.19 exhibits that of NIBL, in total volume of loans and advances, the non-performing loans and advances represent 2%. This is deemed lower as compared to other commercial banks in the country. There has been a substantial decrease in the percentage of the non-performing assets of the bank. However, increase in the non-performing loans decreases the profit of the bank. The bank has been able to decrease its total ratio from 0.02 in 2006/07 to 0.01 and has maintain the ratio throughout the year, which indicates the improving performance of the bank. While comparing with the industry ratio, it can deemed as excellent because it has mention the ratio way below the industry ratio in all the years.

4.3.3 Interest Income to Total Income Ratio

This ratio measures the volume of interest income in total income. This ratio also helps to measure the bank's performance on other fee-based activities. The high ratio indicates the high contribution made by the lending and investment activities and vice versa.

Table 4.20: Interest Income to Total Income Ratio

Rs. in million

Fiscal Year	NIBL			Industry		
	Interest Income	Total Income	Ratio	Interest Income	Total Income	Ratio
2006/07	1584.98	1999.76	0.79	23508.6	30174.1	0.78
2007/08	2194.27	2750.41	0.80	28951.7	37756.9	0.77
2008/09	3267.94	3867.89	0.84	17670	21642.1	0.82
2009/10	4653.52	5349.38	0.87	57131.9	65748.7	0.87
2010/11	5803.44	6568.96	0.88	74393.3	83271.4	0.89

In table 4.20, the ratio for the interest income to total ratio has an increasing trend for NIBL. The highest ratio was in the year 2010/11, and the lowest was in the year 2006/07. The average ratio calculated is hovers around 0.80, which is close by to the year's entire ratio. The average ratio indicates that the ratios of the five years do not have a high degree of deviation form the mean of the bank. We can see that the overall trend of the ratio of the bank is not fixed but as compared to the industry ratio it is deemed to be satisfactory because in all the years it is above the industry ratio. The lowest ratio of NIBL in 2006/07 suggests its low dependency on fund-based activity. In contrary, highest ratio indicates its greater degree of dependency on fund-based activities.

4.3.4 Interest Income to Interest Expense Ratio

The ratio of interest income to interest expense measures the gap between interest rates offered and interest rate charged. Since NRB has restricted the gap between the interest offered and interest charged, in average, should not be more than 5% the difference in this ratio is mainly caused by the ratio of funds mobilized and the funds collected. The credit creation power of commercial banks has high impact on this ratio.

Table No 4.21: Interest Income to Interest Expense Ratio

Rs. in million

Fiscal Year	NIBL			Industry		
	Interest Income	Interest Expenses	Ratio	Interest Income	Interest Expenses	Ratio
2006/07	1584.98	685.53	2.31	23508.6	9917.5	2.37
2007/08	2194.27	992.16	2.21	28951.7	12532.8	2.31
2008/09	3267.94	1686.97	1.94	17670	9533.7	1.85
2009/10	4653.52	2553.85	1.82	57131.9	29203.6	1.96
2010/11	5803.44	3620.34	1.60	74393.3	42245.8	1.76

The ratio indicates that there is a high degree of gap between the interest offered and the interest charged. The increased ratio as compared to the trend of loans and advances and deposits to total deposits, implies that NIBL is charging high interests to the borrowers and offering low interest rate to the depositors. The low cost of deposit and a moderate volume of non interest bearing deposits in the deposits mix of NIBL has caused the gap between interest income and interest expense to be higher. The increase volume of fixed deposits and high interest rate paid thereon has caused the ratio to fall in the year 2010/2011. But comparing with the industry ratio, it is good because it has been in level with the industry ratio throughout the past years. The average ratio of NIBL is 1.98 which indicates that a rupee of expense in deposits has generated 1.98 rupees of interest income for the bank.

4.4 Measurement of Profitability Ratios

4.4.1 Total Income to Total Assets Ratio

This ratio measures how efficiently the asset of a business is utilized to generate income. It also measures the quality of assets in income generation.

Table No 4.22: Total Income to Total Assets Ratio

Rs. in million

Fiscal Year	NIBL			Industry		
	Total Income	Total Assets	Ratio	Total Income	Total Assets	Ratio
2006/07	1999.76	28073.52	0.07	30174.1	490638.1	0.06
2007/08	2750.41	39405.96	0.07	37756.9	566736	0.07
2008/09	3867.89	53596.38	0.07	21642.1	812165.9	0.03
2009/10	5349.38	57935.55	0.09	65748.7	787300.9	0.08
2010/11	6568.96	59149.01	0.11	83271.4	878364.5	0.09

Above table explains that NIBL's highest ratio was observed during 2010/11. The ratio had remained constant for the past 3 years and then observed an increasing trend in the next two years. Since the ratio is increasing, it implies that the efficiency of assets has been increasing year by year and as compare with the industry ratio the performance is said to be good as the NIBL ratio is higher in all the past years. If the bank were to look for a boost in the performance through this ratio, the bank would be in a good position to do so. However, this ratio measures the earning power of assets irrespective of the expenditure involved in this.

4.4.2 Net Profit to Shareholders' Equity Ratio

This ratio measures the amount of profit that a rupee of shareholders' fund has received. The high ratio is indicative of high return to shareholder and vice versa.

Table 4.23: Net Profit to Shareholders' Equity Ratio

Rs in million

Fiscal Years	2006/07	2007/08	2008/09	2009/10	2010/11
Net Profit	501.40	696.73	900.62	1,265.95	1,176.64
Shareholder's Equity	1878.12	2686.78	3907.84	4585.39	5159.76
Ratio	0.27	0.26	0.23	0.28	0.23

Table 4.23 exhibits that the ratio of net profit to shareholder's equity is the highest in the year 2009/10, where the ratio was 0.28 times. But once again this ratio for the bank has not been stable through out the period of five years. Even though there have been fluctuation from the high of 0.28 to the low of 0.23, with an average ratio of 0.25 times, it relates that the shareholder's for every single rupee of equity shall receive 0.25 profits for that single rupee.

4.4.3 Earning Per Share

EPS refers to the net profit divided by the total number of shares outstanding. The amount of EPS measures the efficiency of a firm in relative terms. This figure is the indicative of the overall good or bad performance of the organization. How far an organization is able to use its resources to generate profit is determined by the profit it has earned. Thus the EPS determines the market value of a share, determines the attitude of outsiders and high amount of EPS increases the competition in the market by the entry of new organizations.

Table No 4.24: Earning per Share (EPS)

Rs in million

Fiscal Years	2006/07	2007/08	2008/09	2009/10	2010/11
Earning per Share (EPS)	62.57	57.87	37.42	52.55	48.84
Increase/ Decrease in EPS		(4.70)	(20.45)	15.13	(12.20)
Mean EPS	51.85				

Above table shows that the EPS of NIBL was highest in the year 2006/07. After that it has decreased to Rs 37.42 in the year 2008/09. In the year 2009/10, it increased to Rs 52.55 afterwards again it shows a decreasing trend in which the EPS decreases to Rs 48.84 in the year 2010/11.002/2003 the EPS of the bank increase and in the year 2004/2005 EPS was decreased. In all the year there was a decrease in EPS except the year 2009/10. The major reason behind the drops in the EPS was due to the increase in the number of shares outstanding. As EPS is calculated by dividing net profit by the number of shares outstanding. Hence increase in the denominator, which would always reduce the value obtained from there in.

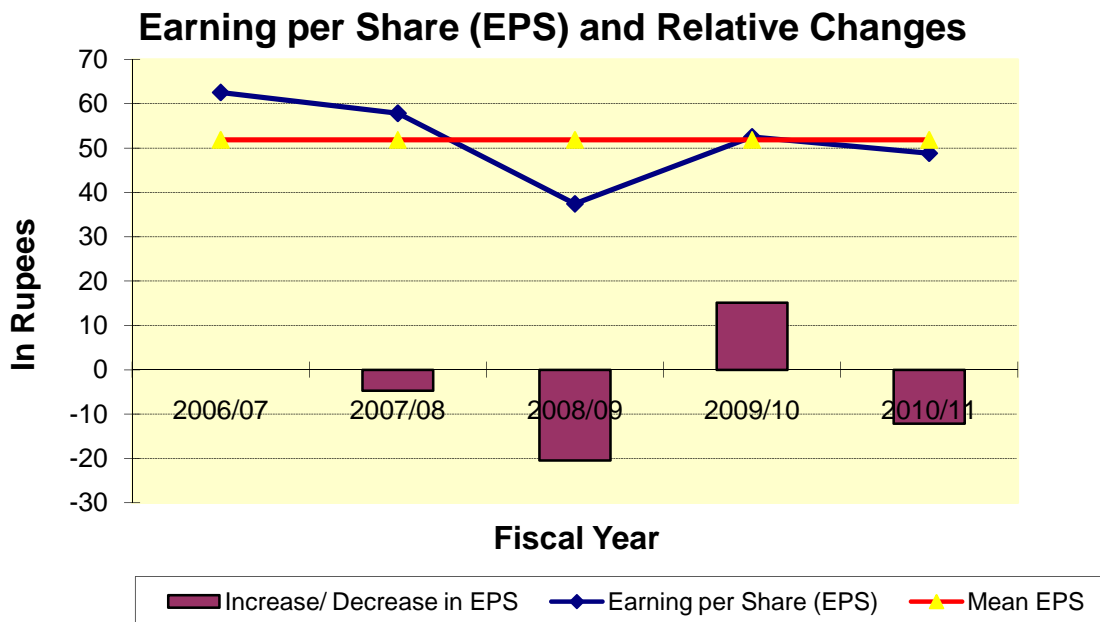


Figure No 4.10

Figure 4.10 reflects the EPS of NIBL and at the same time represents the mean EPS and also shows the change in the EPS during the period of five years. By the figure it is easily portrayed that the EPS of the bank had seen a initially decrease to the year 2008/09 afterwards it saw a increase to the year 2009/10 and then again went down in the year 2010/11. On the other hand, the mean EPS denotes that apart from 2008/09, the EPS for the different years haven't deviated from the bank's average EPS. Though the deviation during 2006/07 and 2007/08 was positive and proved the increased efficiency of the bank, however, decrease in the EPS after that, plummeted the change to a decreasing status. However, the performance of the bank on the part of the EPS is deemed as satisfactory as the mean EPS of NIBL hovers around Rs. 51.85. Further, it can be noted that EPS of NIBL has not gone down than the mean EPS over five years except 2008/09, and they are almost equal to the mean amount.

4.5 Measuring Correlation between different Variables

4.5.1 Correlation between Deposits and Loans & Advances

The correlation between deposits and total loans & advances describes the degree of relationship between these two items. How a unit increase in deposits impact the volume of the loans and advances is measured by correlation. Here, deposit is the independent variable and the loan and advance is the dependent variable. The detail calculation is presented in Appendix 4, Calculation 2.

**Table No 4.25: Correlation, Coefficient of Determination and Probable Error
between Total Deposit and Total Loans & Advances**

<i>Evaluation Criteria</i>			
r	r²	P.Er.	6*P.Er.
0.9972	0.9944	0.0017	0.0102

Table 4.25 describes the relationship between total deposits and total loans and advances. As prominent from the table, it can be seen that there is a high degree of positive correlation between the two variables. This indicates that loans and advances are highly dependable on the amount of deposits collected. Since the value of (r) in the bank is more than six times the P.Er., the correlation between these two variables is significant. As noted the value of coefficient of determination is 0.9944, it indicates that 99.44% of the variation in loans and advances is explained by deposit and the rest of 0.56% is due to other factors such as necessity of utilization of deposit to other sectors, which is essential and requirement for banking operation. Thus by the figures that have been obtained above, we can say that the bank is making its loans and advances form almost major portion of its deposits, which means the bank is efficiently mobilizing its deposits.

4.5.2 Correlation between Shareholders' Equity and Loans and Advances

The correlation between shareholders' equity and loans and advances describes the degree of impact of the increase in shareholders' equity due to increase in loans and advances. The loans and advances is the independent variable and the shareholders' equity is considered as the dependent variable. The detail calculation is presented in Appendix 4, Calculation 2.

Table No 4.26: Correlation, Coefficient of Determination and Probable Error between Shareholders' Equity and Total Loans & Advances

<i>Evaluation Criteria</i>			
r	r²	P.Er.	6*P.Er
0.9793	0.9590	0.0123	0.0738

Above table explains that there is high degree of positive correlation between shareholder's equity and loans and advances in the bank. Since the value of r is greater than six times the P.Er., the value of (r) is significant. We can see that coefficient of determination between the said variables is 0.9590; this infers that the increment in loans

and advance of NIBL increases the shareholder's equity in higher degree. So, 95.90% of the variation in the shareholders' equity has been resulted by the performance of loans and advances and rest of 4.10% is due to other variables.

4.5.3 Correlation between Total Income and Loans & Advances

The correlation between total income and loans and advances measures the degree of linear relationship between these two variables. Loans and advances is independent variable whereas total income is the dependent variable. The detail calculation is presented in Appendix 4, Calculation 2.

Table No 4.27: Correlation, Coefficient of Determination and Probable Error between Total Income and Loans & Advances

<i>Evaluation Criteria</i>			
r	r²	P.Er.	6*P.Er
0.9208	0.8479	0.0459	0.2754

According to above table, correlation between total income and loans and advances is high. The value or (r) is significant as the value of (r) is greater than six times P.Er. Both the variables are positively correlated, so there will certainly be change in total income with changes in loans and advances. The coefficient of determination is also high, which is 0.8479, which means that 84.79% of changes in total income is resulted by loan and advances and rest of 15.21% is due to other factors, such as fee based income and other income of NIBL.

4.5.4 Correlation between Provision for Loan Loss and Loans and Advances

The correlation between provision for loan loss and loans and advances measures the degree of linear relationship between these two variables. Loans and advances is independent variable whereas provision for loan loss is the dependent variable. The detail calculation is presented in Appendix 4, Calculation 2.

**Table No 4.28: Correlation, Coefficient of Determination and Probable Error
between Provision for Loan Loss and Loans & Advances**

<i>Evaluation Criteria</i>			
r	r²	P.Er.	6*P.Er
0.8345	0.6964	0.0916	0.5496

As predicted by the calculations, there is high degree of correlation between two variables. So, changes in loans and advances will certainly result the changes in provision for loan loss. The value of (r) is greater than 6 * P.Er. so the coefficient of correlation is significant. Similarly, coefficient of determination 0.6964 explains that 69.64% of total variation in provision for loan loss is explained by loans and advances and 30.36% is the result of other factors. Here, other factor is again loans and advances, but difference is that in this case loans should be categorized to the higher degree of risk (i.e. non performing loan).

4.5.5 Correlation between Interest Income and Net Profit

The interest income contributes the major portion of total volume of commercial bank's income. This correlation measures the degree of linear relationship between interest income and net profit. Here, the interest income is independent variable and net profit is dependent variable. The detail calculation is presented in Appendix 4, Calculation 2.

**Table No 4.29: Correlation, Coefficient of Determination and Probable Error
between Interest Income and Net Profit**

<i>Evaluation Criteria</i>			
r	r²	P.Er.	6*P.Er
0.9385	0.8808	0.0359	0.2154

Table 4.29 shows that the value of (r) for NIBL is significant and the linear relationship between these two variables is also positive, as the value of (r) is greater than six times the P. Er. In determining the correlation, we can say that the net profit is dependent with

interest income but not totally because as shown by the result coefficient of variation is not 1. As shown in the table 88.08% of variation in net profit is a result of interest income and rest of 11.92% is result of other factors.

4.6 Measuring the Growth Rate, Propensity of Growth based on Trend Value

So far we have calculated various measures of relative financial tools and absolute measures of statistical tools. In this section we shall examine the trend analysis of loans and advances, and EPS. The measures of trend analysis exhibit the behavior of given variables in a series of time. The performance of any commercial bank does not carry consistency over all the period and several factors causes the increase or decrease in the volume of various items of bank operation. The trend of any variable and the slope of trend line relating with the compound interest discount factor measures the growth rate of that variable. Thus along with the analysis of trend line, the growth rate has also been measured.

4.6.1 Trend Analysis, Growth Rate and Propensity of Growth of Loans and Advances.

Loan and Advances are the backbone of commercial banks. Volume of loans and advances directly affects the performance of the bank and its profitability as well. The trend line is obtained for the next five years and is based on least square methods of time series. The detail calculation is presented in Appendix 4, Calculation 4.

Table No 4.30: Trend Equation, Growth Rate and Propensity of Growth of Loans & Advances

Rs in million

Linear Equation with base 2006/2007 = 32992.34 + 6165.63 X	
Average Growth in Percentage	14.20
Propensity of Growth of Loans & Advances	6,165.63

Table 4.30 exhibits linear equation based on $Y = a + bX$ of the bank and the average growth of the bank along with the propensity of growth with respect to the loans and advances. The growth exhibited by the table represents 14.20% growth, where it is likely to growth by Rs 6165.63m in one year period. However, the trend shows the encouraging sign as the loans and advances of the bank are likely to increase vastly in the future.

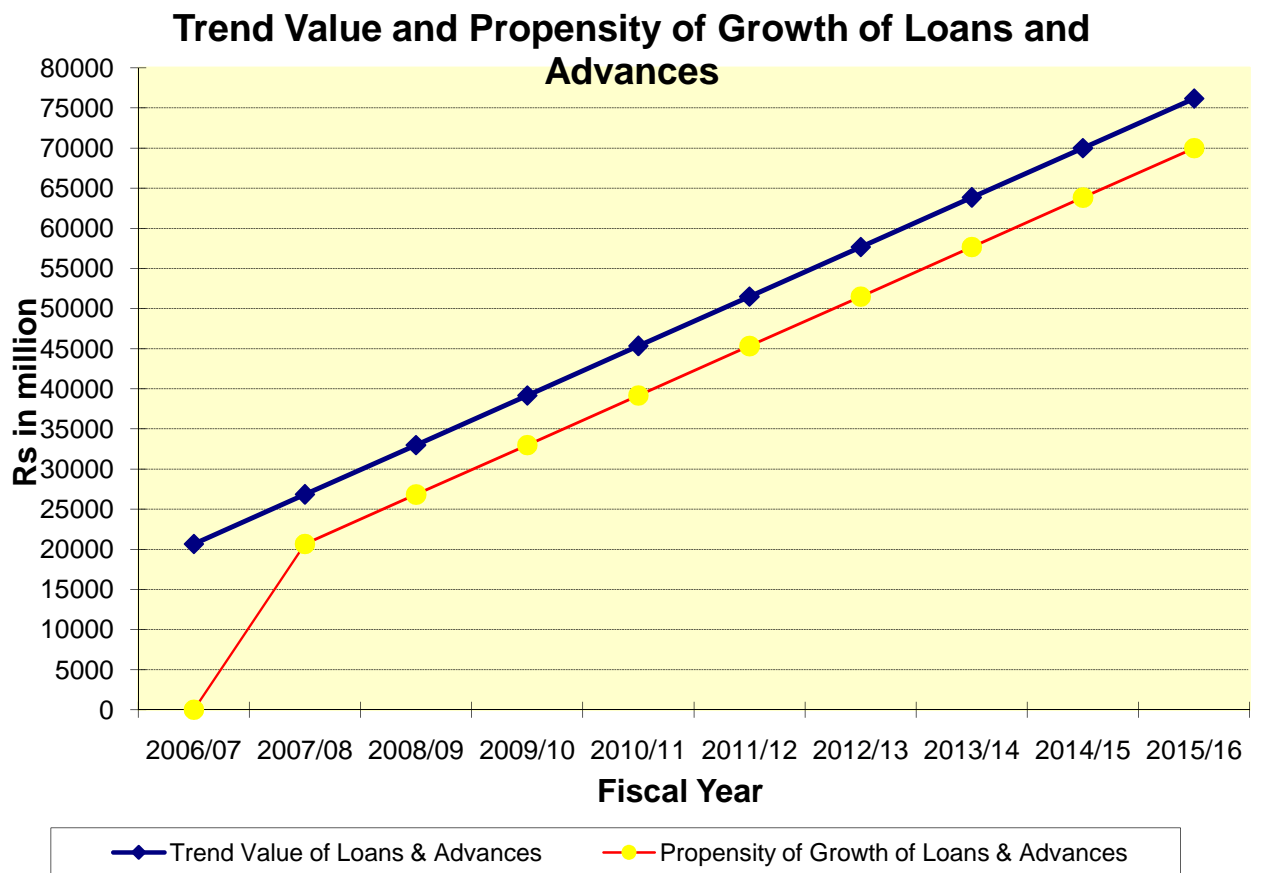


Figure No 4.11

Figure 4.11 exhibits the trends lines representing the trend value performance of loans and advances of NIBL. The trend line has been rising and representing that the bank has major focus on lending. The average lending has been estimated Rs 48406.42m, which means that the bank will be lending at least Rs 48406.42m. The figure indicates that the bank will focus on lending as shown by the slope of the line. The slope of the line represents the high growth rate in its lending.

From this analysis, NIBL can be concluded as a good performer in Loans and advances in the future. It has a good growth rate and the aspect of growing in loans in the future also looks good for the bank.

4.7 Multiple Regression Analysis

Multiple regression analysis studies the statistical relationship between a dependant variable with two or more in dependant variables. Here we have taken net profit (X_1) as a dependent variable and the independent variables are interest income (X_2), interest expenses (X_3) and provision for loan loss (X_4). The calculation for estimating the regression equation id done in Appendix 4, Calculation IV by using SPSS. From the calculation we have derived the below equation:

$$\mathbf{X_1 = 250.82 + 0.75X_2 - 0.76X_3 - 0.86X_4}$$

From the above equation we can derive that when interest income increases by 1%, there is 0.75 increase in net profit, when interest expense and provision for loan loss is held constant. When interest expenses increases by 1%, there is 0.76 decrease in net profit, when interest income and provision for loan loss is held constant. When provision for loan loss increases by 1%, there is 0.86 decrease in net profit, when interest income and interest expenses are held constant.

4.8 Major Findings of the Study

1. The measurement of lending strength of NIBL bank in relative term has revealed that the total liability to total asset of the bank is moderate. The increasing ratio is the result of the having the right amount of volume of shareholders equity in the liability mix. The ratio of the bank however has not deviated vastly from the mean. It depicts average performance of the bank, as it seems the bank has not been efficiently using its funds as its liability permits.
2. Loans and advances to total assets ratio of the bank has been increasing. It shows that the bank has increased its loans and advances almost thrice since the past 5 years. This indicates that the bank has been following a policy of high lending. At the same time the assets of the bank has almost doubled in the five years time period. The ratio in the mean time also depicts that the bank has maintained a right mix of conducting other fee-based activity to move along with its loans and advances. However, the ratio cannot be deemed as outstanding but can be mentioned satisfactory.
3. One noted finding is that the bank is positive towards increasing its assets from the loans and advances. The performance of the bank is pointed to the right direction as it has made reductions in the non performing loans of the bank. Thus, this concludes that the bank is stepping forward to efficiently perform in the case of pace of development
4. The portfolio analysis has revaluated that the flow of loan and advances in agriculture sector is the lowest contribution from the bank. The mean of 1% indicates very low contribution in this sector. The high operating cost, high degree of risk, small-scale loans etc. has made the commercial banks to flow low percentage of their credit in this sector. If the combined mean is taken as the standard percentage, then the performance of the bank in the manufacturing sector deserves a high degree of appreciations compared to other sectors. The contribution of the bank on the manufacturing sector is appreciable and the increase of credit in this sector is crucial for the national development also. However, bank should divert its lending to different sector because focusing to only one sector may create high for the bank's
5. future. The lending in the commercial purpose has however, been efficient in the case

- of NIBL. The contribution of the bank to this sector is given second priority from the data obtained. The service sector too has been given importance by the bank. The bank has contributed 9% of its total credit to this sector.
6. The ratio of provision for loans and advances to loans and advances has a relatively lower degree of effect of NIBL. There has been a variation on this ratio; however, a decline in this ratio has been noted in the earlier years and NIBL has been able to maintain low level of ratio almost all the years. As per NRB directives, provisions against all type of loans should be done and booked under separate accounts. This type of regulations has been imposed by NRB in order to minimize the risk of loan and advances flowed by the banks. In case of NIBL, we can see that some loans have been crossed the rating of good loan. Thus, from the analysis we can say that NIBL has provisioned more than 1% for some of its loans, which shows that defaulters are present in NIBL. However, ratio of five years predict that provisioned amount does not exceed 5% of total loan of NIBL, which proves NIBL has been putting its effort and is conscious to minimize the risky loans.
 7. Regarding NPL, NIBL has to improve the category of its loan and try to minimize the bad loans, which fall under Non-performing Loan. Even though, the percentage of NPL of NIBL is low, it will have to make a review of its lending policy to recover bad loans from its default clients, but certainly NIBL has been putting efforts to reduce in Non Performing Loans (NPL) as we can see in the decrease in the amount of the NPL of NIBL in the year after 2006/07. But in the contrary, increase in the previous year has affected performance of NIBL.
 8. Among the various measures of profitability ratios, the total income total assets ratio measures the earning power of each rupee employed by an organization irrespective of volume of expenditure incurred. The high ratio for NIBL was observed during the years 2010/11. The ratio of total income to total expense measures the earning capacity a rupees of expenses. The ratio indicates how much a rupee of expense would result in total income. Thus higher the ratio, better the productivity of expenditure. Regarding the performance of a bank, it is considered good to have a total income to total expense ratio of more than 2.

9. The EPS reflects the relative measures of profitability. The performance of NIBL is relatively satisfactory. But the high volume of reserve and surplus in the capital mix of NIBL has resulted in the bank to acquire a compromising position as compared to net profit to shareholders equity ratio. There is decrease of EPS in the year 2007/08, 2008/09, 2010/11. In the year 2008/09 and 2010/11 the EPS of NIBL has gone down from the mean EPS of NIBL. Overall we can say that the EPS of NIBL to be unsatisfactory.
10. The bank has a high degree of correlation in respect of total deposits and total loans and advances, shareholder's equity and loans & advances, total income and loans and advances, which are indicative of good performance of NIBL in generating profit through lending. This also concludes that increment in deposits is the most likely to increase the volume of loans and advances. As far as the lending function and its correlation with other variables is concerned, the correlation of NIBL has shown the best contribution toward national economy. There is also a high degree of correlation between shareholders' equity and loans and advances and between total income and loans and advances, which predicts the return generated by lending of NIBL has a great contribution towards bank's profitability.
11. Trend analysis has revealed the future performance of NIBL in the case of loans & advances. The slope of the trend line is high in the bank in case of loan and advances. Especially, through the pattern of the recent times, NIBL's efficiency in loans & advances is forecasted to increase. The measured growth, depending on the trend values, has projected the increasing performance of NIBL's for the next five years in loan and advances. The growth rates of loans & advances of NIBL seem outstandingly good. This added to the vital power of lending in NIBL. The high degree of growth in loans and advances puts the bank in a good position in the lending functions for the future. This is deemed to be good, as in the future this bank will look to dominate the lending of the industry.
12. From the multiple regression equation we can see that there is positive relation between net profit and interest income whereas there is a negative relation between net profit and with the two variables interest income and interest expenses.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In this chapter we examine the processed data to come into summary, conclusions on the performance of the bank on an individual basis and put some recommendation for the subject bank in order to improve its weaknesses. This chapter is divided into summary, conclusions and recommendations.

5.1 Summary and Conclusions

The lending strength of NIBL in term of exposure of loans and advances is good. The ratio of loans & advances to total assets, loans & advances to shareholder's equity indicate a good performance of NIBL in its lending activities. The bank has been able to upgrade the performance by increasing its loan portfolio. If NIBL succeeds in collecting the cheap sources of fund in the future, the lending strength of NIBL would push its performance upward.

Viewing the productivity of loans and advances and its contribution in the national economy, the performance of NIBL has been satisfactory. The contribution made by this bank in agricultural purpose, however, is lower; it has increased contribution to the manufacturing sector continuously. A considerable percentage of NIBL's credit has been granted to unproductive sector of general use and social purpose, however such loans are also required in order to improve individual's social status and fulfillment of basic needs. But the overall slowdown in the economy, increasing failure of the industrial sector in generating profit, increasing tendency bad performance of industrial loan etc. has put NIBL to the tough stage. Thus, element of credit risk in NIBL has increased due to the failure of industrial sector in the economy. If the present economic conditions improved

and the industrial performance turned to success, NIBL would be the superior entity in the commercial banking groups in the future. Whatsoever the case, the contribution made by the bank in industrial sector of the economy is highly appreciable.

The propensity of growth of loans and advances is good but the opportunity in lending activities is limited, thus there is uncertainty to meet the expected growth. This however, decreases the bank's capability in making credits but if the economy takes the upward trend there would certainly be a strong position of NIBL in terms of lending, which will help to generate more profit. Looking at the asset management ratio, the performance of NIBL seems good in the area of lending, productivity and impact on national economy. The activity ratio on the other hand, also reflects to the soaring performance of NIBL. The decreasing loan loss provision ratio is the indicative of the bank's better performance in judging the good customers. The high growth rate, proportionately high volume of loans and advances, better contribution to the industrial sector and the increasing level of deposits mobilization, has put the bank into one of the most competitive banks in the industry. It has also been able to contract a good renowned position in the lending function as deemed by the national priority, and national development. However, better activity ratio of this bank, been a major contributor in managing the lending portfolio according to the demand of the profit oriented business. The high volume of lending activity of NIBL has put this bank in the top position in absolute term.

Thus, looking at the various summaries and findings, we can conclude that the bank has accelerated its performance in the past five years and the bank has the potentiality to become a leading bank in Nepal.

5.2 Recommendations

Based on the findings in chapter four and above conclusions the following recommendations have been forwarded:

1. The rural economy has always been realizing the credit needs; the dominance of non-organized moneylender in this area has been prevailing. The high volume of liquidity shows that the high degree of lending strength has been prevailing in the bank. The lack of reliable lending opportunities and fear of losing the principal in case of lending in rural sector has been keeping the bank less oriented towards the lending function to rural sector. Hence, the government should take appropriate action to initiate the banks to attract to flow credit in the rural economy. This helps minimizing idle fund in business and at the same time contributes to the national economy.
2. Imposing the compulsion by directives does not create long term healthy lending practices unless the commercial banks are not self motivated to flow credit in this sector. But in view of the risk element in lending, the banks still prefer to have a negative outlook in handling lending proposals. This attitude requires to be changed among the banks and any proposal coming to them should be processed to conform to banking norms so that it can be sanctioned for fulfillment of national and social objectives. To compromise between the liquidity and credit need of rural economy, the bank is highly recommended to expand its credit in this area.
3. The provision on loan loss and relatively decreasing volume of non-performing loans in NIBL does somewhat attention. The moderate volume of NPL in NIBL may have caused a slight hassle in the performance of the bank. But the bank must get rid of its accumulated bad debts and show high efficiency. The bank is recommended to follow the directives of NRB strictly and be more cautious and realistic while granting loans and advances. The major solution of reducing the risk is to avoid lending in the more risky area until the bank is fully satisfied regarding the future viability of the project.

4. The actual status of any bank is explored by net profit of that bank. NIBL's net profit shows a good sign of growth, so there is confidence in public towards NIBL. So, NIBL is recommended to continue the present growth rate over net profit in order to maintain its status.
5. The ratio contribution made by the bank in agriculture and priority sector does not look fulfilling. NIBL's volume of agricultural and priority sector both is not satisfactory, though lending to agricultural is increasing. Since, the prosperity of national economy is highly dependent upon this sector, the bank is recommended to increase its volume of credit to these sectors. So, as focused by NIBL, contribution to industrial sectors only does not complete the responsibility of the banks to the national economy. So, NIBL should put effort to lend out money to the prioritized sectors.
6. Finally, however, performance of NIBL seems to be good till date, there is still many opportunities for further growth of the bank. NIBL is suggested to further improve current position of lending portfolio. The bank should concentrate on financial strength, personal integrity and credibility of the borrower for loan disbursement. It should maintain high level of monitoring and control system over the disbursed loans and advances. To create opportunities of business new and attractive lending schemes should be launched to the public. NIBL should be more responsive towards national economy and economic development. It should not neglect the deprived sector, as upliftment of this sector plays vital role for national economy. The bank should avoid credit concentration to a limited sector in order to maintain its performance. If there is recession to any specific sector, remaining sectors of economy may function well and there may not be severe impact on the whole lending portfolio of the bank.

BIBLIOGRAPHY

Books

- Bhattacharya, H. (1998). *Banking Strategy, Credit Appraisal and Lending Decisions- A Risk - Return Framework*. First Edition. New Delhi: Oxford University Press.
- Gupta, S. P. (1989). *Statistical Methods*. Twenty Forth Edition. New Delhi: Sultan Chand and Sons Publishers.
- Halter, O. G. (1999). *Banks Investments and Funds Management*. Second Edition. Macmillan India Ltd.
- Khubchandani, B.S. (2000). *Practice and Law of Banking*. First Edition. Macmillan India Ltd.
- Kothari, C. R. (1994). *Quantitative Techniques*. Third Revised Edition. New Delhi: Vikas Publishing House Pvt Ltd.
- Rose, P. S. (1989); *Commercial Bank Management*. International Edition.
- Sharpe, W. F., Alexander, G. J., and Bailey, J. V. (2000). *Investments*. Fifth Edition. Prentice Hall of India Pvt Ltd.
- Shekher, K. C. and Shekhar, L. (2000). *Banking theory and Practice*. Eighteenth Revised Edition. Vikas Publishing House Pvt. Ltd.
- Singh, S. P., and Singh S. (1983). *Financial Analysis for Credit Managements in Banks*. New Delhi: Vikas Publishing House Pvt. Ltd.
- Timilsina, Y. (2053 BS). *Banking Business in Nepal*. Third Edition. Kathmandu: Ratna Pustak Bhandar.

Journals and website cited

Annual Report- NIBL 2006-2011.

Banking and Financial Statistics No. 57 (Mid July 2011). *Bank and Financial Institutions Regulation Department*. Nepal Rastra Bank.

Banking Promotion-13 (Poush 2058 BS). *A Journal Of Banking Promotion Committee*. Nepal Rastra Bank.

Licensing Policy for Banks and Financial Institutions. Nepal Rastra Bank.

Rajan, R. G. (1994). Why Bank Credit Policies Fluctuate: A theory and Some Evidence. *The Quarterly Journal of Economics*.

Somoye, R.O.C. (2010). The Variation of Risks on Non-Performing loans on Bank Performances in Nigeria. *Indian Journal of Economic and Business*.

Unified Directive of Nepal Rastra Bank, 2068

www.nepalstock.com.np

www.nibl.com.np

www.nrb.org.np

www.worldbank.org

Unpublished Thesis

Khadka, Anju (2007). *A comparative study on Investment Policy of Commercial Banks*. An Unpublished Master's Thesis. T.U.

Pandey, Santosh (2002). *Nepal Rastra Bank directives-Their implementation and impact on Commercial Banks, A case study of Himalayan Bank Limited*. An Unpublished Master Thesis. T.U.

Sharma, Ram Prasad (2002). *Priority Sector Investment of Commercial Banks in Nepal*. An Unpublished Master's Thesis. T.U.

APPENDIXES

Appendix 1

Branch Network of NIBL

1. Kathmandu Head Office Durbar Marg	2. Seepadole Branch Suryabinayak, Bhaktapur	3. Birgunj Branch Adarshanagar
4. Pulchowk Branch Pulchowk, Lalitpur	5. Banepa Branch Banepa, Kavre	6. Jeetpur Branch Jeetpur, Bara
7. Newroad Branch Basantapur, Kathmandu	8. Biratnagar Branch Golcha Chowk, Biratnagar	9. Butwal Branch Traffic Chowk, Butwal
10. Bhairahawa Branch Maitri Path, Bhairahawa	11. Pokhara Branch Chiple Dhunga, Pokhara	12. Putalisadak Branch Putalisadak, Kathmandu
13. Narayangarh Branch Pulchowk, Narayangarh	14. Janalpur Branch Mills Area, Janakpur	15. Nepalgunj Branch Dhamboji, Nepalgunj
16. Thamel Branch Chaksibari, Thamel	17. Kalimati Branch Kalimati Chowk, Kalimati	18. Birtamod Branch Mukti Chowk, Birtamod
19. Battisputali Branch Battisputali, Kathmandu	20. Dhangadi Branch Main Road, Dhangadi	21. Gongabu Branch Gongabu Chowk, Ktm.
22. Surkhet Branch Neta Chowk, Surkhet	23. Jumla Branch Khalang Bazaar, Jumla	24. Boudha Branch Boudha, Kathmandu
25. Hetauda Branch Bank Road, Hetauda	26. Palpa Branch Tansen, Palpa	27. Lukla Branch Chaurikharka, Lukla
28. NayaBaneshwor Branch Naya Baneshwor, Ktm.	29. Dhumbarahi Branch Pipalbot Chowk, Ktm.	30. Bhotahiti Branch Bhotahiti, Kathmandu
31. Tulsipur Branch Tulsipur, Dang	32. Tripureshwor Branch Tripureshwor, Kathmandu	33. Damauli Branch Safasadak, Damouli
34. Krishanagar Branch Krishnanagar, Kapilvastu	35. Gaighat Branch Gaighat, Udaypur	36. Lazimpat Branch Lazimpat, Kathmandu
37. Parsa Branch Parsa, Chitwan	38. Maharajgunj Branch Maharajgunj, Kathmandu	39. Lalbandhi Branch Lalbandhi, Sarlahi
40. Lagankhel Branch Lagankhel, Lalitpur	41. Waling Branch Waling, Syanga	

Appendix 2

Commercial Banks in Nepal

1. Nepal Bank Ltd.	2. Rastriya Banijya Bank
3. Nabil Bank Ltd.	4. Nepal Investment Bank Ltd
5. Standard Chartered Bank Nepal Ltd	6. Himalayan Bank Ltd.
7. Nepal SBL Bank Ltd.	8. Nepal Bangladesh Bank Ltd.
9. Everest Bank Ltd.	10. Bank of Katmandu Ltd.
11. Nepal Credit and Commerce Bank Ltd.	12. Nepal Industrial and Commercial Bank Ltd.
13. Lumbini Bank Ltd.	14. Machhapuchchhre Bank Ltd.
15. Kumari Bank Ltd.	16. Laxmi Bank Ltd.
17. Siddhartha Bank Ltd.	18. Agriculture Development Bank Ltd.
19. Global Bank Ltd.	20. Citizens Bank International Bank Ltd.
21. Prime Commercial Bank Ltd.	22. Bank of Asia Nepal Ltd.
23. Sunrise Bank Ltd.	24. Grand Bank Nepal Ltd.
25. NMB Bank Ltd.	26. Kist Bank Ltd.
27. Janata Bank Nepal Ltd.	28. Mega Bank Nepal Ltd.
29. Commerz and Trust Bank Nepal Ltd.	30. Civil Bank Ltd.
31. Century Commercial Bank Ltd.	32. Sanima Bank Ltd.

Appendix 3

Five Years' Balance Sheet and Profit and Loss Statement of NIBL

५ वर्षको वित्तीय सारांश

बासलात

(रु. हजारमा)

सम्पत्ति	२०६३/६४	२०६४/६५	२०६५/६६	२०६६/६७	२०६७/६८
नगद तथा बैंक मौज्जात	२४,४९,५९४	३७,५४,९४२	७९,९८,००४	६८,९५,८९०	८९,४०,३७९
मागको बखत प्राप्त हुने रकम/ लगानी	६८,६८,६५०	६८,७४,०२४	७३,९९,८९२	८६,३५,५३०	७५,७३,९०७
कर्जा तथा सापटी (कुल)	९,७७,६९,९००	२,७५,२९,३०५	३,६८,२७,९५७	४,०९,४८,४४०	४,९८,८७,६९४
खुद स्थिर सम्पत्ति	७,५९,४५६	९,७०,०९२	९,६०,७५२	९९,३६,२४७	९९,०८,४४८
अन्य सम्पत्ति	२,३४,७९७	२,७७,५९७	३,९०,६५३	३,९९,४३८	४,३९,३८८
जम्मा सम्पत्ति	२,८०,७३,५९७	३,९४,०५,९५९	५,३५,९६,३७९	५,७९,३५,५५५	५,९९,४९,००७
दायित्व					
बैंकबाट सापटी/ ऋणपत्र	८,००,०००	९०,५०,०००	९०,८८,८००	९०,८७,३९५	९३,३०,७६४
ग्राहक निक्षेप	२,४४,८८,८५६	३,४४,५९,७२६	४,६६,९८,९००	५,००,९४,७२५	५,०९,३८,९२२
अन्य दायित्व	४,२३,८६६	६,८४,७९४	९३,९६,०६३	९५,३७,९८०	९७,२८,९८२
जोखिमसम्बन्धी व्यवस्था	४,८२,६७३	५,३२,६५२	५,८५,९५९	६,३०,९३२	७,९२,९७९
जम्मा दायित्व	२,६९,९५,३९५	३,६७,९९,९७३	४,९६,८८,९९४	५,३३,५०,९५२	५,३९,८९,२४७
खुद सम्पत्ति	९८,७८,९२४	२६,८६,७८६	३९,०७,८४०	४५,८५,३९३	५९,५९,७६०
शेयरधनी कोष					
चुक्ता पूँजी	८,०९,३५३	९२,०३,९९५	२४,०७,०६९	२४,०९,०९८	३०,९९,३७२
संचित कोष	९०,७६,७७९	९४,८२,८७९	९५,००,७७९	२९,७६,२९५	२९,४८,३८८
जम्मा शेयरधनीको कोष	९८,७८,९२४	२६,८६,७८६	३९,०७,८४०	४५,८५,३९३	५९,५९,७६०

नाफा-नोक्सान हिसाब

(रु. हजारमा)

व्याज आम्दानी	२०६३/६४	२०६४/६५	२०६५/६६	२०६६/६७	२०६७/६८
कर्जा, सापटी र अधिविक्रम	९३,०२,९२२	९९,०७,२६९	२९,०६,०५५	४३,०३,३९९	५४,३५,८४३
अन्य	२,८२,८६५	२,८७,०९४	३,६९,८८६	३,५०,२९०	३,६७,५९७
व्याज खर्च	(६,८५,५३०)	(९,९२,९५८)	(९६,८६,९७३)	(२५,५३,८४७)	(३६,२०,३३७)
खुद व्याज आम्दानी	८९,९९,२५७	९२,०२,९९७	९५,८९,९६८	२०,९९,६७४	२१,८३,१०३
सट्टी आम्दानी	९,३५,३५५	९,६५,८३९	९,८५,३२७	२,२४,०५७	२,२८,०७६
कमिशन आम्दानी	९,६३,८९९	२,९५,२९२	९,८३,०४२	२,४२,८८६	२,६९,४२९
अन्य संचालन आम्दानी	९,९४,०९६	९,६७,९५३	२,२८,६२७	२,९८,३९३	२,५९,६९९
गैरसंचालन आम्दानी	९,४२६	७,०४८	२,९५३	९,६०६	८,३९६
जम्मा आम्दानी	९३,९४,२३३	९७,५८,२४९	२९,८०,९९७	२७,९५,५३६	२९,४८,६२४
कर्मचारी खर्च	९,४५,३७९	९,८७,९५०	२,२५,७२९	२,७९,८५९	३,२६,५४३
संचालन खर्च	२,४३,४३९	३,९३,९५४	३,६०,५३३	४,३३,५९६	४,५६,०५७
गैरसंचालन खर्च	-	-	-	-	५२,८६९
कर्मचारी बोनस	७२,३३८	९,०९,९९६	९,२९,८६०	९,८०,८२९	९,६७,८०३
जम्मा खर्च	४,६९,९३९	६,०२,३००	७,९६,९९५	८,९५,२६९	९०,०३,२६४
करअधिको मुनाफा	८,५३,०९४	९,५५,९५०	९,४४,८०२	९,०९,२६७	९,४५,३६९
जोखिमसम्बन्धी व्यवस्था	९,२९,७९९	९,३५,९८९	९,६६,२०९	९,३,०५७	२,६७,३३९
आयकर	२,२९,९७७	३,२३,२२९	३,९७,९८२	५,४२,२६९	५,०९,३८८
करपछिको खुद मुनाफा	५,०९,३९९	६,९६,७३२	९,००,६९९	९,२६,५५०	९,९६,६४९

Statement of Assets & Liabilities of Commercial Banks (Aggregate)

Statement of Assets & Liabilities of COMMERCIAL BANKS (AGGREGATE)

(Rs. In million)

Liabilities	Mid-July										
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
CAPITAL FUND	8230.1	10382.5	11814.8	(10301.7)	(19219.2)	(17742.1)	(4110.3)	3060.7	33388.5	40719.8	59044.1
a. Paid-up Capital	5504.1	6431.0	7726.0	8250.0	9723.9	12571.7	20017.1	31828.9	40738.3	46630.4	58284.5
b. Calls in advance										200.4	0.0
c. Statutory Reserves	1787.1	2540.0	2820.0	3385.0	3825.9	4841.7	6536.0	7467.1	9514.2	12146.3	14915.5
d. Share Premium					10.0		10.0		347.4	298.4	317.1
e. Retained Earnings		280.9	75.7	(23054.1)	(44392.3)	(34913.0)	(12300.2)	(31727.9)	(27143.0)	(28722.0)	(34811.2)
f. Other Reserves	010.0	070.6	1103.0	1103.0	1663.5	1476.8	1607.8	1011.3	6670.4	7414.6	9673.4
g. Exchange Fluctuation Fund					541.1	369.7	429.3	133.0	321.4	666.7	745.3
BORROWINGS	2308.7	2348.5	3170.4	3023.5	6542.9	9519.6	12750.4	14408.2	18320.2	19733.9	24852.8
a. NRB	411.3	1167.7	1437.0	131.5	4488.5	1644.5	3757.7	2673.1	2154.3	6742.6	10236.1
b. "A" Class Licensed Institution	1896.9	853.4	1569.2	1770.5	1347.2	1991.9	3119.3	4410.5	8132.5	4816.8	6311.0
c. Foreign Banks and Fin. Ins.	0.0	228.5	134.2	121.4	27.5	127.2	3492.1	4022.7	4012.7	1933.3	1048.1
d. Other Financial Ins.					579.6		111.4	426.2	520.7	2533.4	379.5
e. Bonds and Securities						1613.0	2050.0	2875.7	3500.0	3727.8	6017.8
DEPOSITS	181767.0	185144.7	203879.3	238811.2	252409.5	291245.6	337497.2	426080.3	569604.5	630880.8	687587.5
a. Current	25100.7	24827.0	28862.5	33729.9	34646.4	37385.6	45051.2	56089.3	71651.0	80606.2	78942.5
Domestic					20996.3	32794.6	39987.0	48226.3	65927.8	69758.6	68644.3
Foreign					5450.0	4592.0	5064.2	7663.0	7723.2	10847.6	10318.5
b. Savings	80808.4	83800.0	57228.9	114177.1	128995.0	136669.4	174752.5	211492.0	269920.4	287769.3	281099.4
Domestic					123899.0	141701.7	168469.0	203810.7	253353.9	232482.4	254410.0
Foreign					6095.9	3937.7	6133.5	7641.3	9571.6	5269.9	5678.8
c. Fixed	55322.3	64171.4	63287.6	65130.3	67318.2	78572.8	87212.6	104772.5	141239.4	200058.5	233546.4
Domestic					59653.9	68555.6	72851.1	88824.5	113297.3	132137.7	233579.8
Foreign					8264.3	13017.2	14551.4	15948.0	30962.1	27920.6	30066.5
d. Call Deposits	7891.8	10531.9	12027.9	18061.1	17681.7	22723.1	26953.1	40417.4	84709.7	135687.2	116613.4
e. Other	2063.3	2258.8	2462.4	2152.1	2768.3	2924.7	3557.6	4349.2	5058.9	6819.7	7299.5
Bills Payable					480.2	598.6	698.7	975.6	1738.5	1216.0	942.5
Other Liabilities	59221.3	77221.2	86667.4	113183.5	92800.7	86580.7	79854.6	81303.1	87709.2	77413.0	84366.2
1. Sundry Creditors					2586.1	4513.5	8054.9	15198.9	17306.4	10050.4	13044.3
2. Loan Loss Provision					21410.2	26007.4	36485.1	34790.6	39892.5	24811.8	11340.1
3. Interest Suspense a/c					39670.5	35083.1	33459.7	29554.2	27666.2	34101.3	33249.4
4. Other	59221.3	77221.2	86667.4	113183.5	19434.9	19385.7	9844.6	11819.3	19054.0	21629.5	16752.1
Reconciliation A/c					65219.3	47230.1	60737.6	19151.2	95621.7	1244.6	8911.6
Profit & Loss A/c					30304.3	11272.7	3249.1	14856.8	14772.4	36042.8	18698.5
Total	251527.3	174917.9	305661.7	339126.7	408828.3	428706.2	490688.1	566736.0	812106.9	787300.9	878344.5
Assets											
LIQUID FUNDS	56883.3	48937.2	38163.8	46282.3	38369.4	38842.1	44089.7	66875.4	108989.0	102749.0	99017.1
a. Cash Balance	4775.1	5494.8	5440.4	4719.3	5137.3	5305.6	7813.6	13010.3	15239.2	17573.1	10262.5
Negotiable Notes & Coins	4116.9	4681.1	4735.9	4283.8	4763.3	3908.6	7359.7	12651.6	15014.6	17171.2	19765.0
Foreign Currency	658.2	613.8	704.5	435.5	373.3	395.0	453.9	358.7	824.6	415.9	500.3
b. Bank Balance	37200.9	31115.2	21324.4	28779.7	21173.5	24309.2	20494.1	44458.7	79436.8	69551.5	63293.3
1. In Negal East Bank	21440.9	23170.3	18867.6	22328.2	17859.3	21058.2	23233.2	30820.1	55539.2	49542.7	48717.4
Domestic Currency					16501.0	20865.6	13025.4	30467.6	54348.6	48933.2	48214.6
Foreign Currency					1258.8	191.6	147.9	352.5	1190.7	609.5	452.4
2. "A" Class Licensed Institution	796.1	928.2	663.7	1825.1	548.9	1288.9	1545.4	7094.1	11505.6	8440.4	3826.0
Domestic Currency					835.3	1287.7	1511.9	6942.8	11462.2	8415.1	3497.3
Foreign Currency					13.7	1.2	53.0	131.5	45.4	45.3	
3. Other Financial Ins.					0.0	2.0	25.6	320.2	415.4	1333.7	284.6
4. In Foreign banks	14993.9	7016.7	3783.1	3036.4	3465.1	1962.1	3397.0	5225.2	7978.6	10214.7	10415.2
c. Money at Call	13577.3	13327.3	11388.8	14653.8	12658.7	1225.3	7841.3	10405.4	14711.1	15624.4	14533.2
Domestic Currency					1482.0	1805.5	2758.1	3591.0	8216.2	6047.6	6047.6
Foreign Currency					10776.7	6420.8	5073.7	6814.4	8292.4	7328.1	8465.6
INVESTMENTS	25100.9	28872.8	39048.5	42184.3	50821.9	57639.1	64443.0	71495.5	69161.4	81343.8	102658.5
a. Govt Securities	25100.9	28573.8	39045.5	42384.3	47678.2	57464.7	63889.5	71065.8	68902.0	79079.6	100267.3
b. NRB Bond							0.0	0.0	0.0	1386.8	1647.7
c. Govt Non-Fin. Ins.					300.4	3.0	0.0	17.0	17.0	8.5	18.1
d. Other Non-Fin Ins.					0.0	0.0	0.0	1700.0	70.0	312.3	312.3
e. Non Resident					3042.4	74.4	53.5	343.7	273.4	466.7	310.1
SHARE & OTHER INVESTMENT	345.6	5636.0	6340.8	7384.3	9269.1	26834.7	19097.8	37459.3	61595.6	82697.3	46981.4
1. Non Resident					6467.5	17515.0	21374.8	18240.7	33293.2	35917.0	35062.2
2. Other					2891.5	7119.7	7713.2	19218.6	28302.3	36780.3	11899.3
LOANS & ADVANCES	107118.9	111694.4	123211.1	138822.9	167398.9	173883.4	218961.9	302913.4	398143.0	467107.2	612853.2
a. Private Sector	104209.1	109043.3	120343.4	136403.5	157398.9	163394.7	218597.7	288246.8	387543.3	453049.0	583319.4
b. Financial Institutions							4892.7	11893.7	7991.7	11270.6	13362.3
c. Government Organizations	2909.6	2651.1	2867.7	2119.4	2442.3	4988.7	5451.4	2772.9	2608.0	2787.6	6111.5
BILL PURCHASED	1887.1	1322.2	1143.8	1650.4	3809.2	3363.8	2824.1	36949.8	3745.7	2172.6	4073.8
a. Domestic Bills Purchased					745.7	669.6	500.4	931.4	1308.0	662.0	1663.5
b. Foreign Bills Purchased	1887.1	1322.2	1143.8	1650.4	1653.4	1233.9	1090.3	1381.8	1580.5	742.8	1718.3
c. Import Bills & Imports					2110.1	1453.3	1263.3	1381.7	977.3	767.8	1662.1
LOANS AGAINST COLLECTED BILLS	115.0	158.0	167.5	58.2	368.3	83.0	53.5	297	17.9	98.6	96.0
a. Against Domestic Bills					21.7	21.2	1.4	29.6	17.8	71.4	74.1
b. Against Foreign Bills	115.0	158.0	167.5	58.2	346.5	61.8	52.1	0.0	0.1	27.3	21.8
FIXED ASSETS					3809.5	4026.7	6077.7	8101.2	11004.8	13896.1	16098.8
OTHER ASSETS	61376.3	77596.3	97489.4	103663.3	50728.5	52632.7	59145.6	66347.5	59152.3	69702.9	66675.1
a. Accrued Interest	19888.3	23742.8	27722.2	34458.3	38786.3	35718.0	33444.3	30048.4	28776.5	25188.4	24341.4
Financial Institutions											396.7
Govt. Entp.	334.1	308.2	267.8	180.3	161.9	297.7	423.6	432.7	429.2	170.3	115.8
Private Sector	19554.1	23434.6	27424.4	34278.2	38224.5	36420.3	33020.3	29013.7	28347.2	29181.1	33318.6
b. Staff Loans / Adv.						4448.0	5877.6	7959.1	8978.3	10127.5	12063.3
c. Sundry Debtors					2427.3	1752.5	7012.0	3450.6	4330.7	5946.9	9681.6
d. Cash In Transit					795.8	513.6	594.8	1042.0	993.7	279.6	200.3
e. Others	41487.1	53853.5	69767.2	69405.3	8718.3	9202.6	12136.9	12849.4	15064.4	19160.5	10318.5
Expenses not Written off					362.4	377.5	360.0	390.8	476.2	488.8	640.7
Non Banking Assets					1369.9	1109.7	283.5	2257.1	1889.1	1616.6	1376.6
Reconciliation Account					75288.9	59449.3	50313.4	7186.3	93915.3	4457.9	17941.1
Profit & Loss A/c					17512.4	13688.7	3667.8	16082.9	9976.4	8.0	8.0
Total	251527.3	174917.9	305661.7	339126.7	408828.3	428706.2	490688.1	566736.0	812106.9	787300.9	878344.5

Appendix 4

Calculation I

1. Calculation of Mean, Standard Deviation and Coefficient of Variation of Net Assets

Fiscal Year	Net Assets (X)	X- Mean X = x	x ²
2006/07	1878.12	(1765.46)	3116849.01
2007/08	2686.78	(956.8)	915466.24
2008/09	3907.84	264.26	69833.35
2009/10	4585.40	941.82	887024.91
2010/11	5159.76	1516.18	2298801.79
	$\Sigma X = 18217.9$		$\Sigma x^2 = 7287975.30$

$$\text{Mean X } (\bar{X}) = \frac{\Sigma X}{N}, \quad \text{where } N = 5$$

$$\text{Therefore, Mean X} = \frac{18217.9}{5} = 3643.58$$

$$\begin{aligned} \text{Now, standard deviation } (\sigma) &= \sqrt{\frac{\Sigma x^2}{N}} \\ &= \sqrt{7287975.30 / 5} \\ &= 1207.31 \end{aligned}$$

$$\begin{aligned} \text{Coefficient of Variation (C.V.)} &= \frac{\sigma}{\text{Mean X}} \times 100 \\ &= 1207.31 \times 100 / 3643.58 \\ &= 33.14\% \end{aligned}$$

2. Calculation of Mean, Standard Deviation and Coefficient of Variation of Loans and Advances

Fiscal Year	Loans & Advances (X)	X- Mean X = x	x ²
2006/07	17769.10	(15223.24)	231747036.1
2007/08	27529.31	(5463.03)	29844696.78
2008/09	36827.15	3834.81	14705767.74
2009/10	40948.44	7956.1	63299527.21
2010/11	41887.69	8895.35	79127251.62
	$\Sigma X = 164961.69$		$\Sigma x^2 = 418724279.4$

$$\text{Mean } \bar{X} = \frac{\Sigma X}{N}, \quad \text{where } N = 5$$

$$\text{Therefore, Mean } \bar{X} = \frac{164961.69}{5} = 32992.34$$

$$\text{Now, standard deviation } (\sigma) = \sqrt{\frac{\Sigma x^2}{N}}$$

$$= \sqrt{418724279.4 / 5}$$

$$= 9151.22$$

$$\text{Coefficient of Variation (C.V.)} = \frac{\sigma}{\text{Mean } \bar{X}} \times 100$$

$$= \frac{9151.22 \times 100}{32992.34}$$

$$= 27.74\%$$

3. Calculation of Mean, Standard Deviation and Coefficient of Variation of Industrial Sector Loan

Fiscal Year	Industrial Sector Loan (X)	X- Mean X = x	x²
2006/07	5858.35	(4318.26)	18647369.43
2007/08	8353.73	(1822.88)	3322891.49
2008/09	10753.67	577.06	332998.24
2009/10	12046.3	1869.69	3495740.70
2010/11	13871	3694.39	13648517.47
	$\Sigma X = 50883.05$		$\Sigma x^2 = 39447517.33$

Mean $\bar{X} = \frac{\Sigma X}{N}$, where $N = 5$

Therefore, Mean $\bar{X} = \frac{50883.05}{5} = 10176.61$

Now, standard deviation (σ) = $\sqrt{\frac{\Sigma x^2}{N}}$

= $\sqrt{39447517.33 / 5}$

= 2808.83

Coefficient of Variation (C.V.) = $\frac{\sigma}{\text{Mean X}} \times 100$

= $\frac{2808.83 \times 100}{10176.61}$

= 27.60%

4. Calculation of Mean, Standard Deviation and Coefficient of Variation of Priority Sector Loan

Fiscal Year	Priority Sector Loan (X)	X- Mean X = x	x ²
2006/07	514.6	(501.72)	251722.95
2007/08	673.7	(342.62)	117388.46
2008/09	1119.6	103.28	10666.75
2009/10	1334.7	318.38	101365.82
2010/11	1339	322.68	104122.38
	$\Sigma X = 5081.6$		$\Sigma x^2 = 585266.38$

$$\text{Mean } \bar{X} = \frac{\Sigma X}{N}, \quad \text{where } N = 5$$

$$\text{Therefore, Mean } \bar{X} = \frac{5081.6}{5} = 1016.32$$

$$\begin{aligned} \text{Now, standard deviation } (\sigma) &= \sqrt{\frac{\Sigma x^2}{N}} \\ &= \sqrt{585266.38 / 5} \\ &= 342.13 \end{aligned}$$

$$\begin{aligned} \text{Coefficient of Variation (C.V.)} &= \frac{\sigma}{\text{Mean } \bar{X}} \times 100 \\ &= \frac{342.13 \times 100}{1016.32} \\ &= 33.66\% \end{aligned}$$

Calculation II

1. Calculation of correlation between deposits and loan and advances

F/Y	Deposit (X)	dx= (X-x)	dx ²	Loan (Y)	dy=Y-y	dy ²	dx*dy
2006/07	24488.86	-16685.45	278404241.7	17769.1	-15223.24	231747036.1	254006609.9
2007/08	34451.73	-6722.58	45193081.86	27529.31	-5463.03	29844696.78	36725656.22
2008/09	46698.10	5523.79	30512255.96	36827.15	3834.81	14705767.74	21182685.13
2009/10	50094.72	8920.41	79573714.57	40948.44	7956.1	63299527.21	70971674
2010/11	50138.12	8963.81	80349889.72	41887.69	8895.35	79127251.62	79736227.28
	∑X = 205871.53		∑dx² = 514033183.8	∑Y = 164961.69		∑dy² = 418724279.4	∑ dx*dy = 462622852.5

Here, N = 5

$$\text{Mean of X (x)} = \frac{\text{Sum of X}}{N} = \frac{205871.53}{5} = 41174.31$$

$$\text{Mean of Y (y)} = \frac{\text{Sum of Y}}{N} = \frac{164961.69}{5} = 32992.34$$

Now, standard deviation (σ) = $\sqrt{\frac{d^2}{N}}$

$$\sigma_x = \sqrt{\frac{514033183.8}{5}} = 10139.36$$

$$\sigma_y = \sqrt{\frac{418724279.4}{5}} = 9151.22$$

Now, for calculation of correlation coefficient (r),

$$\begin{aligned} \text{we have } r &= \frac{\sum dx dy}{N \sigma_x \sigma_y} \\ &= 462622852.5 / (5 \times 10139.36 \times 9151.22) \\ &= 0.9972 \end{aligned}$$

Calculation of Probable Error (P.Er.)

$$\begin{aligned} \text{P.Er.} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.6745 [1 - (0.9972)^2] / \sqrt{5} \\ &= 0.6745 \times 0.0056 / 2.236 \\ &= 0.0017 \end{aligned}$$

2. Calculation of correlation between shareholders' equity and loans and advances

F/Y	Loans & Advances (X)	dx=(X-x)	dx ²	Shareholders' Equity (Y)	dy=Y-y	dy ²	dx*dy
2006/07	17769.1	-15223.24	231747036.1	1878.12	-1765.48	3116919.63	26876325.76
2007/08	27529.31	-5463.03	29844696.78	2686.89	-956.71	915294.02	5226535.43
2008/09	36827.15	3834.81	14705767.74	3907.84	264.24	69822.78	1013310.19
2009/10	40948.44	7956.1	63299527.21	4585.39	941.79	886968.40	7492975.42
2010/11	41887.69	8895.35	79127251.62	5159.76	1516.16	2298741.15	13486773.86
	∑X=164961.69		∑dx²=418724279.4	∑Y=18218		∑dy²=7287745.98	∑ dx*dy = 54095920.66

Here, $N = 5$

$$\text{Mean of X (x)} = \frac{\text{Sum of X}}{N} = 164961.69 / 5 = 32992.34$$

$$\text{Mean of Y (y)} = \frac{\text{Sum of Y}}{N} = 18218 / 5 = 3643.6$$

$$\text{Now, standard deviation } (\sigma) = \sqrt{\frac{d^2}{N}}$$

$$\sigma_x = \sqrt{418724279.4 / 5} = 9151.22$$

$$\sigma_y = \sqrt{7287745.98 / 5} = 1207.29$$

Now, for calculation of correlation coefficient (r),

$$\begin{aligned} \text{we have } r &= \frac{\sum dx dy}{N \sigma_x \sigma_y} \\ &= 54095920.66 / (5 \times 9151.22 \times 1207.29) \\ &= 0.9793 \end{aligned}$$

Calculation of Probable Error (P.Er.)

$$\begin{aligned} \text{P.Er.} &= 0.6745 \frac{1 - r^2}{\sqrt{N}} \\ &= 0.6745 [1 - (0.9793)^2] / \sqrt{5} \\ &= 0.6745 \times 0.0409 / 2.236 \\ &= 0.0123 \end{aligned}$$

3. Calculation of correlation between Total Income and loans & advances

F/Y	Loans & Advances (X)	dx=(X-x)	dx ²	Total Income (Y)	dy=Y-y	dy ²	dx*dy
2006/07	17769.1	-15223.24	231747036.1	1999.76	-2107.52	4441640.55	32083282.76
2007/08	27529.31	-5463.03	29844696.78	2750.41	-1356.87	1841096.20	7412621.52
2008/09	36827.15	3834.81	14705767.74	3867.89	-239.39	57307.57	-918015.17
2009/10	40948.44	7956.1	63299527.21	5349.38	1242.1	1542812.41	9882271.81
2010/11	41887.69	8895.35	79127251.62	6568.96	2461.68	6059868.42	21897505.19
	∑X= 164961.69		∑dx²= 418724279.4	∑Y= 20536.4		∑dy²= 13942725.15	∑ dx*dy = 70357666.11

Here, N = 5

$$\text{Mean of X (x)} = \frac{\text{Sum of X}}{N} = 164961.69 / 5 = 32992.34$$

$$\text{Mean of Y (y)} = \frac{\text{Sum of Y}}{N} = 20536.4 / 5 = 4107.28$$

Now, standard deviation (σ) = $\sqrt{\frac{\sum d^2}{N}}$

$$\sigma_x = \sqrt{418724279.4 / 5} = 9151.22$$

$$\sigma_y = \sqrt{13942725.15 / 5} = 1669.89$$

Now, for calculation of correlation coefficient (r),

$$\begin{aligned} \text{we have } r &= \frac{\sum dx dy}{N \sigma_x \sigma_y} \\ &= 70357666.11 / (5 \times 9151.22 \times 1669.89) \\ &= 0.9208 \end{aligned}$$

Calculation of Probable Error (P.Er.)

$$\begin{aligned} \text{P.Er.} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.6745 [1 - (0.9208)^2] / \sqrt{5} \\ &= 0.6745 \times 0.1521 / 2.236 \\ &= 0.0459 \end{aligned}$$

4. Calculation of correlation between provision for loan loss and loans & advances

F/Y	Loans & Advances (X)	dx= (X-x)	dx ²	Provision Amount (Y)	dy=Y-y	dy ²	dx*dy
2006/07	17769.1	-15223.24	231747036.1	482.67	-122.05	14896.20	1857996.44
2007/08	27529.31	-5463.03	29844696.78	532.65	-72.07	5194.08	393720.57
2008/09	36827.15	3834.81	14705767.74	585.95	-18.77	352.31	-71979.38
2009/10	40948.44	7956.1	63299527.21	630.13	25.41	645.67	202164.50
2010/11	41887.69	8895.35	79127251.62	792.18	187.46	35141.25	1667522.31
	∑X= 164961.69		∑dx²= 418724279.4	∑Y= 3023.58		∑dy²= 56229.52	∑ dx*dy = 4049424.44

Here, N = 5

$$\text{Mean of X (x)} = \frac{\text{Sum of X}}{N} = 164961.69 / 5 = 32992.34$$

$$\text{Mean of Y (y)} = \frac{\text{Sum of Y}}{N} = 3023.58 / 5 = 604.72$$

Now, standard deviation (σ) =

$$\sqrt{\frac{d^2}{N}}$$

$$\begin{aligned}\sigma_x &= \sqrt{418724279.4 / 5} \\ &= 9151.22\end{aligned}$$

$$\begin{aligned}\sigma_y &= \sqrt{56229.52 / 5} \\ &= 106.05\end{aligned}$$

Now, for calculation of correlation coefficient (r),

$$\begin{aligned}\text{we have } r &= \frac{\sum dx dy}{N \sigma_x \sigma_y} \\ &= 4049424.44 / (5 \times 9151.22 \times 106.05) \\ &= 0.8345\end{aligned}$$

Calculation of Probable Error (P.Er.)

$$\begin{aligned}\text{P.Er.} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.6745 [1 - (0.8345)^2] / \sqrt{5} \\ &= 0.6745 \times 0.3036 / 2.236 \\ &= 0.0916\end{aligned}$$

5. Calculation of correlation between Interest Income and Net Profit

F/Y	Interest Income (X)	dx=(X-x)	dx ²	Net Profit (Y)	dy=Y-y	dy ²	dx*dy
2006/07	1584.98	-1915.85	3670481.22	501.40	-406.87	165543.20	779501.89
2007/08	2194.27	-1306.56	1707099.03	696.73	-211.54	44749.17	276389.70
2008/09	3267.94	-232.89	54237.75	900.62	-7.65	58.52	1781.61
2009/10	4653.52	1152.69	1328694.24	1265.95	357.68	127934.98	412294.16
2010/11	5803.44	2302.61	5302012.81	1176.64	268.37	72022.46	617951.45
	∑X = 17504.15		∑dx² = 12062525.06	∑Y = 4541.34		∑dy² = 410308.33	∑ dx*dy = 2087918.81

Here, N = 5

$$\text{Mean of X (x)} = \frac{\text{Sum of X}}{N} = \frac{17504.15}{5} = 3500.83$$

$$\text{Mean of Y (y)} = \frac{\text{Sum of Y}}{N} = \frac{4541.34}{5} = 908.27$$

Now, standard deviation (σ) = $\sqrt{\frac{d^2}{N}}$

$$\sigma_x = \sqrt{\frac{12062525.06}{5}} = 1553.22$$

$$\sigma_y = \sqrt{\frac{410308.33}{5}} = 286.46$$

Now, for calculation of correlation coefficient (r),

$$\begin{aligned}\text{we have } r &= \frac{\sum dx dy}{N \sigma_x \sigma_y} \\ &= 2087918.81 / (5 \times 1553.22 \times 286.46) \\ &= 0.9385\end{aligned}$$

Calculation of Probable Error (P.Er.)

$$\begin{aligned}\text{P.Er.} &= 0.6745 \frac{1 - r^2}{\sqrt{N}} \\ &= 0.6745 [1 - (0.9385)^2] / \sqrt{5} \\ &= 0.6745 \times 0.1192 / 2.236 \\ &= 0.0359\end{aligned}$$

Calculation III

1. Calculation of Multiple Regression Analysis using SPSS

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	Provision for Loan Loss, Interest Income, Interest Expenses		Enter

- a. All requested variables entered.
 b. Dependent Variable: Net Profit

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.999 ^a	.999	.996	21.20442

- a. Predictors: (Constant), Provision for Loan Loss, Interest Income, Interest Expenses

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	409912.385	3	136637.462	303.890	.042
	Residual	449.627	1	449.627		
	Total	410362.013	4			

- a. Predictors: (Constant), Provision for Loan Loss, Interest Income, Interest Expenses
 b. Dependent Variable: Net Profit

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	250.824	326.199		.769	.583
	Interest Income	.749	.092	4.060	8.146	.078
	Interest Expenses	-.756	.183	-2.827	-4.122	.152
	Provision for Loan Loss	-.861	.652	-.319	-1.322	.412

a. Dependent Variable: Net Profit

Calculation IV

1. Calculation of Trend of Loans and Advances

Year	T	Loans and Advances (Y)	X = (t-3)	X ²	XY
2006/07	1	17769.10	-2	4	(35538.20)
2007/08	2	27529.31	-1	1	(27529.31)
2008/09	3	36827.15	0	0	0
2009/10	4	40948.44	1	1	40948.44
2010/11	5	41887.69	2	4	83775.38
		$\Sigma Y =$ 164961.69	$\Sigma X = 0$	$\Sigma X^2 = 10$	$\Sigma XY = 61656.31$

Here, N = 5, mid value of t is considered 3

$$\begin{aligned}
 a &= \Sigma Y / N \\
 &= 164961.69 / 5 \\
 &= 32992.34
 \end{aligned}$$

$$\begin{aligned}
 b &= \Sigma XY / \Sigma X^2 \\
 &= 61656.31 / 10 \\
 &= 6165.63
 \end{aligned}$$

Thus, the Trend Equation Line obtained for Loan & Advances is

$$Y = a + b X$$

i.e. $Y = 32992.34 + 6165.63 X$

Rs in million

Linear Equation with base 2006/2007 = 32992.34 + 6165.63 X			
Fiscal Year	X	Trend Equation	Trend Value
2006/2007	-2	$32992.34 + 6165.63 \times -2$	20,661.08
2007/2008	-1	$32992.34 + 6165.63 \times -1$	26,826.71
2008/2009	0	$32992.34 + 6165.63 \times 0$	32,992.34
2009/2010	1	$32992.34 + 6165.63 \times 1$	39,157.97
2010/2011	2	$32992.34 + 6165.63 \times 2$	45,323.60
2011/2012	3	$32992.34 + 6165.63 \times 3$	51,489.23
2012/2013	4	$32992.34 + 6165.63 \times 4$	57,654.86
2013/2014	5	$32992.34 + 6165.63 \times 5$	63,820.49
2014/2015	6	$32992.34 + 6165.63 \times 6$	69,986.12
2015/2016	7	$32992.34 + 6165.63 \times 7$	76,151.75