

# CHAPTER- I

## INTRODUCTION

### 1.1 Background

People have always been seeking security and protection for themselves as well as their property. That led them to introduce and develop scientific and technological tools on one hand, and banking development on the other hand. Today financial sector plays vital role in our economy.

Financial sector immensely contributes to the economic growth and prosperity. Financial Institutions play pivotal role in the economic well being and future growth of a market oriented economy. Financial Institution's principal assets are financial assets or claims stocks, bonds and loans instead of real assets. In most industrialized economies today, the liabilities of financial institutions are the principal means for making payments for goods and services and their loans are the chief source of credit for all economic units in society via: business, households and government.

The basic functions of Financial Institutions are to formulate capital through collecting scattered public deposits in the economy and mobilizing them into productive sectors. It provides wide range of services to the different strata of society to facilitate the growth of trade, commerce, industry and agriculture of the national economy. It also provides remittance of money, providing letter or credit, bank guarantee, developed the plastic money like debit card, credit visa card, ATM (Automatic Teller Machine), SCT (Smart Choice Technology), as banking services and non-banking products like insurance is also going to be a tremendous opportunity provided to the public

#### 1.1.1 Evolution of Banking Industry

The evolution of banking industry had started during ancient times. There was reference to the activities of moneychanger in the temple Jerusalem in the New

Testament. In ancient Greece, the famous temples of Delphi and Olympia served as the great depositories for peoples' surplus funds and these were the centers of money lending transaction. Indeed the traces of "rudimentary banking" in ancient Rome roughly followed the Greek pattern. Banking suffered oblivion after the fall of the Roman Empire after the death of Emperor Justinian in 565 AD, and it was not until the revival of trade and commerce in the Middle Ages that the lessons of finance were learnt anew from the beginning. Money lending in the middle Ages was, however, largely confined to the Jews since the Christians were forbidden by the Canon law to indulge in the sinful act of lending money to others on interest. However, as the hold of the Church loosened with the development of trade and commerce about the thirteenth century Christians also took to the lucrative business of money lending, thereby entering into keen competition with the Jews who had hitherto monopolized the business.

As a public enterprise, banking made its first beginning around the middle of the twelfth century in Italy and the Bank of Venice, founded in 1157 was the first the public banking institution. Following it were established the Bank of Barcelona and the Bank of Genoa in 1401 and 1407 respectively. The Bank of Venice and the Bank of Genoa continued to operate until the eighteenth century. With the expansion of commercial activities in Northern Europe there sprang up a number of private banking houses in Europe and slowly it spread throughout the world. In Nepal, modern banking starts from the establishment of Nepal Bank Limited.

### **1.1.2 Development of Banking Industry In Nepal**

In the country, the development of banking is relatively recent. The record of banking system in Nepal gives detail account of mixture of slow and steady evolution in the financial and global economy of Nepalese life. Involvement of landlords, rich merchants, shopkeepers and other individual moneylender has acted as fence to institutional credit in presence of unorganized money market. It shows that some crude bank operations were in practice even in the ancient times, in Nepalese Chronicle, it was recorded that the new era known as Nepal Sambat was introduced by Shakhadhar Sakhwa, a Sudra merchant of Kantipur in 879 or 880 A.D. after having paid all the outstanding debts in the country. This shows the basic of money

lending practice in ancient Nepal. Towards the end of 8<sup>th</sup> century, Gunkam Dev had borrowed money to rebuild the Kathmandu valley. In 11<sup>th</sup> century, during Malla regime there was an evidence of professional moneylenders and bankers and money-lending business, particularly for financing the foreign trade with a Tibet. The establishment of “Tejarath Adda” could be regarded as pioneer foundation of banking in Nepal during the year 1877 AD. It was fully subscribed by the government of Kathmandu valley, which played a vital role in the banking system. There was no other financial institution set-up and no efforts to expand the services. Above all of the defects, this institution did not accept any deposits from the public. In the absence of saving mobilization the “Adda” faced financial problems making it impossible to cater to the credit and service need of the general population through out the country.

Then the government started trade with India and Tibet. Various indigenous bankers handled even the trade, because transfer of the money could be safely made only through these bankers in the absence of modern banking institutions. Hence, the need of banking institution was realized. This was even strongly supported by the situation caused during 1934 AD’s earthquake where there was a need of finance for the reconstruction of works. Reviewing these situations, the “Udyog Parishad (Industrial Development Board)” was constituted in 1936 AD. One year after its formulation, it formulated the “Company Act” and “Nepal Bank Act” in 1937 A.D. In the year 1934 AD, the establishment of Nepal Bank Ltd, with the Imperial Bank of India came into existence under “Nepal Bank Act, 1937” as the first commercial bank of Nepal, inaugurated by Late King Tribhuvan on November 1937. Rastriya Banijya Bank, the second commercial bank was established in the year 1965. RBB being the largest commercial bank plays a major role in the economy.

The financial shapes of the two old banks have a tremendous impact on the economy that is the reason why these banks still exist in spite of their bad position. Thus we can say that modern banking practices began only before the Second World War with the establishment of the first banking institute, Nepal Bank Limited, which was establishment as a joint venture of government and private individuals. Earlier banks were different from modern commercial banks in many respects. The banks, which operated in the past, combined central banking functions such as issue of currency,

with commercial banking operations like accepting deposits and financing business. In course of time this practice was abandoned and specialized institutions for the central banking functions were created. Now, a central bank can be easily distinguished from a commercial bank due to their objectives and unique functions.

The commercial banks facilitated and supervised by Central bank hold the deposits of million of persons, government and business units. It exchanges money, accepts deposits, grants loan and operates commercial transaction. They make funds available through their lending activities to borrowers, individuals, business firms and government and investing activities from small average amount to large number of productive and needed sector of the country, so as to develop the nation. With the opening of NABIL bank in 1985 the door of opening commercial banks was opened to the private sector. Then whole lot of commercial banks was opened in Nepal. Today all the Banks except Nepal Bank Ltd. and Rastriya Banijya Bank are making profit. The inefficiency of these two public sector banks has lead to the success of other private banks. As the commercial bank grew they stopped entertaining small projects. Thus a scope for opening finance companies emerged. In 2042 B.S., finance company Act was passed, but private sector kept stony silence till 2049 B.S. the first break came in month of Shrawan of that year, when first company Nepal Housing and Development Finance Company came. The second came in the Poush of the same year, Nepal Finance and Saving Company.

### **1.1.3 Background of Nepal Investment Bank Limited**

Nepal Investment Bank Ltd. (NIBL), previously 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) 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, has acquired on April 2002 the 50% shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank. The name of the bank has been changed to Nepal Investment Bank Ltd. upon approval of Bank's Annual General Meeting, Nepal Rastra Bank and Company Registrar's office with the following shareholding structure.

A group of companies holding 50% of the capital

Rastriya Banijya Bank holding 15% of the Capital.

Rastriya Beema Sansthan holding the same percentage.

The remaining 20% being held by the General Public (which means that NIBL is a Company listed on the Nepal Stock Exchange).

#### **1.1.4 Vision**

The vision of NIBL is to be most preferred provider of financial services in Nepal.

#### **1.1.5 Mission Statement**

To be the leading Nepali bank, delivering world-class service through the blending of state-of-the-art technology and visionary management in partnership with competent and committed staff, to achieve sound financial health with sustainable value addition to all our stakeholders. They are committed to do this mission while ensuring the highest levels of ethical standards, professional integrity, corporate governance and regulatory compliance.

#### **1.1.6 Company Objective**

To develop a customer oriented service culture with special emphasis on customer care and convenience.

- To increase the bank's market share by following a disciplined growth strategy.
- To leverage the technology platform and open scalable system to achieve cost-effective operations, efficient MIS, improved delivery capability and high service standards.
- To develop innovative products and services that attracts the targeted customers and market segments.
- To continue to develop products and services that reduces the cost of funds.
- To maintain a high quality asset portfolio to achieve strong and sustainable returns and to continuously build shareholders' value.
- To explore new avenues for growth and profitability.

### **1.1.7 Corporate Strategy**

Corporate strategy is “We want to be the preferred provider of financial services in Nepal having the largest capital base and delivering maximum shareholder value.”

### **1.1.8 Company Core Values and Ethical Principles**

The core values of the bank tell that the customers and the communities they serve, who they really are, what they are about, and the principles by which they pledge to conduct business. In essence, they believe that success can only be achieved by living their core values and principles:

#### **Customer Focus**

At NIBL, the prime focus of the bank is to perfect its customer service. Customers are their first priority and driving force. They wish to gain customer confidence and be their trusted partner.

#### **Quality**

It believed a quality service experience is paramount to its customers and they are strongly committed in fulfilling this ideal.

#### **Honesty and Integrity**

It ensures the highest level of integrity to the customers, creating an ongoing relationship of trust and confidence. They treat their customers with honesty, fairness and respect.

#### **Belief in the people:**

It recognizes that employees are its most valuable asset and its competitive strength. It respects the worth and dignity of individual employees who devote their careers for the progress of the bank.

#### **Teamwork**

It believes in teamwork and feed that loyal and motivated teams can produce extraordinary results. They are derived by a performance culture where recognition and rewards are based on individual merit and demonstrated track record.

## Good Corporate Governance

Effective corporate Governance procedures are essential to achieve and maintain public trust and confidence in any company. At NIBL, they are committed in following the best practices resulting in good corporate governance.

## Corporate Social Responsibility

As a responsible corporate citizen, they consider it important to act in a responsible manner towards the environment and society. Their commitment has always been to behave ethically and contribute towards the improvement of quality of life of their people, the community and greatly the society of which they are an integral part.

### 1.1.9 Promoters and Shareholders

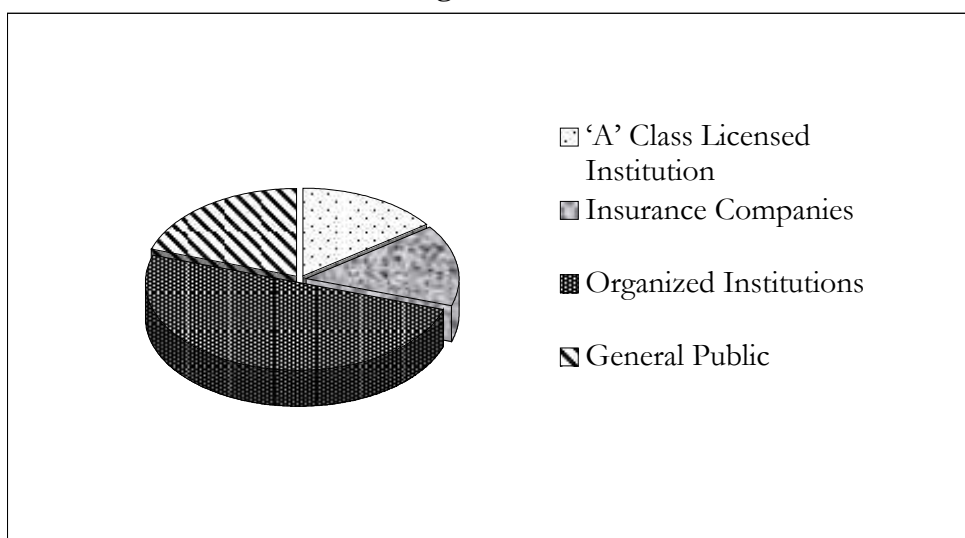
A team of experienced bankers and professionals having proven track record, who can offer us what we are looking for, manages NIBL.

**Table 1.1**  
**Share Holders of the Bank**

		Share Holding [%]
1	'A' Class Licensed Institution	15%
2	Insurance Companies	15%
3	Organized Institutions	50%
4	General Public	20%
	<b>TOTAL</b>	<b>100%</b>

[[www.nibl.com.np](http://www.nibl.com.np)]

**Figure 1.1**  
**Share Holding Pattern of the Bank**



(Share Holding Pattern of the Bank)

**Table 1.2**  
**Capital Structure of the Bank**

<b>Share Capital</b>	<b>Amount in NPRs</b>
<b>Authorized Capital</b> <b>(4,00,00,000 shares @ Rs.100)</b>	<b>Rs.4,000,000,000</b>
<b>Issued Capital</b> <b>2,40,90,977 ordinary shares @ Rs.100)</b>	<b>Rs.2,40,90,97,700</b>
<b>Paid – Up Capital</b> <b>2,40,90,977 shares @ Rs.100</b>	<b>Rs.2,40,90,97,700</b>

*[www.nibl.com.np]*

## **1.1.10 Performance Overview**

### **1.1.10.1 The Retail Banking**

Customer mapping is being done on a quarterly basis that has helped the bank to study and identify location for new branches sites and for the installation of new ATM's. As the result the bank has established 10 new branches, of which 4 branches within the capital city and rest outside the Katmandu valley. Now the Bank enjoys with 40<sup>th</sup> branches all over the country with 70<sup>th</sup> ATM, through new 18 ATM during the fiscal year 2009/10. With the aim to retain the existing account holders and attract potential clients, they have revised the existing E-Zee Saving Account, and added the popular Rs.1 Minimum balance account to their ever growing stable of retail products.

Apart from Schools, they have on-line arrangements (for the payment and other instruments) with the likes of Nepal Telecom Corporation, World link Technology, Web Surfer, Mercantile Communications and other Internet Service Providers as well as ecommerce sites like Muncha.com.

### **1.1.10.2 Card Center**

Bank has successfully started new Electra Card System under New switching system. At the end of the year 2010 card base of the bank has increased up to 250,000. Bank has 25 thousand e-banking Customers which is the highest customer among the other



banks through out the country. For the convenient of the customer, bank has started the Electronic Payment Gateway. They have issued 69,480 VISA Debit Cards during fiscal year 2007/08 with total Number of NIBL, debit cards of 115,417 in the market during FY 2007/08. They have developed a total of 600 POS machines most of which are providing significant returns. Besides all examinations fees online payments, they have been providing Student and Exchange Visitor's Program (SEVIS) – a visa fees payment service for students going to the US. They are working on issuance of prepaid virtual cards (USD) to the general public which can be used for purchase of Internet based products and services

#### **1.1.10.3 Remittance**

The bank signed remittance agreements with UAE Exchange Center (for payment through SWIFT), Habib Exchange Company and Emirates and East India Exchange in UAE, Gulf Exchange Company and City Exchange Company in Qatar, Global Money Transfers. They have started remittance business from Malaysia in FY 2007/08. The bank has also started remittance from USA & UK. Being on the establishment year of the remittance service the bank has performed the best service that helped the bank to be in the first line of the Banks' providing remittance service in the country. A number of 300 remittance disbursement agent was added all over the country increasing the total disbursement agents to 500.

#### **1.1.10.4 Corporate Banking**

The total loans and advances at the end of 2009/10 stood at Rs.40.95 billion. The branches possess a satisfactory share of the bank's lending and its growth. New proposals for hydropower projects and cement industries are being reviewed along with a consortium banks.

#### **1.1.10.5 Trade Finance**

There has been a rise in the volume of letters of credit (LC) and guarantees issued by the bank with a commensurate increase in their fee based income. The total income gained from issue of LC is 61.527 million & from guarantees is 53.463 million. i.e. in comparison to the last F.Y 2008/09 it has seem to be increased from 35.29% & 7.28% respectively.

#### **1.1.10.6 Treasury**

This year the total exchange gain was Rs 224.057 million with an increase of 20.91%. They have taken initiative to diversify their investment portfolio of foreign currencies to various financial instruments and also started using on-line software to deal in foreign currencies with various banks. They have allocated funds into principal protected products that diversify their income sources away from Nepal.

#### **1.1.10.7 Information Technology**

Prompted by the quantum growth in our retail and borrowing customer base and the consequent increase in the volume of transactions it became apparent that the current banking software was hard pressed to keep up with the growth rates. Thus, the bank, after a comprehensive study decided to invest in a new banking software - Finnacle – a product of the world renowned IT company, Infosys, India After successful implementation of Postpaid Mobile Bill Payment Collection, the bank has well demonstrated its lead in technical innovation by introducing Prepaid Mobile Recharge PIN through its e-Banking (Internet Banking) and ATM outlets for their customer's convenience – another first in the banking industry in Nepal. Customers can now simply buy a Prepaid Mobile Recharge PIN electronically from either the e Banking or 70 ATMs deployed across the country.

#### **1.1.10.8 Human Resources**

Rapid growth and branch expansion has been the cornerstone of the bank's strategic focus. With a commitment to continue to provide the best product and service delivery to all their valued customers, they have recruited many talented people and also focused on training their staff with the skills they need to achieve their organizational objectives. The bank also has a performance management system that rewards employees with incentives for achieving their assigned individual goals and objectives. The bank provides opportunity in terms of training for career advancement and fast tracks high potential employees with accelerated promotions and greater responsibilities. That has served as a good motivator for both performance and loyalty. The Bank has altogether 877 staffs, of which 41 % are female.

During this year, altogether 533 staffs were trained for different subjects like SME lending, risk management, Anti money laundering, signature verification & counter fit notes, customer service operation & NRB guidelines.

### **1.1.11 Awards**

Nepal Investment Bank Limited (NIBL) has been awarded the prestigious "Bank of the Year 2003" and "Bank of the Year 2005" and "Bank of the Year 2008" by the London based Financial Times Group's "The Banker". This honor was provided to NIBL for meeting the stringent benchmark criteria set by The Banker. The Award is based on the growth and performance in terms of capital, assets, and return on equity and management quality. NIBL was also awarded as "The Best Presented Accounts Award – 2006", for standing first in the banking sector by The Institute of Chartered Accountants of Nepal (ICAN). This recognition is a great honor and a source of pride and inspiration to the bank. It has already launched the "Premier Banking Cell" that caters to its high net worth clients and renders consultancy services in taxation, legal, insurance and travel and tours. The Bank constantly interacts with existing and potential customers to get feedback and suggestions that in turn help to design products and services to suit the requirements and expectations of customers. The Bank has started a concept of "15 Minute Banking" for the convenience of all its valued customers. Customers entering any of its branches can carry their entire banking transaction within 15 minutes. Through the best service in remittance business the Bank is awarded "The Best Remittance Partner Award 2010" by Bank Albilad for its quality & Relation with the customers'.

### **1.1.12 Corporate Governance**

At NIBL, all staffs are firmly committed to the highest standards of governance. The Board of Directors ensures that the activities of the bank are always conducted with the highest ethical standards and in the best interests of all its stakeholders. The BOD continues to ensure that the bank conducts itself as a model corporate citizen by specifying corporate values for the bank and stipulating a Code of Conduct and Ethics for the employees to ensure that the employees maintain their dignity and integrity and build customer confidence. Pursuant to Section 12 of the Bank and Financial Institutions Act, 2006 requires appointment of an independent director to the Board of the Bank. The bank has adopted one independent director in its Board. There are several Board constituted committees, each with a defined scope of work and terms of reference. These committees are responsible for providing independent and expert advice to the Board on the subjects assigned.

- Executive Credit Committee
- Audit Committee
- Human Resource Development Committee
- Construction Committee
- System Committee

The bank has adopted good corporate governance practices prescribed by the Nepal Rastra Bank as well as in other relevant statues such as the Company Act 2006 and Bank and Financial Institution Act, 2006. The team believes that the trust, confidence and goodwill reposed on the bank by the stakeholders and clients is, inter alias, an acknowledgement of the good corporate governance practices adopted by the bank.

### **1.1.13 Study Focus**

Many assets in the financial system are claims against other borrowers. As such, the value of those assets fluctuates with the strength of the borrower's balance sheet. Banks and other lending institutes must constantly balance risks and rewards. Too high a price of loan products and you lose the customer, too low, and you affect the profit margin or take a loss. Too much capital on reserve and you miss investment revenue, too little and you risk regulatory non-compliance and financial instability. Credit risk is the risk that arises because of the possibility that promised cash flows on financial claims held by FI, like loans and bonds, will not be paid in full. That affects bank's profitability because of various reasons. Credit is the most common cause of bank failures, causing virtually all regulatory environments to prescribe minimum standards for credit risk management. The basis of sound credit risk management is the identification of the existing and potential risks inherent in lending activities. Credit risk management has always been on the radar of the top management of any company, but at no other time has its scenario – plagued by increasing competition and that great nemesis the sub prime lending crisis. In this age of advancing and complex risk transfer mechanisms, it may make sense to step back and take a look into the very basic of credit risk management. It will help to identify the key priority areas and challenges in the credit risk arena and how a solution can be designed to tackle the risk. So the study is focused on the credit risk that affect severely into the bank

## **1.2 Objectives of the Study**

The main objective of the study is to examine the credit risk management system adopted by NIBL and to find various areas of improvements to manage the credit risk effectively within the bank.

The study has the following specific objectives:

- To analyze the credits and advances provided by the commercial banks.
- To find out credit quality problems faced by the bank.
- To provide suitable recommendation and suggest additional measure for improvement of credit risk management in present performed conditions related to credit risk.

## **1.3 Significance of the Study**

Though different risks are associated with the loan disbursement, the credit risk affects the credit portfolio tremendously in the commercial banks. Uncertainties of the risk in the credit portfolio that may cause from unpredicted and unanticipated consequences affect the bank and may lead to bankruptcy. Hence effective credit risk management is very important and should be taken as most challenging management factor by the bank. Managing credit risk is the combination of various processes executed by managers of the commercial bank that includes identifying, assessing, monitoring, diversifying and controlling while performing leading activities of the bank. Credit risk management deals with various types of businesses and sectors as well as correlation among various sectors in bank's portfolio. It is very much complex to manage. Despite its complexity, managers need to manage credit risk effectively by identifying all the risks that may arise in the business activities and aggregate risk of its exposures can be evaluated to certain extent.

## **1.4 Relevance of the Study**

Currently, banks are gaining the stakeholders' belief through their efficient management and professional services and playing an eminent role in the economy. The credit risk for banks is unforeseen. So, the study is focused on credit risk management practice of the bank. The study attempts to interlink the financial performance and the credit risk management practice of the bank. The study is expected to be useful to the shareholders as they can analyze the risk relating to credit. The studies are expected to be useful to the management bodies of the bank to

evaluate its performance prevailing situation of credit risk management and implement new mechanism if any and manage the risk. The study is expected to be useful to the government body, NRB for further research is the area to formulate and implement new policies and regulations. The study is expected to be useful to the other stakeholders to know the practices made over the risk management by the bank.

### **1.5 Statement of the Problem**

Although being in small economy, financial institutions are increasing that leads to the tough competition in banking sector because of wide range of operations. Due to the unhealthy competition among the banks, it lacks good investment opportunities; the recovery of the credit also became so difficult. Non performing loans are increasing year by year. The commercial banks adopt new innovative technology to provide better services and stay competitive in the market. Rapid development of technology, new way of banking business and various innovations provide tremendous opportunity for market driven commercial banks. It is one of the most risks exposing sector. The study will examine the credit risk management practices adopted by the bank as it exposes more credit risk. It is also expected that the credit risk management of Nepal has not been conducted and the study can give new insight of credit risk management practice of commercial banks. Banks are delivering numerous functions for global economy and capital markets.

Managing risks like systematic risk, credit risk, operation risk, liquidity, legal risk, counterparty risk for banking sector became extremely vital due to high degree of internal and external market dynamism. Since economic condition of the country is degrading due to conflict and overall economic sector either manufacturing or commercial sectors have undergone heavy losses, the bank must focus in the credit risk pertaining to existing lending portfolios and potential credit risks that may arise due to emerging categories of new lending in future.

### **1.6 Limitations of the Study**

Though this study will try to cover all the credit risk related sectors, it still has some limitations. This study is concentrated only on the credit management practices and the performance of Nepal Investment Bank Limited. This research study largely depends on the secondary data like annual reports (Profit and Loss Account, Balance Sheet and Financial Statements).The study is based on only financial and statistical

tools and technology. The study mainly based on last eight years data (2001 to 2008) that are not enough for the statistical calculation and cannot be generalized for entire financial sectors.

### **1.7 Organization of the Study**

The study has been divided into different five chapters as follows:

#### **Chapter I – Introduction**

This chapter describes the basic concept and background of the study. It has served orientation for readers to know about the basic information of the research area, various problems of the study, objectives of the study and need or significance of the study. It is oriented for readers for reporting or giving them perspective they need to understand the detailed information about coming chapter.

#### **Chapter II – Review Of Literature**

The second chapter of the study assures readers that they are familiar with important research that has been carried out in similar areas. It also establishes that the study as a link in a chain of research that is developing and emerging knowledge about concerned field.

#### **Chapter III – Research Methodology**

Research Methodology refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objectives in view. It describes about the various source of data related with study and various tools and techniques employed for presenting the data.

#### **Chapter IV – Presentation, Analysis and Interpretation**

This chapter analysis the data related with study and presents the finding of the study and also comments briefly on them.

#### **Chapter V – Summary, Conclusion and Recommendation**

On the basis of the results from data analysis, the researcher concluded about the performance of the concerned organization for better improvement.

## **CHAPTER II**

### **REVIEW OF LITERATURE**

The review of literature is a crucial aspect of planning of the study. The main purpose of literature review is to find out what types of works and researches have been done in past in the area of the research problem under study and what has not been done in the field of the research study being undertaken. For review study, the researcher uses different books and journal, indexes, reports; research studies published by various institutions, unpublished dissertations submitted by master level students have been reviewed, etc.

The researcher reviewed the literature into two parts:

#### **2.1 Conceptual/ Theoretical Framework**

#### **2.2 Review of related studies**

#### **2.1 Theoretical/ Conceptual Framework**

##### **2.1.1 Concept of Bank**

Simply, Bank is financial institution that accepts deposits and invests the amount in the lending activities and also it provides commercial services. In ancient time, bank emerged from Latin word *Baucus*, French word *Banque* and Italian word *Bianca*, which all means a Bench where sitting over there to invest, exchange and keep record of money and cash. These all functional activities formed as current banking industry.

Bajracharya, in his article "*Monetary policy and deposit mobilization in Nepal*" (bajracharya: 1991:3) has concluded that mobilization of the domestic saving is one of the prime objectives of the monetary policy in Nepal. And commercial banks are the most active financial intermediary for generating resource in the form of deposit of private sector and providing credit to the investors in different sectors of the economy.

##### **2.1.2 Introduction of Banking Industry**

Banks are among the most important financial institutions in the economy. They are the principal source of credit (loan able funds) for millions of households (individuals



and families), local units of government (school districts, cities, countries). Moreover, for small local businesses, banks are often the major source of credit to stock the shelves with merchandise. When the business and consumers have to make payments for the purchase of goods and services, they can use cheques provided by the banks, credit and debit cards or electronic accounts connected to a computer network. And when they need financial information and financial planning, it is the bankers to whom they turn most frequently for advice and counsel.

Worldwide, banks grant more installment loans to consumers than any other financial institution. In most years, they are among the leading buyers of bonds and notes issued by governments to finance public facilities. Banks are among the most important sources of short term working capital for businesses and have become increasingly active in recent years in making loans for new plants and equipments. Banks reserves are the principal channel for government economic policy to stabilize the economy.

Banks can be identified by the functions they perform in the economy. Now-a-days the functions of the banks as well as functions of their principal competitors are also changing. Many financial institutions – including leading security dealers, brokerage firms, mutual funds and insurance companies are trying to be as similar as possible to banks in the services they offer. Banks in turn are challenging these non bank competitors by seeking expanded authority to offer real estate and security brokerage services, insurance coverage, investment in mutual funds, and many other new products. The success of bank lies on the ability to identify the financial services the public demands, produce those services efficiently and sell them at a competitive price.

### **2.1.3 Commercial Banks**

Before defining the term commercial bank, let us define the meaning of bank and commercial.

According to H.L definitions of bank:

A banker or bank is a person or company carrying on the business of receiving moneys, and collecting drafts, for customer's subjects to the obligation of honoring

cheques drawn upon them from time to time by the customers to the extent of the amount available on their customer.” (Vaidya: 1992:3)

Commerce is the financial transactions related to selling and buying activities of goods and services. Therefore commercial banks are those banks, which work from a commercial viewpoint. They perform all kinds of banking functions such as accepting deposits, advancing credits, credit creation, and agency function. They provide short-term credit, medium term credits and long term credit to trade and industry. They also operate off balance sheet functions such as issuing guarantee, bonds, letter of credit, etc.

Commercial banks are the major component in the financial system. They work as the intermediary between depositors and lenders and facilitate in overall development of the economy, with major thrust in industrial development. Commercial banks come into existence mainly with the objectives of collecting the idle funds, mobilizing them into productive sector and causing an overall economic development. The bankers have the responsibility of safeguarding the interest of the depositors, the shareholders and the society they are serving. A sound banking system is important because of the key roles it plays in the economy: intermediation, maturity transformation, facilitating payments flows, credit allocation and maintaining financial discipline among borrowers. Banks are the gatherers of saving.

#### **2.1.4 Growth**

The banking sector in Nepal started with the establishment of Nepal Bank Limited. Today, we have 31 commercial banks in operation including Nepal Bank Limited and Rastriya Banijya bank as Public sector and others as Private sector banks. It can be shown as:

#### **2.1.5 Concept of Credit**

Credit is the sum amount of money lent by the creditor (Bank) to the borrower (Customer) either on the basis of security or without security. Sum of money lent by the bank, is known as credit (*Oxford Advanced Learners Dictionary, 1992*). Credit and advances are important items on the asset side of the balance sheet of the commercial bank. Bank earns interest on credits and advances, which is one of the major sources of income for banks. Bank prepares credit portfolio, otherwise it will

not only add bad debts but also affect profitability adversely( *Varhney and Swarrop, 1992:42*)Credit is financial assets resulting from the delivery of cash or other assets by a lender to borrower in return for an obligation of repay on specified on demand. Banks generally grants credit on four ways (*Chhabra and Juneja, 1991*).

- Overdraft
- Cash Credit
- Direct Credit
- Discounting of Bills

### **2.1.6 Types of Credit**

#### **a) Overdrafts**

It denotes the excess amount withdrawn over their deposits. In other words, bank provide sum limit of money to their value customer according to their believe and level of transaction.

#### **b) Cash Credit**

The credit is not given directly in cash but deposit account is being opened on the name of credit taker and the amount credited to that account. In this way, every credit creates deposit.

#### **c) Term Credit**

It refers to money lent in lump sum to the borrowers. It is principle form of medium term debt financing having maturity period of 1 to 8 years. Barely and Myars urge that bank credits with maturities exceeding 1 year are called term loan. The firm agrees to pay interest based on the bank's prime rate and to repay principle in the regular installments. "Special patterns of principle payments over time can be negotiated to meet the firm's special needs" (*Richard, 1996:89*).

#### **d) Working Capital Credit**

Working capital denotes the difference between current liabilities. It is granted to the customers to meet their working capital gap for supporting production process. A natural process develops in funds moving through the cycle are generated to repay a working capital credit.

**e) Priority or Deprived Sector Credit:**

Commercial banks are required to extend advances to the priority and deprived sector. 12% of the total credit must be forwarded toward priority sector including deprived sector. Rs. 2 million for agriculture cum service sector and Rs. 2.5 million for single borrowers are limit sanctioned to priority sector. Institutional support to “Agriculture Development Bank” and “Rural Development Bank” are also considered under this category. Deprived sector lending includes:

- Advances to poor/ downtrodden/weak/deprived people up to Rs.30,000 for generating income or employment.
- Institutional Credit to Rural Development Bank.
- Credits to NGOs those are permitted to carryout banking transactions for lending up to Rs.30000.

**a) Hire Purchase Financing (Installment Credit)**

FI also extend credit to their customers. It is different types such as residential building, commercial complex, Construction of warehouse, etc. It is given to those who have regular income or can earn revenue from housing project itself.

**b) Project Credit**

Project credit is granted to the customers as per project viability. The borrowers have to invest certain proportion to the project from their equity and the rest will be financed as project credit. Construction credit is short term credits made to developers for the purpose of completing proposed projects. Maturities on construction credits range from 12 months to as long as 4 to 5 years, depending on the construction credits range from 12 months to as long as 4 to 5 years, depending on the size of the specific project. The basic guideline principle involved in disbursement policy is to advance funds corresponding to the completion stage of the project. Term of credit needed for project fall under it (Johnson, 1940:83).

**c) Consortium Credit**

No single FI grant credit to the project due to single borrower limit or other reason and so two or more such institutions may consent to grant credit facility to the project

of which is baptized as consortium credit. It reduces the risk of project among them. Financials bank equal (or likely) charge on the project's sets.

**d) Credit cards and Revolving Lines of Credit**

Banks are increasingly utilizing cards and revolving lines of credit to make unsecured consumer credit. Revolving credit line lowers the cost of making credit since operating and processing cost are reduced. Due to standardization, centralized department processes revolving credits resulting reduction on administration cost. Continued borrowing arrangement enhances cost advantages. Once the credit line is established, the customer can borrow and repay according to his needs and the bank can provide the fund to the customer at lower cost.

**2.1.7 Off –Balance sheet Transaction:**

In fact, bank guarantee and letter of credit refer to off balance sheet transaction of financial institution. It is also known as contingent liability. Contingent liability pinpoints the liability, which may or may not arise during the happening of certain event. Footnotes are kept as references to them instead of recording in the book of accounts. It is non- funded based remunerative facilities but more risky than the funded until adequate collateral are not taken. Lets its two varieties be described separately.

**a. Bank Guarantee**

It is used for the sake of the customers in favor of the other party (beneficiary) up to the approved limit. Generally, a certain percent or amount is taken as margin from the customer and the customer's margin account is credited.

**b. Letter of credit**

It is issued on behalf of the customer (Buyer/Importer) in favor of the exporter (Seller) for the import of goods and services stating to pay certain sum of money on the submission of certain documents complying the stipulated terms and conditions as per the agreement of L/C. It is also known as importers letter of credit

### **2.1.8 Credit Risk**

FI transforms claims of household savers (in the form of deposit) into loans issued to corporations, individuals and government. FI accepts the credit risk on these loans in exchange for a fair return sufficient to cover the cost of funding (e.g. covering the costs of borrowing or issuing deposits) to household savers and the credit risk involved in lending. Credit risk arises because of the possibility that promised cash flows on financial claims held by FIs like loans & bonds will not be paid in full which affect severely into bank's profitability because of various reasons such as deteriorating quality of assets, risk of non payment of loan, risk of payment of higher interest rate on deposits, and risk of deterioration of bank's image. If the principal and interest of all financial claims were paid, there won't be credit risk. Credit risk for commercial bank may arise due to various reasons such as external and internal elements relating to borrowers, lack of sound mechanism for information, false financial information given by borrower, lack of transparency among banking sectors, lack of credit rating agencies, etc. Diversification is the major tool for controlling or managing unsystematic credit risk that has been exemplified in the study of bank mergers. Credit risk is the most important and greatest risk for commercial banks of Nepal as substantial portion of their balance sheet contains credit portfolio. The risk is of greatest importance to commercial banks as it can be assessed, mitigated, controlled, and hedged due to which tremendous attention is given by banks, investors, regulators, and practitioner. Individual banks and banking groups are required to have in-place a comprehensive risk management policies and processes to identify, evaluate, monitor and control or mitigate material risks. Supervisors must be satisfied that banks have a credit risk management process that takes into account the risk profile of the institution, with prudent policies and processes to identify, measure, monitor and control credit risk (including counterparty risk). This would include the granting of loans and making of investments, the evaluation of the quality of such loans and investments and the ongoing management of the loan and investment portfolios.

### **2.1.9 Risk Management**

Banks are by their very nature in the risk management business and risk is an integral part of banking. However, with the continuing increase in the scale and complexity of the banking business and the rapid growth in the volume of their financial transactions, risk management strategies include the transferable of risk to other parties, avoidance of risk, reduction of the negative effect of the risk and acceptance of the consequences of a particular risk. The design of a risk management system in a commercial bank depends among other things, on its size, capital structure, complexity of functions, technical expertise, quality of MIS and the like. It is structured to address both banking as well as non-banking risks. With a view to maximize ensures that the bank takes well-calculated business risks while safeguarding the bank's capital, its financial resources and profitability. The bank's primary business activity is commercial banking where substantial risk comprises of credit risks. To a lesser extent, commercial banking activities also expose the bank to market risk arising from reprising; maturity and currency mismatches give rise to interest rate risk, liquidity risk and foreign exchange risk. The BOD of NIBL recognizes that a critical factor in the bank's continued growth, profitability and stability is its effective risk management capabilities and risk return trade-off. In this respect, the bank ensures its risk management capabilities and also continuously promotes a pro-active risk management culture in the bank

### **2.1.10 Credit Risk Management**

Credit risk is the probability that a borrower or counterparty will fail to meet its obligations in accordance with the terms of approval of the credit. This includes non-repayment of capital and/or interest within the agreed time frame, at the agreed rate of interest and in the agreed currency. Various branches are the business units of the bank. Each branch forwards business proposals to the Head of Credit Division, Head Office. The Credit Division critically analyses the proposal from different perspectives in line with statutory, regulatory and internal guidelines. Thereafter, if the business proposal is found to be creditworthy, it is placed in the Credit Committee. The Credit Committee is comprised of seasoned bankers who evaluate credit proposals. The Committee analyzes in depth financial as well as non-financial information regarding the borrower such as business history, market situation, and

future prospects of the market, managerial capabilities, cash flow and then declines or recommends approval of the designated credit authorities. To ensure proper and adequate risk analysis and timely customer service, Credit Policy and Procedures Guide (CPPG) provides various layers in the credit approval process. The CPPG has conferred specific credit discretions ranging from the General Manager to the Executive Credit Committee, the penultimate authority of the bank.

- Adoption of international standards via their in-house Credit Policy and Procedures Guide.
- Formation of Credit Quality Control (CQC) unit for monitoring the quality of credit, both at the account level and portfolio level.
- Regular review of the credit portfolio by the Senior Management with periodic reporting to the BOD.
- Separate independent audit and inspection of borrowers by internal auditors in addition to audit and inspection by statutory auditors.
- Strict adherence to the prudential guidelines of the Central Bank on London Classification, Interest Recognition, Asset Classification, Single Obligor Limit, Sectorized Exposure etc.
- Establishing suitable exposure limits for borrowers and sectors and monitoring the limits on a regular basis.
- Risk mitigation steps with a special emphasis on collateral. Setting counterparty limits based on financial strength.
- Training of lending and legal officers on documentation and professional valuations. Developing skills and expertise of lending officers to scientifically assess project viability and customer integrity.
- Educating the staff on provisions in the banks and Financial Institution Act and other relevant statutes and the regulatory guidelines of the Central Bank.
- Seeking external legal option and advice.
- Identifying Early Warning Signals (EWS) and taking prompt action thereon.
- Constant post sanctions monitoring with special independent team for verification of hypothetical stocks.



### **2.1.11 Market Risk Management**

Market risk is the uncertainty in the future value of the bank's on balance sheet and off balance sheet financial items resulting from movements in factors such as interest rates, foreign currency exchange rates, equity prices and commodity prices. The Asset Liability Management Committee (ALCO) services as the primary oversight and decisions for the bank's management of market risk and liquidity risk of the bank. The key elements in the market risk management framework are principles, risk limits and risk measures.

### **2.1.12 Foreign Exchange Management**

Foreign exchange risk arises from exchange rate movements which affect the profit of the bank from its foreign exchange open positions. This risk is managed by setting predetermined limits on open foreign positions, the monitoring of the open foreign positions, the monitoring of the open positions against these limits and the setting and monitoring of their stop-loss mechanism. Important Risk Management Measures of the Bank to Address Market Risk and Foreign Exchange Risk include:

- A pro-active Assets Liability Management Committee (ALCO) that meets on weekly basis.
- Review of ALCO decisions by top Management and BOD Conduction of gap analysis, timely re-pricing of products and hedging of exposures.
- Risk management via forward contracts, swaps and currency options.
- Daily monitoring of Credit to Deposit (CD) ratio.
- Maintaining the Liquid Asset Ratio with a contingency buffer.
- Constant monitoring of dealer, broker, counterparty, transaction, product and currency exposure limits.
- Regular monitoring of competitor behavior and building competitor intelligence.
- Maintaining strong relationship with correspondent banks.
- Enhancing fee based income to reduce dependence on fund based income.
- Non-engagement in large scale transactions on a speculative basis.
- Separation of front and back officers at the treasury department.

### **2.1.13 Liquidity Risk Management**

The objective of liquidity management is to ensure that the bank has sufficient funds to meet its contractual and regulatory financial obligations at all times. Liquidity risk relates to the ability of the bank to maintain sufficient liquid assets at reasonable cost to meet its financial obligations as and when they fall due. The bank's liquidity policy is to ensure that all contractual commitments can be met by readily available sources of funding. In addition, liquid assets are maintained in relation to cash flows to provide further sources of funding in the event of a crisis. The bank also has excellent access to financial markets to ensure the availability of funds. With in 2010, Nepal will open its doors to foreign banks allowing them to set up branches in Nepal. Given their highly competitive strength and nature, it is imperative for Nepalese bankers to enhance their efficiency and competitiveness to meet future challenges. For this purpose, Nepalese bankers have to improve on all accounts, be it human resource, information technology, capital resource, branch network, product development, service standard and the like. One of the ways to augment capacity and pool the required resources is to go for an M & A option. In this context, they believe banks should merge to achieve synergy in operations and increased profitability.

### **2.1.14 Process of Credit Disbursement in NIBL**

#### **1. Application Form**

The first step of credit is to fill the application form i.e. the customer must apply for the loan specifying the amount of loan that is required and the purpose of the loan. The applicant has to specify all the information in the form.

#### **2. Information Sheet**

After applying for the loan, information sheet should be filled by the applicant provided by the bank. That includes: Firm ownership License detail History of the organization Promoters'/managers' experience Process of the firm (production, raw material, supply and distribution through direct interview Market (clients) Balance Sheet Sister concerns Other sources of income Business risk Loan from other banks

### **3. Proposal Credit Memorandum**

After getting all the required information, proposal for credit memorandum is made analyzing SWOT Analysis (competition and environment benefit and soundness of the (firm) and including all the information gained from information sheet and direct interview, the credit policy and collateral provided by the applicant after value calculation through the agents either by IBB Engineering & Consultancy or Apex Construction or Debendra & Associates specifying the return from the loan.

### **4. Executive Committee**

The proposal credit memorandum is forwarded to the executive committee to finalize whether it is appropriate to provide the loan to the applicant. Executive committee is the team of the bank that determines that whether the loan is going to be good or not and whether to disburse or not.

### **5. Disbursement**

After the executive committee reviews the loan application or credit proposal, it approves the loan and then the loan is disbursed either by cash as spot loan or loan commitment.

#### **2.1.15 Measurement of Credit Risk**

Measurement of credit risk on individual loans or bonds is crucial of an FI manager is to Price a loan or values a bond correctly, and (2) set appropriate limits on the amount of credit extended to any one borrower or the loss exposure it accepts from any particular counterparty. For example, the Industry Perspectives box highlights how the default of one major borrower can have a significant impact on the value of an FI. Thus managers need to manage the FI's loan portfolio to protect the overall FI from the failure of a single borrower. Management of overall loan portfolio is equally important. Traditionally, managing the credit portfolio was risk management. But the marketplace is broader and more complex today, and best-practice institutions know they need to measure and manage risk across the entire enterprise. We recognize that managing Credit Risk is still essential to enterprise-wide risk management, so we offer products and services to institutions and individuals involved in retail, commercial, and corporate credit risk. RMA is the premier provider of commercial credit education and information.

### **2.1.16 Default Risk Models**

Economists, analysts, and FI managers have employed many different models to assess the default risk on loans. These vary from the relatively qualitative to the highly quantitative models. Proper financial risk management is one of the main pillars of financial health of the banks. But traditional techniques for credit risk assessment, widely used by commercial banks have their limitations. One of such drawback is that they analyze credit risk of particular bank, based on information of previous periods, and not at the moment of the transaction. The models that can be used to manage the default credit risk are as follows.

#### **Qualitative Models**

The FI manager has to assemble information from the private sources as credit and Deposit files and from external sources, credit rating agencies in absence of publicly available information on quality of borrower. A number of key factors enter into the credit decision that include. Borrower specific factor

#### **Reputation:**

The borrower's reputation that involves the borrowing – lending history of the credit applicant that can be established only over time through repayment and observed behavior which is difficult for the new borrowers.

#### **Leverage/Capital structure/Ratio of debt to equity:**

It affects the probability of its default. Large amount of debt, like loans and bonds increase the borrower's interest charges and pose a significant claim on its cash flows.

#### **Volatility of earnings:**

A high volatile earning stream increases the probability that the borrower cannot meet fixed interest and principal charges for any given capital structure.

#### **Collateral:**

Loan pricing decision depends upon the degree of collateral or assets backed security of the loan as it gives the first claim to the lender.

## **Market specific factor**

### **Business cycle:**

The position of the company economy in the business cycle phase is very important to an FI in assessing the probability of borrower default as if in recession phase of business cycle of luxury products would be risky than the necessity products in recession.

### **Level of interest rate:**

Generally, high interest rates are correlated with higher credit risk. It may encourage borrowers to take excessive risks or encourage only the most risky customers to borrow.

### **Credit Scoring Models**

Mathematical models that use observed loan applicant's characteristics either to calculate a score representing the applicant's probability of default or to sort borrowers into different default risk classes. From the economic and financial characteristics, an FI manager can establish important factors explaining default risk, evaluate relative degree of that factor, improve pricing of default risk, easily screen out bad loan applicants, and calculate reserves needed to meet expected future loan losses. Consumer loan may include income, assets, age, occupation of the applicant and cash flow information, financial ratios, statistical tools like linear probability models are required for Commercial and Industrial loans.

### **Derivation of Credit Risk/Credit Derivation**

It is to analyze the risk premiums inherent in the current structure of yields on corporate debt or loans to similar risk rated borrowers. Rating agencies like Standard & Poor (S&P) categorized corporate bond issuers into different classes of credit quality rating. For example, AAA, AA, A indicates investment quality borrowers. Derivative market has already been grown in the western countries as banks, securities firms, corporations and other institutes exercised hedging their credit risk exposure or realign their lending portfolio or against adverse moves in credit quality of their investment. It has not been used yet in Nepal. It will be totally new approach for Nepali FIs. Credit derivatives may be used to manage realized default risk as

credit swaps. Swaps will help banks to manage the risk relating to default risk, interest rate risk and currency exchange rate risk.

Nepal has stated that there was growing market for credit derivatives that had provided powerful new tools for managing credit risk that are less costly and more effective than traditional models.

## **2.2 Review of Related Studies**

### **2.2.1 Review of Articles and Journals**

**Ganesh Shrestha, (1998)** in his article “*Lending Operations of Commercial Banks of Nepal and its Impact on GDI*” presented the objectives to make an analysis of contribution of commercial banks lending to the Gross Domestic Product (GDP) of Nepal. He has set a hypothesis that there has been a positive impact of lending of commercial banks to the GDP. In research methodology, he has considered GDP as the dependent variable and various sectors of lending viz. agriculture, industrial, commercial, service, general and social sectors as independent variable. A multiple regression technique has been applied to analyze the contribution.

The multiple analysis have shown that all the variable except service sector lending have positive impact on GDP. Thus in conclusion, he has accepted the hypothesis, i.e. there has been positive impact on GDP by the lending of commercial banks in various sectors of economy, except service sector investment.”

**Bajracharya (2007)**, in his article “*Monetary Policy and Deposit Mobilization In Nepal*” has concluded that mobilization of the domestic saving is one of the prime objectives of the monetary policy in Nepal. And commercial banks are the most active financial intermediary for generating resources in the form of deposit of private sector and providing credit to the investors in different sectors of the economy.

**Joshi (CEO-NIC Bank)** , in an interview published on Himalayan Times dated 22 Dec. 2006 , comments that the strong and healthy banking sector will definitely help boost national economy.

He adds that if commercial banks ever face survival threats or management inefficiency, it will primarily due to poor corporate governance. As number of banks and financial institutions is increasing, the market, on the contrary, is facing more difficulties. The bankers, in such a bottle neck competitions, urge the state to create more investment opportunities in the areas where financial institutions can prosper.

In Josh's view the business sector is currently on a wait and watch mood as there is no clear indication from the government on various issues like investors' security and property rights. However, he seems optimistic in a changed environment. According to him, "Government has to clarify its vision on economic policy so that business could survive and expand. "The time is running out to identify new areas for investment and encourage the market forces to function," he opines adding that the government should remain only as a regulator and let the private sector do their job properly and honestly. To increase the market pie for banking sector, colossal investment in infrastructure, tourism and hydropower are urgently required, which ultimately could bring a turn-around in the economic growth within a few years time,"

"Sound and safe environment has to be created to motivate the foreign investors to invest on infrastructure as the government alone cannot invest the huge amount needed for infrastructure," in Joshi's view adding that without enough foreign direct investment, the economy will face troubles to take off smoothly. "Even in hydropower, capital subsidy is required to boost investment. Talking about nonperforming assets, Joshi adds, "Due to poor corporate governance conflict of interest and poor management skills ratio of non-performing assets has increased."

### **2.2.2 Review of Thesis**

**Ojha** (2002), in his dissertation about "*Lending Practices*" has written that the commercial banks have to expand their credit in the area of rural economy so as to compromise between the liquidity and credit need such economy. This helps in minimizing the idle fund in business and at the same time contribute to the national economy. The banks should also increase the volume of credit in the sector of

agriculture as the ratio of contribution made by the banks in this priority sector is decreasing.

Researcher has found out that following the normal guidance of Nepal Rastra Bank and acting upon reduces many of the credit risk arising from borrower's defaulter, lack of proper credit appraisal, defaulter by blacklisted borrowers, and professional defaulter, The over confidence of commercial banks regarding credit appraisal efficiency and negligence while taking information from Credit Information Bureau (CIB) has caused many of the bad debts in these banks. He thinks that these banks have to follow the directives of NRB strictly and be more cautious and realistic while granting loans and advances.

The high volume of liquidity reveals that a degree of lending strength has been prevailing in all of the commercial bank. The lack of reliable lending opportunities and fear of losing the principle in rural sector has been keeping these banks less oriented towards the lending function. Hence, the government should take appropriate action to initiate these banks to attract the flow of credit in rural economy. Posing the compulsions by directives does not create long term healthy lending practices unless the commercial banks are not self motivated to flow credit in this sector.

**Joshi** (2003), In "*A Comparative Study of Financial Performance of Standard Chartered Bank Nepal Limited and Everest Bank Ltd.*" States that the mean current ratio of EBL is slightly higher than that of the SCBNL and the variability of ratio of EBL is more consistent than s SCBNL in comparison, The mean ratio of cash and bank balance to total deposit of SCBNL is lower in comparison to EBL. SCBNL has better liquidity position than EBL because of the high volume of liquidity indicates the inability of the bank to mobilize its current assets. Moreover SCBNL's ratio are homogenous than EBL. The mean ratio of cash and bank balance to current assets of SCBNL is lower in comparison to EBL. Similarly, SCBNL's ratio of the study period is more consistent than EBL. The mean ratio of loan and advances to total deposit of EBL is higher than SCBNL. It can be said that EBL used to provide greater loan and advance in comparison to its total deposit than SCBNL. Likewise, SCBNL's ratio seems to be variable than EBL. The mean ratio of investment on government securities to total working fund of SCBNL is higher than EBL. Consequently, it has



consistency in maintaining the ratio than EBL. The mean ratio of return on loan and advances of SCBNL has found to be significantly greater than EBL with more consistency than that of EBL. The mean ratio of credit risk of SCBNL is lower than that of EBL's ratio are more consistent than that of SCBNL. Growth ratio of deposit are consistent than that of SCBNL is lower i.e. 19.28 % in comparison to EBL i.e. 76.46%.

The main statement of the problem of his research is the investment decision is the major tool of financial institution. There are many finance companies and commercial banks operating in Nepal. The fast growth of such organizations has made pro-rata increment in collecting deposits and their investment, they collect adequate amount from the mass, and however they could not find or locate new investment sectors required to mobilize their fund on the changing context of Nepal. Many banks or companies succumbed to liquidation although they had sustainable investment capacity. The increasing rate of liquidity has caused downward trend in investment sectors. It has ensured bad impact on interest rate of depositors, lower market value of shares, etc. for the assessment of such adverse impact, this study has shown to contrast and analyze the investment policy of joint venture banks, Joint venture banks viz. Standard Chartered Bank Nepal Ltd. And Everest Bank Ltd. The main objectives are to compare investment policy of concerned banks, find out the empirical relationship among total investment, deposit, deposit utilization, loan and advance, net profit and outside assets and comparison of SCBNL and EBL.

**Regmi** (2004), in the study Entitled "*Credit Management of Commercial Banks with Reference to Nepal Bangladesh Bank and Bank of Kathmandu*" states that commercial banks are those banks which work from commercial view point. They perform all kinds of banking functions such as, accepting deposits, advancing credits, credit creation and management of credit and advances. Portfolio management helps to minimize or manage the credit risks and spreading over the risks to various portfolios. Banks earn interest on credit and advances which is one of the major sources of income for banks. On average, 5 years of research period, cash and bank balance to total deposits of ratio of NB bank and BOK is 12.75% and 14.12% respectively. Likewise NB Bank and cash and bank balance 1.584 times of current

deposits and BOK has cash and bank balance 1.014 times of current assets. NB bank: most of the credit and advances almost 70% is provided as assets guarantee. The assets guarantee credit is increasing period by period. After assets guarantee bank provides credit on bills guarantee credit is 3421.3 millions (76.1% of total credit) and in the last period it is 3347.99 millions (58.2% of total credit)

The main statement of the problem of his research is that Nepal is a small country with small market. Economic condition of the county is degrading. Nepal being Agriculture County needs more investment in this sector. Nevertheless, commercial banks are rather concerned in industrial and foreign projects. As a result, the credit extended to this sector is unsatisfactory. Besides, they are not even fulfilling the NRB's regulation of 12% investment of their total loans to priority sectors like agriculture, cottage and small industries and services. Similarly, the banks are not following the diversification principle i.e. they are not considering the investment portfolio position. A good portfolio theory indicates diversification of investable funds to reduce risks. Hence, the principle do not put all the eggs in a basket" really does not apply in context of Nepalese commercial banks. As a result, many banks today could not recover their loan because, in the past, a major portion of their investment were made in garment, carpets and hotel sectors that has now come to the brick of extinction. The objectives of this research are to analyze the functions, objectives, activities, credits and advances procedure and recovery status of the NB bank and BOK.

**Shrestha, S,** (2005) in his dissertation "*Credit management with special reference to Nepal SBI Bank Ltd*" illustrates that lending is one of the most important parts of function of a commercial bank and composition of loan and advances directly affects the performance and profitability of the bank. There is intense completion in banking business with limited market and less investment opportunities available. Every bank is facing the problem of default loan and there is always possibility of a certain portion of the loan and advances, profitability deposits position of Nepal SBI Bank Limited is analyzed and its contribution in total profitability has been measured.

The main statement of the problem of his study is that credit management is the essence of commercial banking. Consequently, the formulation and implementation of sound credit policies are among the most important responsibilities of bank

directors and management. Well conceived credit policies and careful credit practices are essential if a bank is to perform its credit creating function effectively and minimize the risk inherent in any extension of credit management effects on the company's profitability and liquidity. So it is one of the crucial decisions for the commercial banks. Measuring the credit performance in quality, efficiency and contribution of profitability, liquidity position and its effect on credit performance and measure the growth rate and propensity of growth based of trend analysis are the main objectives of his dissertation.

**Mirsra** (2007), entitled her thesis "*Credit Management of Everest Bank Limited*" illustrate that liquidity position; cash reserve ratio shows the more liquidity position. Cash and bank balance to current assets ratio shows that the bank is able to maintain good financial condition. Cash and bank balance to current assets ratio shows that the bank's ability to meet the daily cash requirement of their customer's deposit. That is why liquidity position of the bank is better. In the aspect of profitability position, interest income to interest expenses ratio shows the more profitable salivation. In addition, total income to total expenses ratio shows that the overall predominance of the bank is satisfactory. Return on loan and advances shows profitable position of EBL. Analysis of assets management ratio, loan advances to total assets ratio shows the better performance but loan and advances to total deposit position is minimum than the averages. Whereas, investment in loan and advances is safe and does not take any risk. That's why, assets management position of the bank shows better performance in the latest year. After analyzing the lending efficiency of the bank, the loan lo provision to loan advances indicates the better performance in the latest year. The interest expenses to total deposit ratio shows the improving efficiency of the bank. EBL has sufficient liquidity. It shows that the bank has not got investment sectors to utilize their liquid money. This is to recommend that cash and bank balance of EBL is high. Bank's efficiency should be increased to satisfy the demand of depositors at low level of cash and bank balance does not provide returns to the bank. Therefore, some percentage of the cash and bank balance should be invested in profitable sectors. Bank should open up its branches in remote areas with the objective to provide the banking services and minimum deposit amount should be reduced. The main objectives of this study are to evaluate the credit management and to examine the impact of deposit in liquidity.

## **Research Gap**

The purpose of this study is to develop some expertise in one's area, to see what new contribution can be made and to receive some ideas, knowledge and suggestions in relation to credit management of Nepal Investment Bank. Thus, the previous studies can't be ignored because they provide the foundation to the present study. In other words, there has to be continuity in the research process. This continuity in research is ensured by linking the present study with the past research studies. Here, it is clear that the new research cannot be found on the same topic, i.e. "*Credit Management of Nepal Investment Bank*". Therefore, to fulfill this gap, this research is selected taking previous research studies as guideline. To complete this research work many books, articles, journals and various published and unpublished dissertations are also followed as guideline to make the present research smooth and easier to make.

In this regard, here we are going to analyze the different procedures regarding credit management, which is only considered by Nepal Investment Bank. Our main research problem is to analyze whether NIBL has right level of liquidity or not and as well as to see where it is using proper financial and statistical tools or not Similarly, trend analysis of investment and profit are reviewed to make this research complete. Therefore, this study is useful to the concern bank as well as different persons such as: shareholders, investors, policy makers, stock brokers, state of government and so on.

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

Research methodology describes the methods and process applied in the entire aspect of the study .the main objective of this research is to measure the credit risk of the selected commercial banks and to study the various management techniques and principles used by the Nepalese commercial banks to manage the credit risk. Thus, this chapter consists of the research methodology applied in the study for the fulfillment of the stated objectives. Thus, the overall approach to the research is presented in this chapter. This chapter consists of research design, sample size and selection process, data collection procedure and data processing and presentation techniques and tools.

#### **3.2 Research Design**

This study is the combination of descriptive and analytical type of research .historical data are used to identify and analyze the credit risk of a bank in the past period .similarly management system ,organizational structure policies for mitigating the credit risk and the credit risk management procedures have been presented in descriptive from so as to identify the current status from which pitfalls can be identified .From collection of past data and information from key informants, the credit risk management system has been analyzed and recommendations have been for improving the credit risk management of banks. . Secondary data are mostly used for this research purpose. The major sources of secondary data are as follows: Annual report of Nepal investment bank NRB directives. Economy survey of government of Nepal and ministry of finance. Newspaper, journals, articles and various magazines. Dissertation of central library of T.U. and library of Shanker Dev Campus.

#### **3.3 Population and Sample**

Since the research topic is about “Credit Risk Management of Nepal Investment Bank Limited”, so here all the total 31 commercial banks established in Nepal constitute or

form the population. The population for the study comprises all the Nepalese commercial banks. Among that population, the researcher has selected the commercial bank *named NIBL*, as the sample under the study. The sample is chosen with an objective to find out the credit risk management of NIBL, which has successfully completed glorious 25 years. Likewise, financial statements of five years (beginning from 2005/2006 to 2009/2010) are selected as samples for the purpose of it.

### **3.4 Data Collection Procedure**

Especially the annual report of Nepal investment bank limited and the website of concern bank limited are taken as main source of data collection for purpose of study .NRB publication such as economic report and bulletin, banking and financial statistics, annual report of NRB etc .other main source is website of NRB and website of Nepal share market. Most of the data and substance are obtain from above source.

### **3.5 Method of Data Analysis Technique**

For the purpose of the study all collected primary as well as secondary data are arranged, tabulated under various heads and them after disunities and statistical analysis have been carried out to enlighten the study. Mainly financial methods are applied for the purpose\ of this study. Appropriate statistical tools are also used. To make the study more specific and reliable, the researcher uses two types of for tool analysis,

- 1 Financial analysis
- 2 Statistical analysis.

#### **3.5.1 Financial tool**

Stakeholders of a business firm perform several types of analysis on a bank is financial statements. All of these analyses rely on comparisons or relationship of data that enhance the utility or practical value of accounting information.

##### **3.5.1.1 Ratio Analysis**

A ratio is simply one number expressed in term of another and as such it express the quantitative relationship between any two numbers. Ratio refers to the numerical or

quantitative relationship between two items/variables. A ratio is calculated by dividing one item of relationship with the other. A ratio can be expressed in term of percentage, proportion, and as a coefficient. A ratio is a figure or a percentage representing the comparison of two variables or any substance. The relationship between two accounting figure, expressed mathematically is known as financial ratio. The technique of ratio analysis is part of the whole process of analysis of financial statement of any business and industrial company especially to tame output and credit decision. It is defined as the systematic use of ratio to interpret the financial statements so that the strength and weakness of a firm as well as its historical performance and current financial condition can be determined. Thus ratio analysis is useful to evaluate, judgment and taking appropriate decision.

### **A. Liquidity Ratio:**

Liquidity means the ability of a firm to meet its short-term or current obligations. Liquidity ratios are used to measure the ability of a firm to meet its short-term obligations and the present cash solvency as well as ability to remain in debt. It's not good for having excess liquidity and low liquidity in any organization. Inadequate liquidity can lead to unexpected cash short falls and reduce profitability as well as inadequate liquidity can lead to the liquidity insolvency of the institution. On the other hand, excessive liquidity can lead to two asset yields and contribute to poor earnings performance. To find –out the ability of bank or financial institution, following ratios are analyzed and find liquidity ratios to identify the liquidity position.

#### **i. Cash Reserve Ratio**

It's also known as cash and bank balance to total deposit ratio. This ratio shows the ability of banks immediate funds to cover their deposit. Higher the ratio shows higher liquidity position and ability to cover the deposits and vice versa. Total deposit includes current deposit saving, fixed deposit, call short deposit, and other types of deposit. This ratio can be calculated using the following formula.

$$\text{Cash Reserve Ratio} = \frac{\text{Cash \& Bank Balance}}{\text{Total Deposit}}$$

## **ii. Cash and Bank Balance to Current Assets Ratio**

Cash and bank balance are liquid current assets. This ratio measures the percentage of liquid fund with the current assets. Higher ratio indicates the banks sound ability to meet the daily cash requirement of their customers' deposit. So bank has to maintain cash and bank balance to current assets ratio properly.

Cash and bank balance to Current Assets

$$\text{Ratio} = \frac{\text{Cash \& Bank Balance}}{\text{Current Assets}}$$

## **iii. Cash and Bank Balance to Interest Sensitive Deposit ratio**

Saving deposit is deposited by public in a bank with objectives of increasing their wealth. Interest rate plays important role in the follow of interest sensitive deposit. Fixed and current deposit is not interest sensitive. Fixed deposits have a fixed term to maturity and Current deposits are not sensitive towards interest rate. The ratio of cash and bank balance to interest sensitive deposits measure the bank ability to meets its sudden out flow of interest sensitive deposit to the change interest rate.

$$\text{Cash \& bank balance to interest sensitive deposit ratio} = \frac{\text{Cash \& Bank Balance}}{\text{Sensitive Deposit}}$$

## **B. Activity Ratio**

It is also known as efficiency turnover ratio or assets management ratio. It measures how efficiently the firm utilizes the assets. Turnover means; how much number of times the assets flow through a firm's operations and into sales. Greater rate of turn over or conversion indicates more efficiency of a firm managing and utilizing its assets, being other things equal. Various ratios are follows.



### **i. Credits Advances to Fixed Deposit ratio**

Fixed deposits are the long-term bearing obligations and credits and advances are the major sources of investment to generate the income by the commercial banks. This ratio measures how many times the amount is used in credits and advances income per unit to fixed deposit for the income generating purpose. The ratio is slightly different from the former one, because it only includes the fixed deposits, whereas the former one includes all the deposits. The following formula is used to obtain this ratio.

$$\text{Credits and advances to fixed ratio} = \frac{\text{Credit and advances}}{\text{Fixed Deposit}}$$

### **ii. Credits advances to total deposits ratio**

It is also known as loan advance to total deposit ratio. Commercial banks utilize the outsider's fund for profit generation purpose. Credits and advances to deposit ratio shows whether the banks are successful to utilize the outsiders funds (i.e. total deposit) for the profit generating purpose on the credit and advances or not. Generally, a high ratio reflects higher efficiency to utilize outsider's fund and vice-versa. The ratio can be calculated by using following formula.

$$\text{Credits and advances to total deposit ratio} = \frac{\text{Credit and advances}}{\text{Total Deposits}}$$

### **iii. Credit and advances to total assets ratio**

It measures the ability in mobilizing total assets into credits and advances for profit generating income. A higher ratio is considered as an adequate symbol for effective utilization of total assets of bank into credit and advances which creates opportunity to earn more and more. It is calculated as:

$$\text{Credit and Advances to Total Assets Ratio} = \frac{\text{Credit and advances}}{\text{Total Assets}}$$

### **iv. Non-performing assets to total assets ratio**

This ratio shows the relationship of non-performing assets and total assets. This ratio represents the proportion between the non-performing assets and total assets of bank.

It shows the how much assets is non-performing or idle in the total assets of bank. Higher NPA to total assets ratio indicates the worst performance, which reduces the profitability of bank. Higher ratio shows the low efficient operating of the credit management and lower ratio shows the more efficient operating of credit management.

$$\text{Non-performing assets to total assets ratio} = \frac{\text{Non - performing Assets}}{\text{Total Assets}}$$

### **C. Leverage ratio**

It is also known as capital structure ratio. Leverage ratio helps to test long term solvency position of the firm. It informs us the relationship of long-term debt with total capital or shareholder fund. The use of finance is refers by financial leverage. . These ratios are also called solvency ratio or capital structure ratio. These ratios indicate mix of funds provided by owners and lenders. To judge the long-term financial position of the firm, leverage ratios are calculated. This ratio highlights the long-term financial health, debt servicing capacity and strength and weaknesses of the firm. Following ratios are included under leverage ratios.

#### **i. Total debt to equity ratio:**

It shows the relationship between debt and equity. Total debt to equity ratio measures the relative proportion of outsiders and owner's funds employed in the total capitalization. Hear, total debt includes total deposits, bills payable and other liabilities of the bank and equity includes paid up capital, retained earning and reserves. The formula used to determine the ratio is:

$$\text{Total debt} = \text{long term debt} + \text{current liability}$$

#### **ii. Total debt to total assets ratio:**

It examines the relationship between borrowed funds (i.e. total debt) and total assets. It shows the relative extent to which the firm is using borrowed money. A lower ratio is preferable since it reduces the distress of the creditors by using more amount of equity on total access. Total debt includes both current liabilities and long term debt. Creditors prefer low debt ratios because the lower the ratio, the greater the cushion

against creditors losses in the event of liquidation. Stockholders on the other hand may want more leverage because it magnifies expected earnings. It is computed as:

$$\text{Total Debt to Total Assets Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

### **iii. Total Assets to Net worth Ratio:**

The ratio is calculated to find out the proportion of owner's fund to finance for the total assets. Total Assets comprises of the total value of the assets side of balance sheet where as net worth is the sum of the share capital plus reserves and retained of the bank. It is calculated to see the amount of assets financed by net worth.

$$\text{Total Assets to Net worth Ratio} = \frac{\text{Total Assets}}{\text{Net Worth}}$$

## **D. Profitability Ratio**

The ratio shows the profitability conditions of the bank. Profit is essential for the survival of bank so it is regarded as the engine that drives the banking business and indicates economic progress. Profitability ratio is calculating to measure the management ability regarding how well they have utilized their funds. Lending is one of the major functions of commercial bank so following are the various types of ratio, which should the contribution of loan and advances in profit and help to be investor whether to invest in particular firm or not.

### **I. Net Profit to Gross Income Ratio**

The ratio measures the position of profitability of the company to total income. This shows the sound and weakness of the company to utilize its resources. Higher ratio shows the higher efficiency of management and lower ratio shows the lower efficiency of the management. The formula of net profit to gross income ratio is

$$\text{Net profit to gross income} = \frac{\text{Net Profit}}{\text{Gross Income}}$$

## **ii. Interest Income to Total Income Ratio**

The ratio measures the volume of interest incomes to total income. The high ratio indicated the banks performance on other fee-based activities. The high ratio indicates the high contribution made by lending and investing activities.

$$\text{Interest income to total income ratio} = \frac{\text{Interest Income}}{\text{Toal Income}}$$

## **iii. Operating profit to Loan and Advances Ratio**

Operating profit to loan and advances ratio measure the earning capacity of commercial bank. Operating profit to loan and advances ratio is calculated by dividing operating profit by loan and advances.

$$\text{Operating profit to loan and advances ratio} = \frac{\text{operating profit}}{\text{Loan And Advances}}$$

## **iv. Return on loan and advances ratio**

This ratio measures the earning capacity of the commercial bank through it find mobilization as loan and advances. Higher ratio indicated greater success to mobilize fund as loan and advances and vice versa. Mostly loan and advances includes cash, credit, bank overdraft, bills purchased and discounted.

$$\text{Return on loan and advances} = \frac{\text{Net profit}}{\text{Loan And Advances}}$$

## **v. Net profit to Total Assets**

This ratio shows the relationship of net profit and total assets and is to determine how efficiently the total assets and is to determine how efficiently the total assets have been used by the management. This ratio indicates the ability of generation profit per

rupees of total assets. It also evaluates the present return on the total assets as a guide for return expected on future purchase of assets. Higher the ratio shows the more efficient operating of management and lower the ratio shows the low efficient operating of management. This ratio is computed by

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

#### **vi. Earning Per Share (EPS)**

Earning per share measures the profit available to the cash equity holders. It only ensures the overall operational efficiency bank. It is the profit tax figure EPS tells us what profit the common share holder get for every share.

$$\text{Earning per share} = \frac{\text{Profit After tax}}{\text{No. of common share}}$$

#### **vii. Price Earning Ratio**

This ratio shows the relationship between earning per share and market value per share. This ratio measures the profitability of the firm. Higher ratio shows the higher efficiency of the management and lower ratio shows the lower efficiency of the management. The ratio is computed by.

$$\text{Price Earning Ratio} = \frac{\text{Market Price Per Share}}{\text{Earning per Share}}$$

### **E. Lending Efficiency Ratio**

This ratio is concerned with measuring the efficiency of bank. This ratio also shows the utility of available fund. One following is the various types of lending efficiency ratio.

#### **i. Loan Loss Provision to Total Loan and Advances Ratio**

Loan loss provision to total loan and advances describes the quality assets that a bank holding. The provision for loan loss reflects the increasing probability of non-

performing loan. The provision of loan mean the net profit of the banks will come down by such amount. Increase in loan loss provision decreases in profit result to decreases in dividends but it is positive impact is that strengthens financial conditions of the bank by controlling the credit risk and reduced the risks related deposits. So, it can said that loan suffer it only for short term while the good financial conditions and safety of loans will make banks prosperity regulating increasing profits for long term. The low ratio indicates the good quality of assets of in total volume of loan and advances. High ratio indicates more risky assets in total volume of loan advances.

$$\text{Loan loss provision to total loan and advances} = \frac{\text{Loan Loss Provision}}{\text{Total Loan and Advances}}$$

### **ii. Non-Performing Loan to Total Loan and Advances**

This ratio shows the relationship of non-performing loan and total loan and advances and is to determine how efficiently management has used the total loan and advances. Higher ratio shows the low efficient operating of the management and lower ratio shows the more efficient operating of credit management.

$$\text{Non-performing loan to total loan and advances} = \frac{\text{Non - performing Assets}}{\text{Total Loan and Advances}}$$

### **iii Interest Expenses to Total Deposit Ratio**

This ratio measures the percentage of total interest paid against total deposit. A high ratio indicates higher interest expenses on total deposit. Commercial banks are dependent upon its ability to generate cheaper fund. The cheaper fund has more the probability of generating loans, advances, and vice versa.

$$\text{Interest expenses to total deposit ratio} = \frac{\text{Interest Income}}{\text{Total Deposits}}$$

### 3.5.2 Statistical tools

For supporting the study, statistical tool such as mean, standard deviation, coefficient of variation, correlation and diagrammatic cum pictorial tools have been used under it.

#### Arithmetic Means (average)

Arithmetic mean also called ‘the mean’ or ‘average’ as most popular and widely used measure of central tendency. Arithmetic mean is statistical constants which enables us to comprehend in a single effort of the whole. Arithmetic mean represents the entire data by a single value. It provides the gist and gives the birds’ eye view of the huge mass of a widely numerical data. It is calculate as:

$$\bar{X} = \frac{1}{n} \sum_{i=1}^n X_i$$

Where,

$\bar{X}$  = Mean value or Arithmetic mean

$\sum_{i=1}^n X_i$  = sum of the observation

N = number of observation

#### Correlation coefficient(r)

Correlation may be defined as the degree of linear relationship existing between two or more variables. These variables are said to be correlated when the change in the value of one results change in another variable. Correlation is categorized three types. They are simple, partial and multiple correlations. Correlation may be positive, negative or zero.

Correlation can be classified as linear or non-linear. Here, we study simple correlation constant considering them to have no serious effect on the dependent.

### Formula Correlation Coefficient (r)

$$r_{x_1x_2} = \frac{N \sum X_1 X_2 - \sum X_1 \sum X_2}{\sqrt{N \sum X_1^2 - \sum X_1^2} \sqrt{N \sum X_2^2 - \sum X_2^2}}$$

$N \sum X_1 X_2$  = No. of product observation and sum of product  $X_1$  and  $X_2$

$\sum X_1 \sum X_2$  = Sum of product  $X_1$  and sum of product  $X_2$

### Coefficient of variation (c.v.)

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The coefficient of variation is measures the relative measures of dispersion, hence n capable compare two variables independently in term of variability

$$C.V. = \frac{\dagger}{X} * 100$$

† = Standard deviation

x =sum of the observation

### Probable error

The probable error of the coefficient of correlation helps in interpreting its value. With the help of probable error, it is possible to determine the reliability of the value of the coefficient in so far as it depends on the conditions of random sampling. The probable error of the coefficient of correlation is obtained as follows:

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

Here,

r= correlation coefficient

N=Number of Paris of observations



If the value of 'r' is less than the probable error, there is no evidence of correlation, i.e. the value of 'r' is not at all significant. Then, if the value of 'r' is more than six times the probable error, the coefficient of correlation is practically certain, i.e., the value of 'r' is significant.

### **Time Series Analysis**

Time series is used to measure the change of financial, economical as well as commercial data .the least square method to trend analysis has been used in measuring the trend analysis. This method is widely used in practice. The straight line trend of a series of data is represented by the following formula.

$$Y=a+bx$$

Here,

Y is the dependent variable, a is y intercept or value of y when  $x=0$ , b is the slope of the trend line or amount of change that comes in y for a unit change in x

## **CHAPTER IV**

### **PRESENTATION ANALYSIS AND INTERPRETATION**

#### **4.1 Introduction**

This chapter needs the analysis, presentation, interpretation and major findings of relevant data of Nepal Investment Bank Ltd. In order to fulfill the objectives of research study. To obtain better result, the data has been analyzed according to the research methodology as mentioned in the third chapter. The purpose of this chapter is to introduce the mechanics of data analysis and interpretation. With the help of this analysis, efforts have been made to highlight credit risk management of NIBL as well as other cases and problems as well. For analysis, different types of analytical methods and tools such as financial ratio analysis as well as statistical analysis have been used. This chapter deals with various aspects of credit risk management as financial ratios, impact of deposit in liquidity, priority sector lending, lending efficiency, correlation and trend analysis.

#### **4.2 Financial Statement Analysis**

Financial analysis is done by applying various financial tools in order to clean picture on the viability of the project. The financial analysis is done to ascertain the liquidity, profitability, leverage, debt servicing and interest servicing ability of the firm. The concept of financial statement analysis has been already discussed in previous chapter. Here, we study and analyze the data by using accounting tools.

##### **4.2.1. Liquidity Ratio**

Liquidity refers to the ability of a firm to meet its short-term or current obligations. So liquidity ratios are used to measure the ability of a firm to meet its short-term obligations. Inadequate liquidity can lead to unexpected cash short falls that must be covered at excessive costs reducing profitability. In the worst case, inadequate liquidity can lead to the liquidity insolvency of the institution. To find out the ability of the bank to meet their short term obligations, which are likely to mature in the

short period, the following ratios are developed under the liquidity ratios to identify the liquidity position.

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

Cash and bank balance to total deposit ratio shows that percentage relation between cash and bank to total deposit. It means the liquid balance available in respect to total deposit of the bank whereas the difference between the cash & bank balance to total deposit is liabilities is noted as fully liberalized, 10%-15% as largely liberalized, 15%-25% as partially repressed and above 25% as completely repressed, it is ranked by 3,2,1 and 0 respectively. The ratio calculations are as follows:

**Table 4.1**  
**Cash and Bank Balance to Total Deposit**  
(Amount in Million)

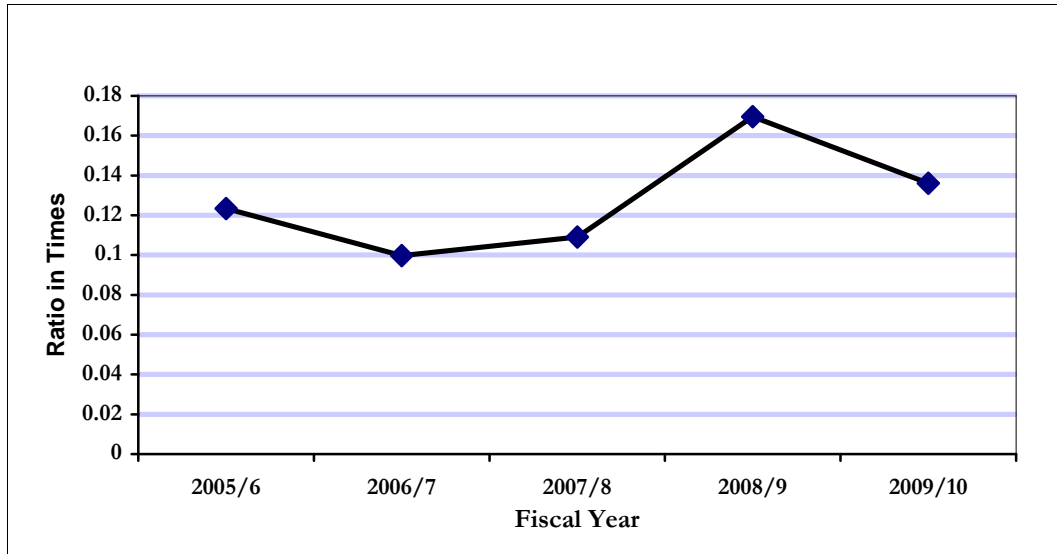
<b>Year</b>	<b>Cash and Bank Balance (Rs)</b>	<b>Total Deposit(Rs)</b>	<b>Ratio ( Times)</b>
2005/6	2336.521	18927.306	0.1234
2006/7	2441.514	24488.856	0.0997
2007/8	3754.942	34451.726	0.1090
2008/9	7918.004	46698.010	0.1696
2009/10	6815.890	50094.725	0.1361
<b>Mean</b>			<b>0.1276</b>

*Source: Annual Report of Nepal Investment Bank (2005/06-2009/2010)*

In above table shows that the cash and bank balance to total deposit ratio of NIBL is in fluctuating trend. The ratios are. 0.1235, .0.0997, 0.1090, 0.1696 and 0.1361 respectively. The average mean ratio is 0.1276 times in the study period. The highest ratio is 0.1695 times in year 2008/09 and the lowest ratio 0.0997 times in year 2006/07. These all ratio shows that the bank maintains good liquidity position. Therefore, it shows that the bank has much utilization of resources. Cash and bank balance to total deposit ratio is shown in the following graph.

**Figure No.4.1**

**CASH AND BANK BALANCE TO TOTAL DEPOSIT RATIO**



**ii) Cash and Bank Balance to Current Deposit Ratio:**

This ratio shows the relations between cash and bank balance to current deposit. Cash and bank balance is aggregate outcome of deposits of customers plus other income and reserves of the bank. Bank is responsible to customer to pay upon demand of customers at any time. So it is a very important factor. The ratio between cash and bank to current deposit are as follows.

**Table 4.2**

**Cash and Bank Balance to Current Deposit**

**(Amount Rs. in Million)**

<b>Year</b>	<b>Cash and Bank Balance</b>	<b>Current Deposit</b>	<b>Ratio ( Times)</b>
2005/6	2336.521	1705.7	1.3698
2006/7	2441.514	2175	1.1225
2007/8	3754.942	3139	1.1962
2008/9	7918.004	3756	2.1081
2009/10	6815.890	4026	1.6930
<b>Mean</b>			<b>1.4979</b>

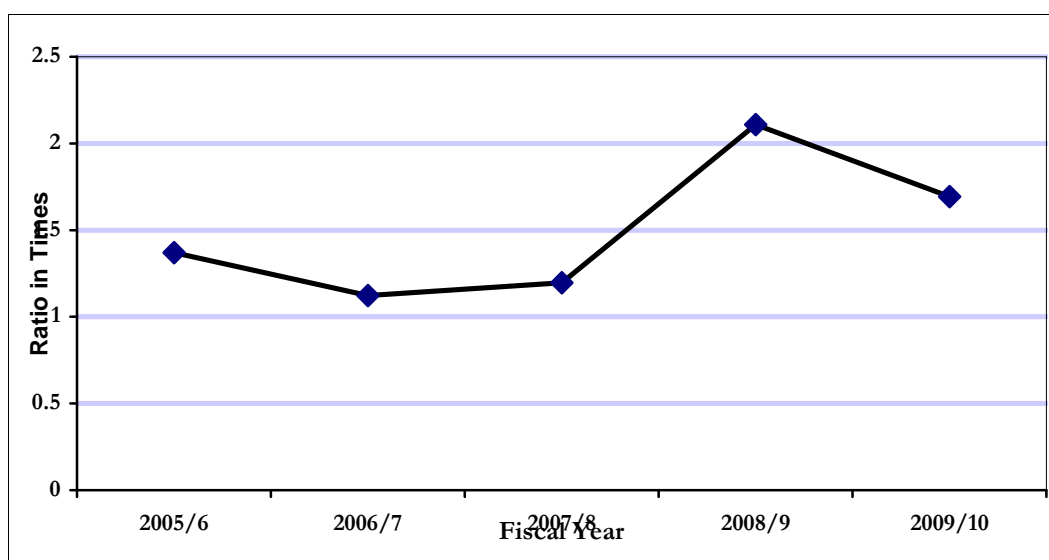
*Source: Annual Report of Nepal Investment Bank (2005/06 - 2009/2010)*

Above Table shows the calculation of Cash and Bank Balance to current deposit of NIB. The ratios are 1.3698, 1.1225, 1.1962, 2.1081 and 1.6930 times respectively

from the first year to last year of the research period. The mean average calculation is 1.4979 times, which means consistency in this ratio during the research period. Cash and bank balance would be sufficient to meet the demand of current depositors. Therefore here seems to be making more cash and bank balance to meet the current deposit. Otherwise, the bank demands for their deposits. Here, the mean ratio is only 1.4979, so more cash and bank balance is required to meet the current depositor's requirement.

**Figure 4.2**

**CASH AND BANK BALANCE TO TOTAL DEPOSIT RATIO**



**ii) Cash and Bank Balance to Interest Sensitive Deposit Ratio**

The ratio of cash and bank balance to interest sensitive deposits measures the ability to meet its sudden outflow of interest sensitive deposits due to the change in interest rate.

**Table No 4.3**  
**Cash and Bank balance to interest sensitive deposit Ratio**

(Amount Rs. in million)

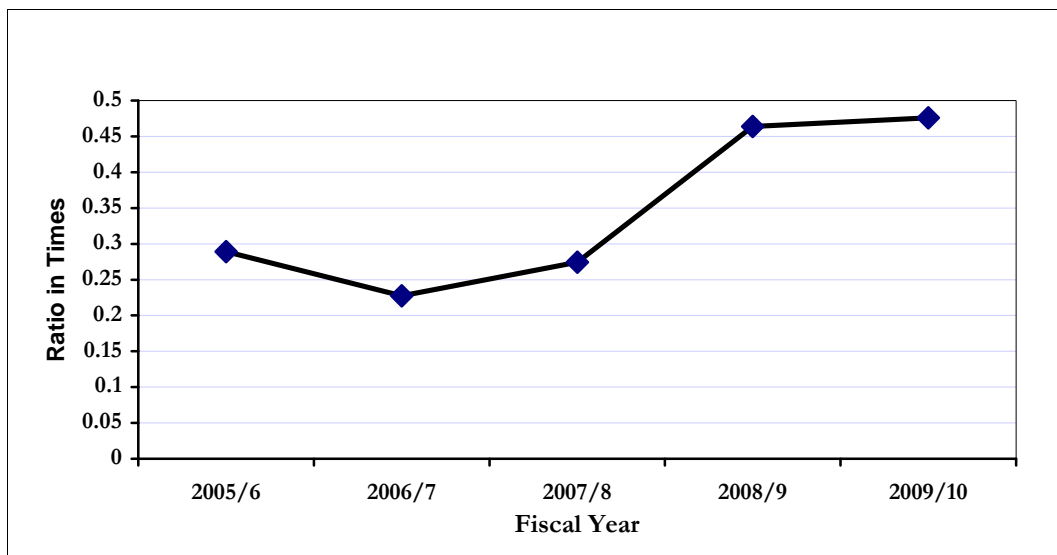
Year	Cash and Bank Balance	Sensitive Deposit	Ratio ( Times)
2005/6	2336.521	8082	0.2891
2006/7	2441.514	10742	0.2273
2007/8	3754.942	13689	0.2743
2008/9	7918.004	17066.25	0.4640
2009/10	6815.890	14324.25	0.4758
<b>Mean</b>			<b>0.3461</b>

Source Annual Report of Nepal Investment Bank: (2005/06 - 2009/2010)

Table 4.3 shows that the cash and bank balance to interest sensitive ratio of NIBL is in fluctuating trend. The ratios are 0.2891, 0.2273, 0.2743, 0.4640 and 0.4758 respectively according to consecutive year. The mean ratio is 0.3461 times. This means that the bank is able to maintain this ratio in the good financial condition. The highest ratio is 0.4758 times in the year 2009/10 and the lowest ratio of 0.2273 times in the year 2006/7. In year, 2009/10 this bank mobilized deposits 0.4758 times and has maintained good financial condition. The sensitive deposit ratio is volatile so the condition of sensitivity of the bank is also fluctuating. Therefore, credit management neither good nor bad position of the NIBL. Cash, bank balance and interest sensitive deposit are presented in following diagram.

**Figure No 4.3**

**Cash and Bank Balance to Interest Sensitive Deposit Ratio**



#### 4.2.2 Assets Management Ratio

Asset management means management and utilization of all about of asset. It is also known as turnover or efficiency ratio or assets management ratio. It measures how efficiently the firm employs the assets. Turnover means how many times the assets flow through a firms operation and into sales. Greater rate of turnover or conversion indicates more efficiency of a firm in managing and utilizing its assets, being other things equal. There are some ratios as examined under.

### i) Credit and Advances to Fixed Deposit Ratio

Credit and advances clearly state that it is the assets of the bank and fixed deposit is the liability. It is also known as loan and advance ratio. So, this is the ratio between assets and liability. This help to show the ratio of Loan and Advances to fixed deposit. We can also conclude that what part of the credit and advances is initiated against fixed deposit.

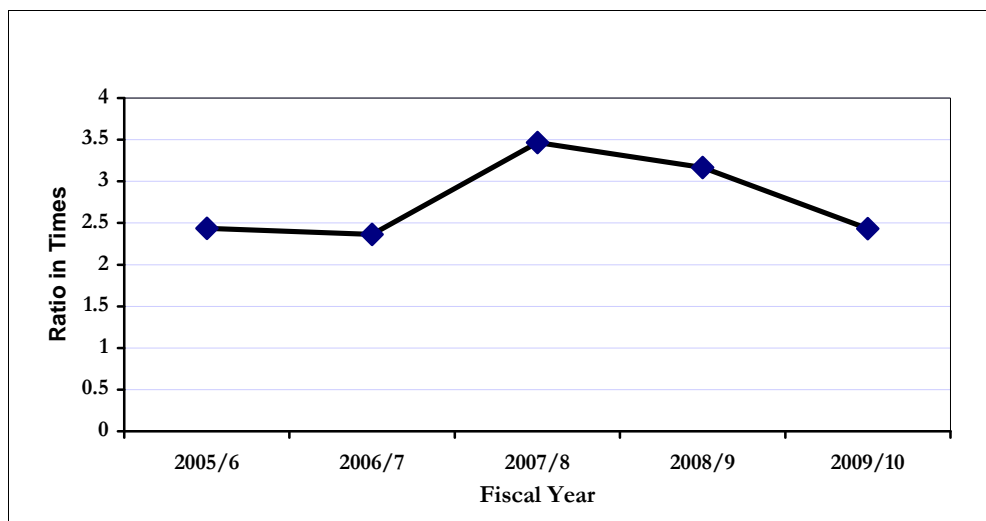
**Table 4.4**  
**Credit and Advances to Fixed Deposit Ratio**  
(Amount Rs. in million)

Year	Credit and Advances	Fixed Deposit	Ratio ( Times)
2005/6	13178	5413	2.4345
2006/7	17769	7517	2.3638
2007/8	27529	7944	3.4654
2008/9	36827	11633	3.1657
2009/10	40948	16825	2.4338
<b>Mean</b>			<b>2.7726</b>

*Source: Annual Report of Nepal Investment Bank (2005/06 - 2009/2010)*

Table 4.4 shows that Loan and advances to fixed deposits ratios of NIBL in increasing trend overall. The ratio of NIBL in 2005/6 was 2.4345 and it increased to 3.4654 in 2007/8 and trend to decrease to 2.4338 in the F.Y 2009/10. The mean ratio is 2.7726 times. This means that the bank is able to maintain this ratio in the good financial condition. Credit and advance to fixed deposit ratio is presented in following diagram.

**Figure No.4.4**  
**Credit and Advances to Fixed Deposit Ratio**



## ii) Credit and Advances to Total Deposit Ratio

Credit and advances is the investing activities of the bank and total deposit is the deposit amount of the bank collected from its customers or depositor. So, we are trying to find out the ratio between credit and advances to total deposit. This ratio measures the extent to which the bank is successful to manage its total deposit on loan and advances for the purpose of income generation. A high ratio indicates better mobilization of collected deposit and vice-versa. However, it should be noted that too high ratio might not be better from liquidity point of view.

**Table No.4.5**

### **Credit and Advances to Total Deposit Ratio**

(Amount Rs. in million)

<b>Year</b>	<b>Credit and Advances</b>	<b>Total Deposit</b>	<b>Ratio ( Times)</b>
2005/6	13178	18927.306	0.6962
2006/7	17769	24488.856	0.7256
2007/8	27529	34451.726	0.7991
2008/9	36827	46698.010	0.7886
2009/10	40948	50094.725	0.8174
<b>Mean</b>			<b>0.7654</b>

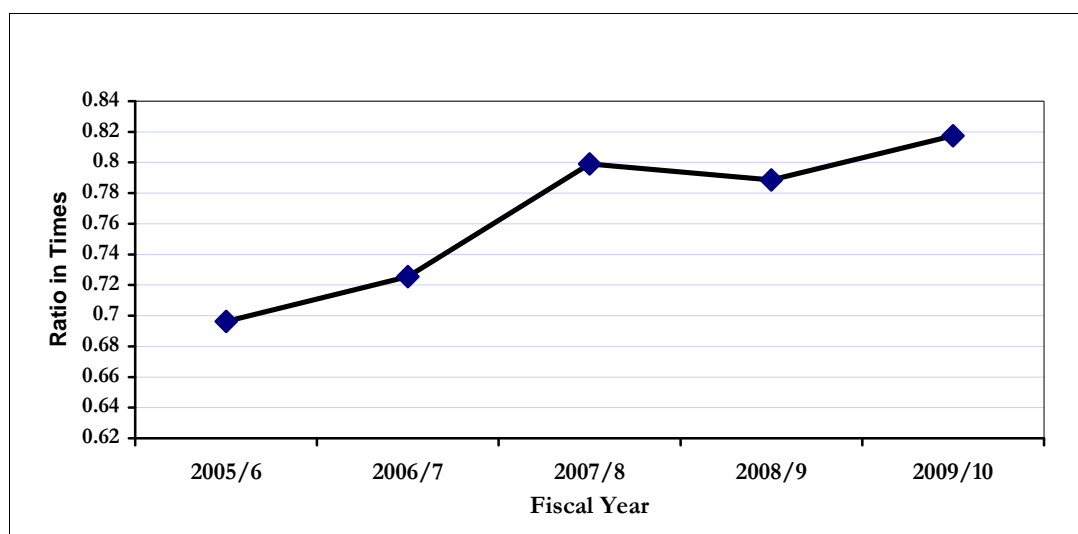
*Source: Annual Report of Nepal Investment Bank (2005/06 - 2009/2010)*

Above table shows that the total loan advances to total deposit ratio of NIBL is in increasing trend. The ratios are 0.6962, 0.7256, 0.7991, 0.7886 and 0.8174 respectively according to consecutive year. The mean ratio is 0.7654 times. This means that the bank is able to proper mobilization of collected deposit. The highest ratio is 0.8174 times in the F.Y 2009/10 and the lowest ratio of 0.6962 times in the year 2005/6. In year, 2009/10 this bank mobilized deposits 0.8174 times and has maintained good financial condition. According to NRB directives above 70% to 90% of loan and advances to total deposit ratio is consider as the better mobilization of the collected deposit. So all of the year the bank tried to meet the NRB requirement or it has utilized its deposit to provide loan. This means that the credit management is in good position of the bank. Loan & advances to total deposit in following diagram.



**Figure No 4.5**

**Credit and Advances to Total Deposit Ratio**



**iii) Credit and Advances to Total Assets Ratio:**

This ratio is determined to find out the relation between credit and advances to total assets. Credit and advances is the part of total assets.

**Table No 4.6**

**Credit and Advances to Total Assets Ratio**

(Amount Rs. in million)

Year	Credit and Advances	Total Assets	Ratio ( Times)
2005/6	13178	21732	0.6064
2006/7	17769	28074	0.6329
2007/8	27529	39406	0.6986
2008/9	36827	53596	0.6871
2009/10	40948	57936	0.7068
<b>Mean</b>			<b>0.6664</b>

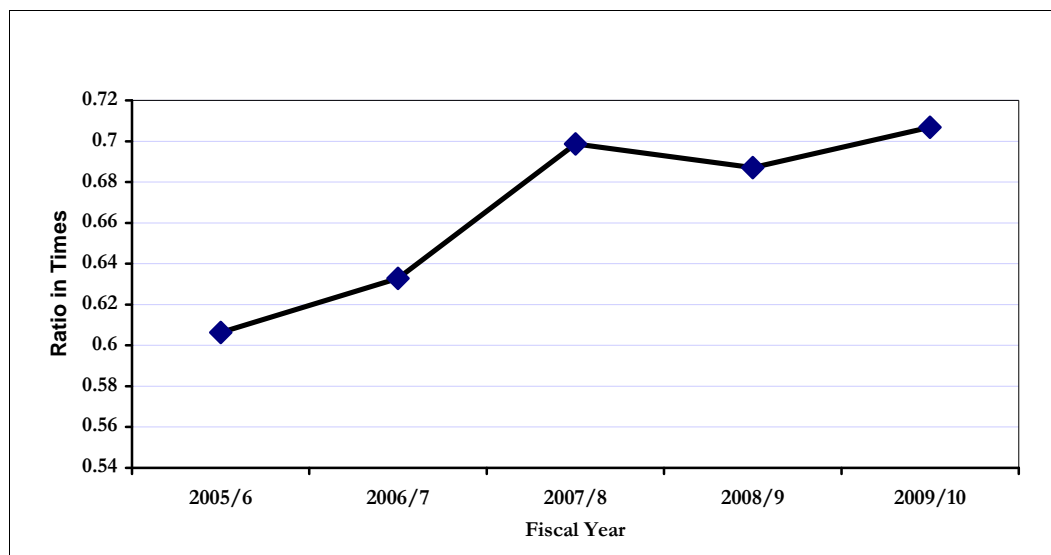
*Source: Annual Report of Nepal Investment Bank (2005/06 - 2009/2010)*

Above table shows that the total loan advances to total assets ratio of NIBL is in mixed or fluctuating trend. The ratios are 0.6064, 0.6329, 0.6986, 0.6871 and 0.7068 respectively according to the consecutive years. The mean ratio is 0.6664 times. This means that the bank is able to proper utilize total assets in the form of credit and advances. The highest ratio is 0.7068 times in the year 2009/10 and the lowest ratio of 0.6064 times in the year 2005/6. Consistency in the utilization of assets in the form of

credit and advance is satisfactory because the fluctuation of ratio is minimum. Loan & advances to total assets is represented in following diagram.

**Figure No 4.6**

**Credit and Advances to Total Assets Ratio**



**iv) Non performing Assets to Total Assets Ratio**

Lower the non-performing assets ratio is good and higher the ratio is bad. This ratio measures lending opportunity of the bank.

**Table No.4.7**

**Nonperforming assets to Total Assets Ratio**

(Amount Rs. in million)

Year	Non performing Assets	Total Assets	Ratio ( %)
2005/6	272.79	21732	1.26
2006/7	421.97	28074	1.50
2007/8	309.47	39406	0.79
2008/9	375	53596	0.70
2009/10	-	57936	0.00
<b>Mean</b>			<b>0.85</b>

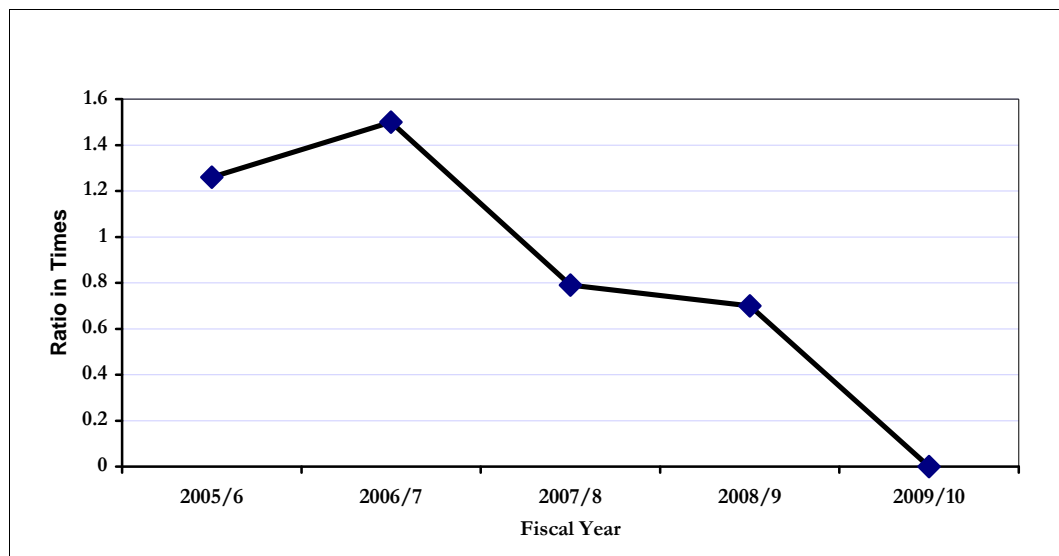
*Source: Annual Report of Nepal Investment Bank (2005/06 - 2009/2010)*

Above table shows that the total nonperforming assets to total assets ratio of NIBL is in decreasing trend. The ratios are 1.26%, 1.50%, 0.79%, 0.70%, and 0% respectively

according to consecutive year. The mean ratio is 0.85%. This means that the bank is able to obtain higher lending opportunity. The highest ratio is 1.50% in the year 2006/7 and the lowest ratio of 0% in the year 2009/10. Therefore, credit management is in good position of the bank.

**Figure No. 4.7**

**Nonperforming assets to Total Assets Ratio**



#### **4.2.3 Leverage Ratio**

These ratios are also called capital structure or solvency ratio. These ratios include mix of funds provided by owners and lenders. As a general rule, there should be an appropriate mix of debt and owner's equity in financing the firm's assets. To judge the long term financial position of the firm, leverage ratios are calculated. This ratio highlights the long term financial health, debt servicing capacity and strength and weaknesses of the firm.

Following ratios are included under these leverage ratios.

##### **i) Total Debt to Equity Ratio:**

Total debt is the liability of the firm and it is payable towards its customers. Debt includes the value of deposits from customers, loan and advance payable, bills

payable and other liabilities. Equity is the share capital and reserve of the firm. This ratio shows the comparison between total debt and equity.

Total debt = Debentures & Bonds + Borrowings + Deposits + Bills Payable + Proposed & Undistributed Dividends + Income tax liabilities

Total Equity = Share Capital + Reserve and Surplus

**Table No. 4.8**

**Total Debt to Equity Ratio**

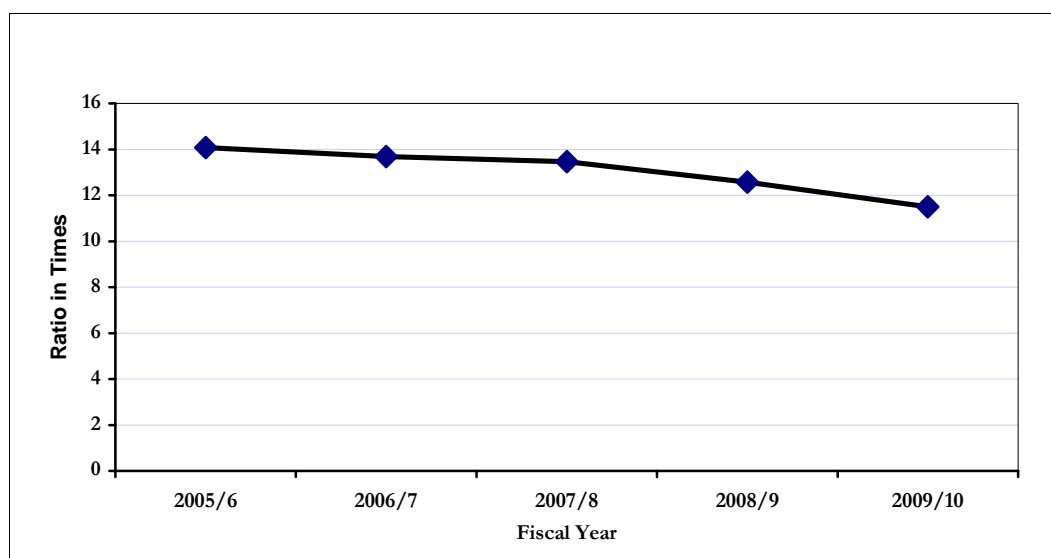
(Amount Rs. in Million)

<b>Year</b>	<b>Total Debt</b>	<b>Total Equity</b>	<b>Ratio (Times)</b>
2005/6	19915	1415	14.07
2006/7	25713	1878	13.69
2007/8	36187	2687	13.47
2008/9	49103	3908	12.57
2009/10	52720	4585	11.50
<b>Mean</b>			<b>13.06</b>

*Source: Annual Report of Nepal Investment Bank (2005/06 - 2009/2010)*

Above Table shows the calculation of Debt to total Equity ratio of NIBL. The ratio has decreased from the period 2005/06 and continuously is in decreasing trend till the research period. The ratios are 14.07, 13.69, 13.47, 12.57 and 11.50 times respectively from the first year to last year of the research period. The mean average calculation is 13.06 times which means consistency in this ratio during the research period. Excess amount of debt capital structure results heavy burden in payment of interest. Risk of liquidation increases if the debt is not repaid in time. High gearing ratio may provide high return to the equity shareholders if the bank makes profit. Ratio is represented in the figure as follows:

**Figure No. 4.8**  
**Total Debt to Equity Ratio**



**ii) Total Debt To Total Assets:**

A metric used to measure a company's financial risk by determining how much of the company's assets have been financed by debt calculated by adding short term and long term debt and then dividing by the company's total assets. In general, creditors prefer a low debt ratio and owner prefer a high debt ratio in order to magnify their earning on one hand and to maintain their concerned control over the firm on the other hand.

**Table No.4.9**  
**Total Debt to Total Assets Ratio**

**(Amount Rs. in Million)**

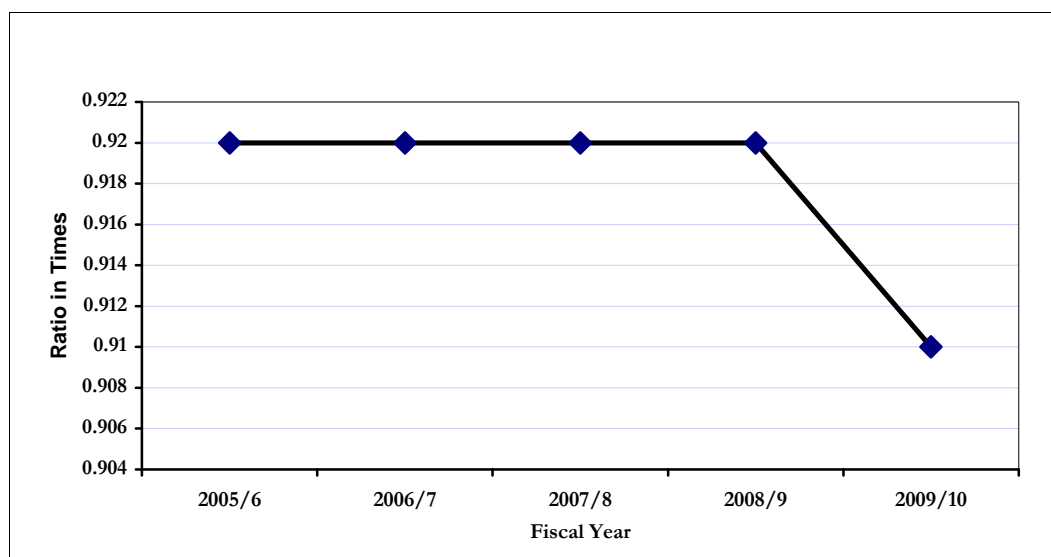
<b>Year</b>	<b>Total Debt</b>	<b>Total Assets</b>	<b>Ratio (Times)</b>
2005/6	19915	21732	0.92
2006/7	25713	28074	0.92
2007/8	36187	39406	0.92
2008/9	49103	53596	0.92
2009/10	52720	57936	0.91
<b>Mean</b>			<b>0.92</b>

*Source: Annual Report of Nepal Investment Bank (2005/06 - 2009/2010)*

In the above table the ratios are 0.92, 0.92, 0.92, 0.92 and 0.91 times from the study period of 2005/6 to 2009/10 respectively. The average mean ratio in five years

research period is 0.92times. This means, almost 92% of total assets is financed by the outsider's funds. It is seen that there is not much deviation in the ratio for the five years study period. It means no change in the policy on this ratio for the five years. Ratio is represented in the figure as follows:

**Figure 4.9**  
**Total Debt to Total Assets Ratio**



#### iv) Total Assets to Total Net worth Ratio

The ratio is calculated to find out the proportion of owners fund to finance for the total assets. Total Assets comprises of the total value of the assets side of balance sheet where as net worth is the sum of the paid-up capital plus reverses and retained of the bank, it is calculated to see the amount of assets financed by net worth.

**Table No. 4.10**  
**Total Assets to Net worth Ratio**

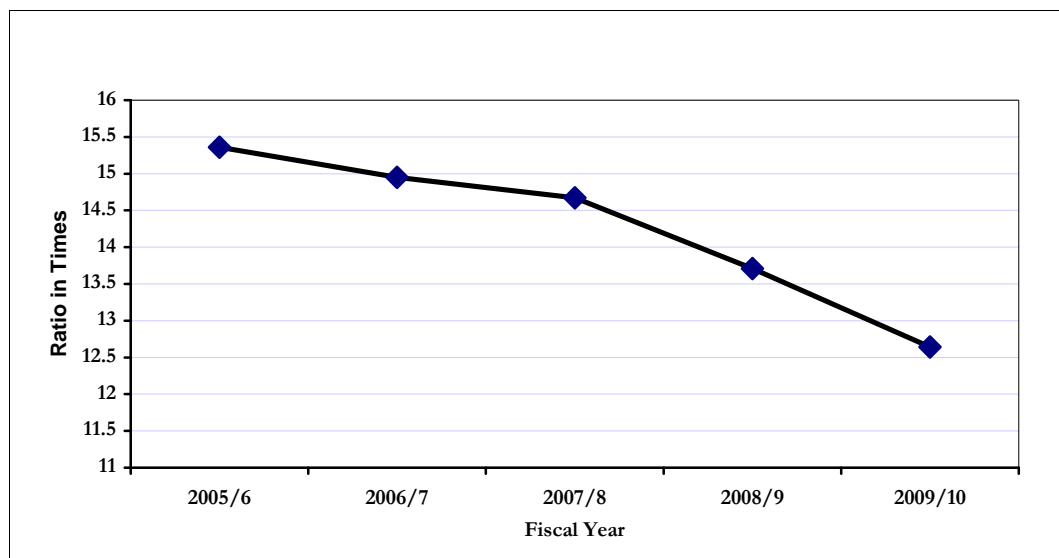
(Amount Rs. in Million)

Year	Total Assets	Net Worth	Ratio (Times)
2005/6	21732	1415	15.36
2006/7	28074	1878	14.95
2007/8	39406	2687	14.67
2008/9	53596	3908	13.71
2009/10	57936	4585	12.64
<b>Mean</b>			<b>14.27</b>

Source: Annual Report of Nepal Investment Bank (2005/06 - 2009/2010)

Above Table shows the calculation of Total assets to net worth ratio of NIB. The ratios are 15.36, 14.95, 14.67, 13.71 and 12.64 times respectively from the first year to the last year of the research period. The average calculation is 14.27 times which means consistency in this ratio during the research period. The lowest ratio is 12.64 in the period 5<sup>th</sup> year and the highest ratio is 15.36 in the 1<sup>st</sup> year. In the table above, we can see that the total assets and net worth are increasing year by year during the study period. The figure 4.10 clearly shows Total assts to net worth ratio of the bank.

**Figure No.4.10**  
**Total Assets to Net worth Ratio**



#### 4.2.4 Profitability Ratio

Profit is the major objective of any business organization. Profit is regarded as engine that drives the business enterprises. Profitability ratios are very helpful to measure the overall efficiency in the operation of the FIs. Profitability ratio is calculated based on sales and investment. In the context of banks, no bank can survive without profit. Profit is acquires profit by providing different services to its customers or by providing loan and advances and making various kinds of investment opportunities. Profitability ratio measure the efficiency of the bank. A higher profit ratio shows the higher efficiency of the bank and vice-versa. The following ratio is calculated:

### i) Net Profit to Gross Income Ratio

This ratio measures the volume of gross income. The high ratio measures the higher efficiency of the bank and lower ratio indicates the lower efficiency of the bank.

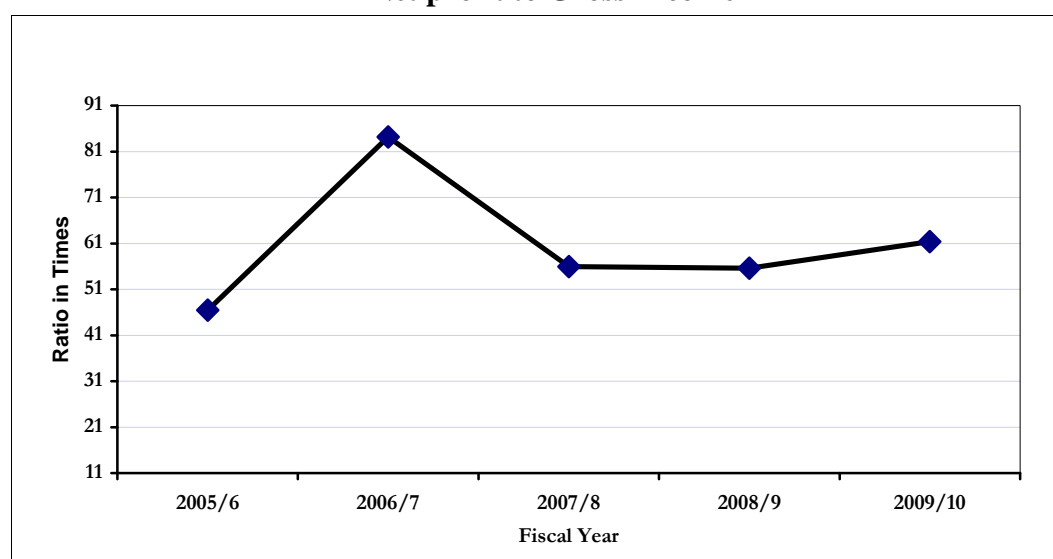
**Table No. 4.11**  
**Net profit to Gross Income Ratio**  
(Amount Rs. in Million)

Year	Net Profit	Gross Income	Ratio (%)
2005/6	350.54	753.89	46.50
2006/7	501.34	595.49	84.19
2007/8	696.73	1246.03	55.92
2008/9	900.62	1649.62	55.60
2009/10	1265.95	2063.31	61.36
<b>Mean</b>			<b>60.51</b>

Source: Annual Report of Nepal Investment Bank (2005/06 - 2009/2010)

Table No. 4.11 shows that the total net profit to gross income ratio of NIBL is in both increasing and decreasing trend. The highest ratio is 84.19% in the year 2006/7 and the lowest ratio is 46.50% in the year 2005/6. The mean ratio is 60.51%. The ratios are 55.92%, 55.60% and 61.36% in the year 2007/8, 2008/9 and 2009/10 respectively. These are able to obtain higher efficiency of the bank Therefore; credit management is in good position of the bank. Net profit to gross income ratio is represented in the figure below.

**Figure No.4.11**  
**Net profit to Gross Income**





## ii) Interest Income to Total Income Ratio

This ratio measures the volume of interest income to total income. The high ratio indicates the bank's performance on other free base activities. The high ratio indicates the high contribution made by lending and investing activities.

**Table No. 4.12**  
**Interest Income to Total Income Ratio**

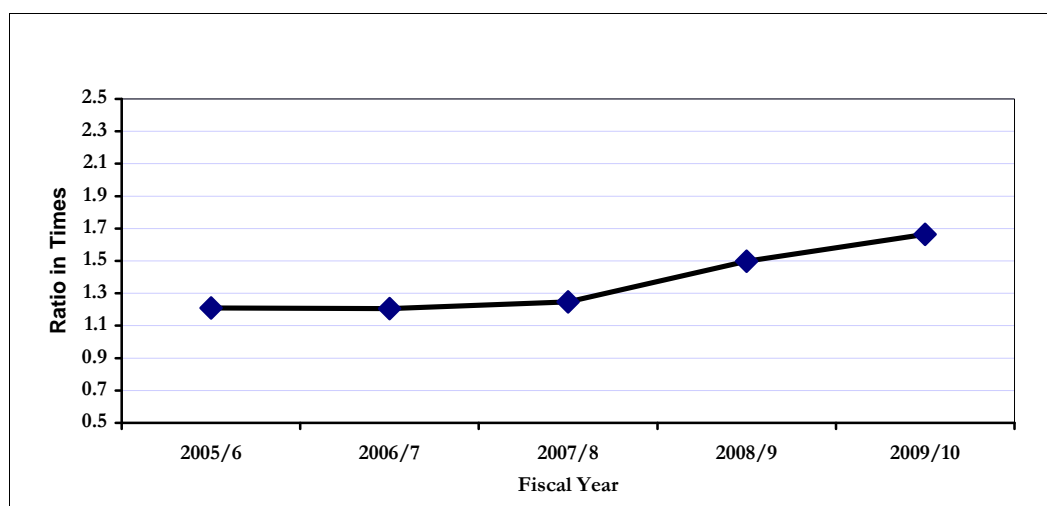
(Amount Rs. in Million)

Year	Interest Income	Total Income	Ratio (Times)
2005/6	1173	970.48	1.209
2006/7	1585	1314.23	1.206
2007/8	2194	1758.25	1.248
2008/9	3268	2180.92	1.498
2009/10	4654	2795.54	1.665
<b>Mean</b>			<b>1.365</b>

Source: Annual report of Nepal Investment Bank Ltd (2005/06 - 2009/2010)

The above table shows that the total interest income to total income ratio of NIBL is in fluctuating trend. The ratios are 1.209 times, 1.206 times, 1.248 times, 1.498 times and 1.665 times in the fiscal year, 2005/6, 2006/7, 2007/8, 2008/9 and 2009/10 respectively. The highest ratio is 1.665 times in the year 2009/10 and the lowest ratio is 1.206 times in the year 2006/7. The mean ratio is 1.365 times in the study period. The ratio indicates the high contribution made by lending and investing activities. Therefore, credit management is in good condition of the bank. Interest income to total income is presented in the diagram below.

**Figure no.4.12**  
**Interest Income to Total Income Ratio**



## ii) Operating Profit to Loan and Advance Ratio

This ratio measures the earning capacity of commercial bank. Operating profit to loan and advance ratio is calculated by dividing operating profit by loan and advance.

**Table No.4.13**  
**Operating Profit to Loan and Advance Ratio**

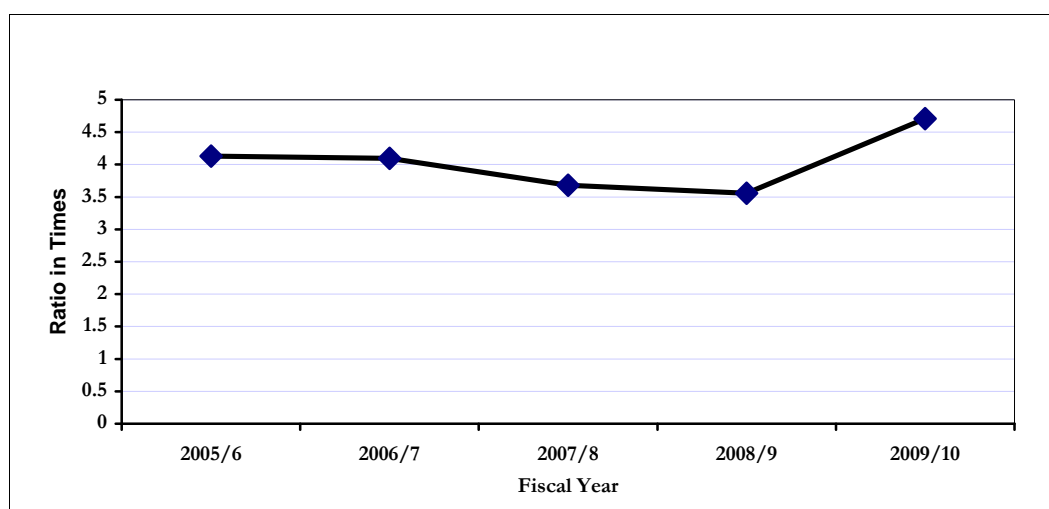
(Amount Rs. in Million)

Year	Operating Profit	Loan and Advance	Ratio (%)
2005/6	544.31	13178	4.1304
2006/7	727.51	17769	4.0943
2007/8	1013.33	27529	3.6810
2008/9	1310.85	36827	3.5595
2009/10	1928.43	40948	4.7095
<b>Mean</b>			<b>4.0349</b>

Source: Annual report of Nepal Investment Bank Ltd (2005/06 - 2009/2010)

Table No. 4.13 shows the Operating profit to loan and advance ratio of NIBL which is in fluctuating trend. The highest ratio is 4.7095% in the year 2009/10 and the lowest ratio is 3.5595% in the year 2008/9. The ratios are 4.1304%, 4.0943%, 3.6810%, 3.5595% and 4.7095 in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 respectively. The mean ratio is 4.0349% in the study period. This indicates the fine profitability position of the bank. But there is a fluctuating operating profit and loan and advance ratio. Anyway, credit management is in good condition of the bank. Operating Profit to Loan and Advance Ratio is presented in the diagram below

**Figure No.4.13**  
**Operating Profit to Loan and Advance Ratio**



### iii) Return on Loan and Advance ratio

This ratio measures the earning capacity of commercial banks through its fund mobilization as Loan and advance and vice- versa.

**Table No. 4.14**  
**Return on Loan and Advance Ratio**

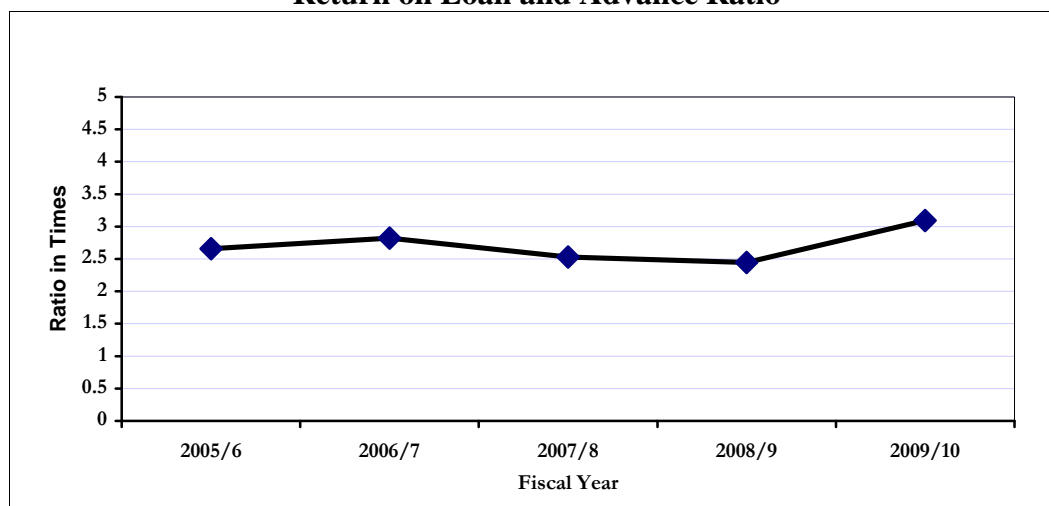
(Amount Rs. in Million)

Year	Net Profit	Loan and Advance	Ratio (%)
2005/6	350.54	13178	2.6600
2006/7	501.40	17769	2.8218
2007/8	696.73	27529	2.5309
2008/9	900.62	36827	2.4455
2009/10	1265.95	40948	3.0916
<b>Mean</b>			<b>2.7100</b>

Source: Annual report of Nepal Investment Bank Ltd (2005/06 - 2009/2010)

Table No. 4.14 shows the Net profit to loan and advance ratio of NIBL which is in increasing trend. The highest ratio is 3.0916% in the year 2009/10 and the lowest ratio is 2.4455% in the year 2008/09. The ratios are 2.6600%, 2.8218%, 2.5309%, 2.4455% and 3.0916% in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 respectively. The mean ratio is 2.7100% during the study period. This indicates the little high earning capacity of NIBL through loan And Advances. Thus, credit management is in good condition of the bank. Net Profit to Loan and Advance Ratio is presented in the diagram below.

**Figure 4.14**  
**Return on Loan and Advance Ratio**



#### iv) Net Profit to Total Assets Ratio

This ratio shows the relationship of net profit and total assets to determine how efficiently the total assets have been utilized by the bank. This ratio indicates the ability of generating profit per rupees of total assets.

**Table 4.15**  
**Net Profit to Total Assets Ratio**

(Amount Rs. in million)

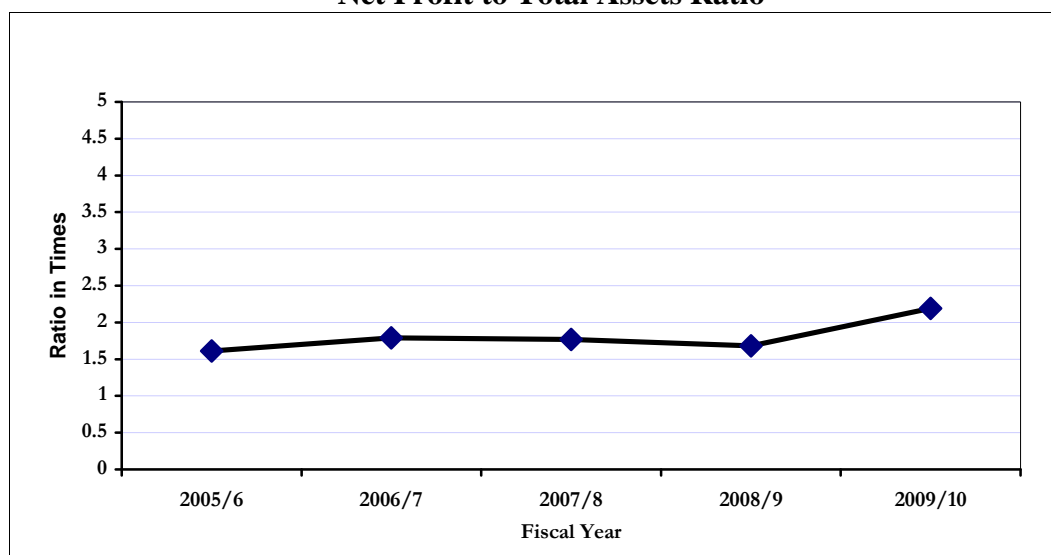
Year	Net Profit	Total Assets	Ratio (%)
2005/6	350.54	21732	1.61
2006/7	501.40	28074	1.79
2007/8	696.73	39406	1.77
2008/9	900.62	53596	1.68
2009/10	1265.95	57936	2.19
<b>Mean</b>			<b>1.808</b>

Source: Annual report of Nepal Investment Bank Ltd (2005/06 - 2009/2010)

Table No. 4.15 shows the Net profit to total assets ratio of NIBL which is in increasing trend. The highest ratio is 2.19% in the year 2009/10 and the lowest ratio is 1.61% in the year 2005/6. The ratios are 1.61%, 1.79%, 1.77%, 1.68 and 2.19% in the fiscal year 2005/6, 2006/7, 2007/8, 2008/9 and 2009/10 respectively.. The mean ratio is 1.8322% during the study period. This indicates the normal earning capacity of NIBL through assets utilization. In the table both net profit and total assets are in increasing trend. Net profit to total assets ratio has been represented in the figure as follows:

**Figure 4.15**

**Net Profit to Total Assets Ratio**



### v) Earning Per Share

It measures the profit available to equity shareholders on per share basis i.e. the amount they can get on the proportion to each share held. The objective of computing this ratio is to measure the profitability of the firm on per equity share basis. This ratio is computed by dividing the net profit after preference dividend by the number of equity shares.

**Table 4.16**  
**Earning Per Share**

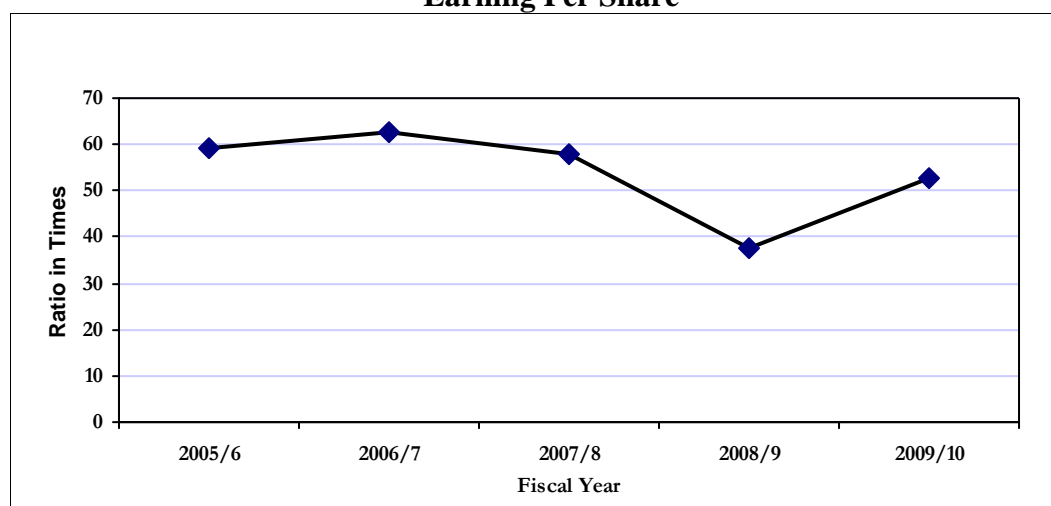
(Amount Rs. in million)

Year	Net Profit	No. of equity share	Earning per Share(Rs)
2005/6	350.54	5905860	59.355
2006/7	501.40	8013526	62.569
2007/8	696.73	12039154	57.872
2008/9	900.62	24070689	37.416
2009/10	1265.95	24090977	52.549
<b>Mean</b>			<b>53.952</b>

Source: Annual Report of Nepal Investment Bank (2005/06 - 2009/2010)

Above table shows that the earning per share of NIBL is in fluctuating trend. The highest EPS is Rs. 62.569 in the fiscal year 2006/7 and the lowest EPS is Rs. 37.416 in the fiscal year 2008/9. The average mean EPS calculated of NIBL is Rs. 53.952 during the study period. This shows the better earnings in the coming years. Earning per shares are Rs.59.353, Rs.57.872 and 52.549 in the fiscal years 2005/6, 2007/8 and 2009/10 respectively. In the fiscal year 2008/9, EPS is lower due to increased number of shareholders. Aggregate profit is in increasing trend. Therefore, credit management and overall performance is in good condition. Earning per share is represented in the following diagram.

**Figure 4.16**  
**Earning Per Share**



### vii) Price Earning Ratio

Price earning ratio measures the profitability of the firm. Higher the ratio, higher the profitability and vice versa. This ratio shows the relationship between earning per share and market value per share. Price Earning Ratio

$$(P/E \text{ ratio}) = \text{Market value per share} / \text{Earning per share}$$

**Table 4.17**  
**Price Earning Ratio**

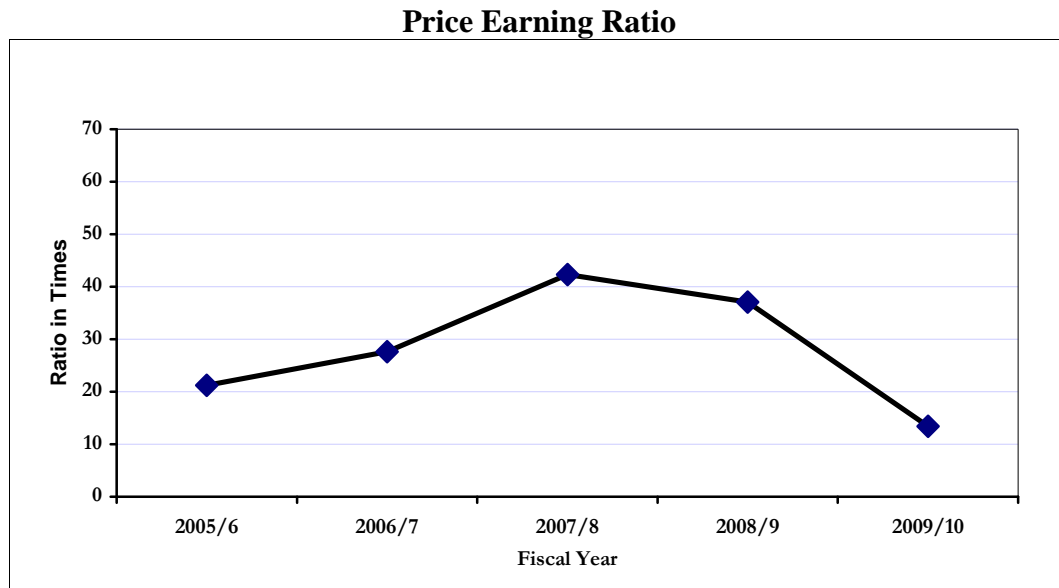
(Amount Rs. in million)

Year	Market Price Per Share	Earning per Share(Rs)	Ratio(Times)
2005/6	1260	59.355	21.23
2006/7	1729	62.569	27.63
2007/8	2450	57.872	42.33
2008/9	1388	37.416	37.10
2009/10	705	52.549	13.42
<b>Mean</b>			<b>28.34</b>

*Source: Annual Report of Nepal Investment Bank (2005/06 - 2009/2010)*

Above table shows that the price earning ratio of NIBL is in increasing trend up to the F.Y 2007/08 but it is continuously decreasing till FY 2009/10. The highest price earning ratio is 42.33 times in the fiscal year 2007/8 and the lowest price earning ratio is 13.42 times in the current fiscal year 2009/10. The average mean ratio calculated of NIBL is 28.34 times during the study period. Price Earning Ratios are Rs.21.23, Rs.27.63 and Rs.37.10 in the fiscal years 2005/6, 2006/7 and 2008/9 respectively. Due to the economical & political condition it seem that the market price dramatically decreased the affect the Price Earning Ratio. Price Earning Ratio is represented in the following diagram.

**Figure 4.17**



#### **4.2.5 Lending Efficiency Ratio**

Lending Efficiency Ratio indicates how properly or how efficiently the assets and funds are used by the company. The efficiency of the firm largely depends on the efficiency with the method of how its assets are managed and utilized. This ratio is concerned with measuring the efficiency of bank this ratio also shows the utility of available funds. The following are the various types of Lending Efficiency Ratio

##### **i) Total Loan Loss Provision to Total Loan and Advance Ratio**

Total loan loss provision to total loan and advance describes the quality of assets that a bank is holding. The amount of loan loss provision in balance sheet refers to general loan loss provision. The provision of loan loss reflects the increasing profitability of non- performing loan. This means the profit of the banks will come down by such amount. Increase in loan loss provision decreases profit and which in turn results to decrease dividends but its positive impact is that it helps strength financial conditions of the banks by controlling the credit risk and reduces the risks related to deposit. Therefore, it can be said that banks suffer it only for short term loan while the good financial conditions and safety of loans will make bank's prosperity resulting increasing profit for long term. Loan loss provision should not be more than 1.25% of risk bearing assets.

**Table No.4.18**

**Loan Loss Provision to Loan and Advance Ratio**

(Amount Rs. In million)

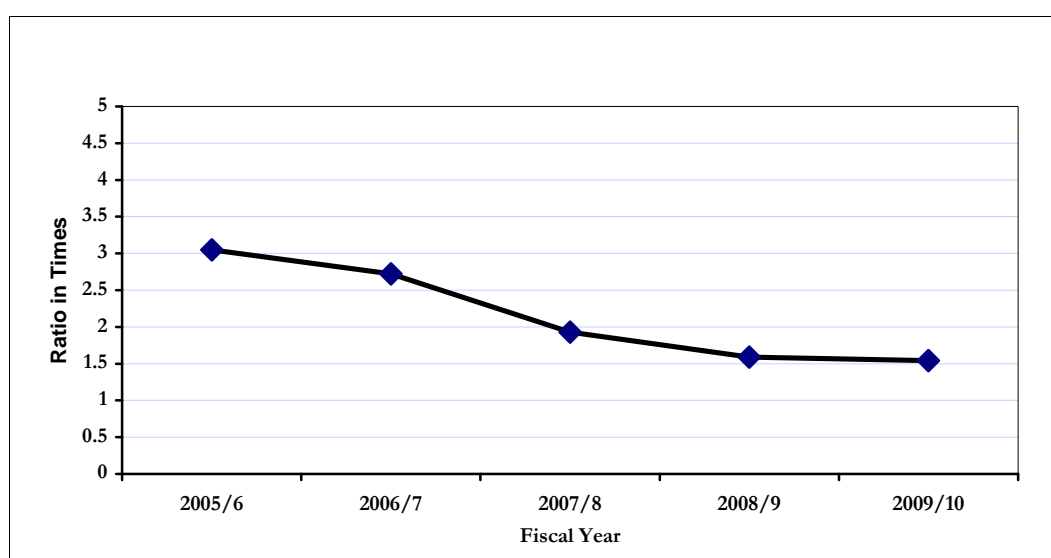
<b>Year</b>	<b>Loan Loss Provision</b>	<b>Loan and Advance</b>	<b>Ratio (%)</b>
2005/6	401.94	13178	3.05
2006/7	482.67	17769	2.72
2007/8	532.65	27529	1.93
2008/9	585.95	36827	1.59
2009/10	630.13	40948	1.54
<b>Mean</b>			<b>2.17</b>

*Source: Annual Report of Nepal Investment Bank (2005/06 - 2009/2010)*

Above table shows that loan loss provision to total loan and advances ratio of NIBL is in decreasing trend. The highest ratio is 3.05% in the fiscal year 2005/6 and the lowest ratio is 1.54% in year 2009/10. The mean ratio of the study period is 2.17%. This shows that good quality of assets in the total volume of loan and advances. Ratios are 3.05%, 2.72%, 1.93%, 1.59% and 1.54% in year 2005/6, 2006/7, 2007/8, 2008/9 and 2009/10 respectively. The ratio is continuously decreasing that indicates that the bank's performance is increasing. Thus, credit management is in good position. So all of the year the bank has met the NRB requirement. Loan loss provision and total loan and advances represented in the following diagram clearly.

**Figure No. 4.18**

**Loan Loss Provision to Loan and Advance Ratio**





**ii) Non Performing Loan to Total Loan and Advances Ratio:**

This ratio shows the relationship of non performing loan and total loan and advance. It determines how efficiently the total loan and advance have been used by the management. Higher ratio shows the low efficient operating of the management and lower ratio shows the high efficiency of credit management.

**Table 4.19**  
**Non Performing Loan to Total Credit and Advances Ratio**

(Amount Rs. In million)

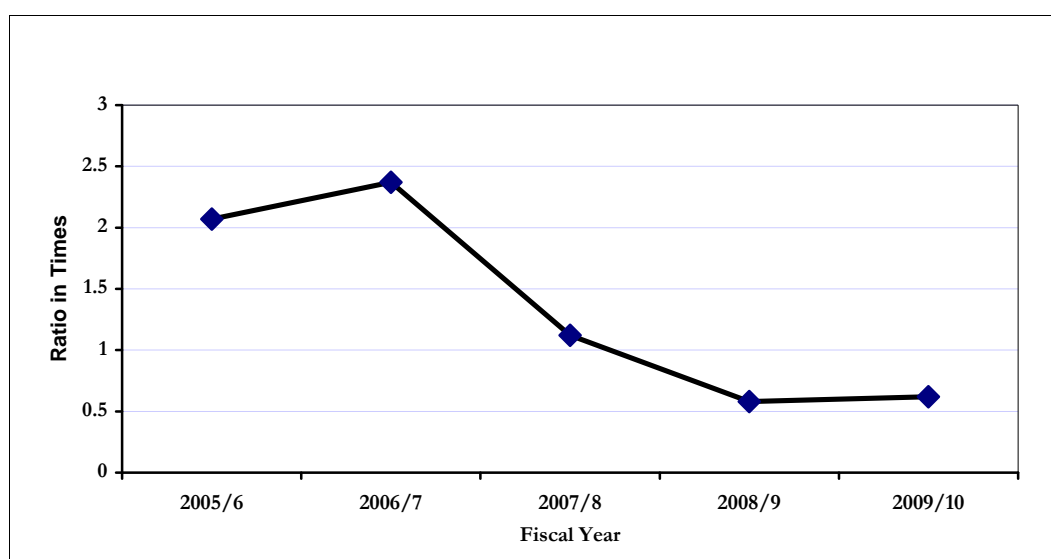
<b>Year</b>	<b>Non Performing loan</b>	<b>Loan and Advance</b>	<b>Ratio (%)</b>
2005/6	272.79	13178	2.07
2006/7	421.97	17769	2.37
2007/8	309.47	27529	1.12
2008/9	213.90	36827	0.58
2009/10	254.03	40948	0.62
<b>Mean</b>			<b>1.35</b>

*Source: Annual Report of Nepal Investment Bank (2005/06 - 2009/2010)*

Above table shows that Non Performing Loan to Total Credit and Advances ratio of NIBL is in decreasing trend. The highest ratio is 2.37% in the fiscal year 2006/7 and the lowest ratio is 0.58% in year 2008/9. The average non performing loan to total loan and advances ratio of the study period is 1.35%. Ratios are 2.07%, 2.37%, 1.12%, 0.58% and 0.62 in year 2005/6, 2006/7, 2007/8, 2008/9 and 2009/10 respectively. The ratio is continuously decreasing but in the F.Y 209/10 it is slightly increased that may be due to the economical condition that is affected by the new monetary policy introduced by the NRB. Thus, credit management is in good position. So all of the year, the bank has met the NRB requirement. Loan loss provision and total loan and advances are represented in the following diagram clearly.

**Figure No. 4.19**

**Non Performing Loan to Total Credit and Advances Ratio**



**iv) Interest Expenses to Total Deposit Ratio**

The ratio measures the percentage of total interest against total deposit. Commercial banks are depending upon it's ability to generate cheaper fund. The cheaper fund has more the probability of generating loans and advances and vice versa. It measures the interest expense towards the deposit.

**Table 4.20**

**Interest Expenses to Total Deposit Ratio**

(Amount Rs. In million)

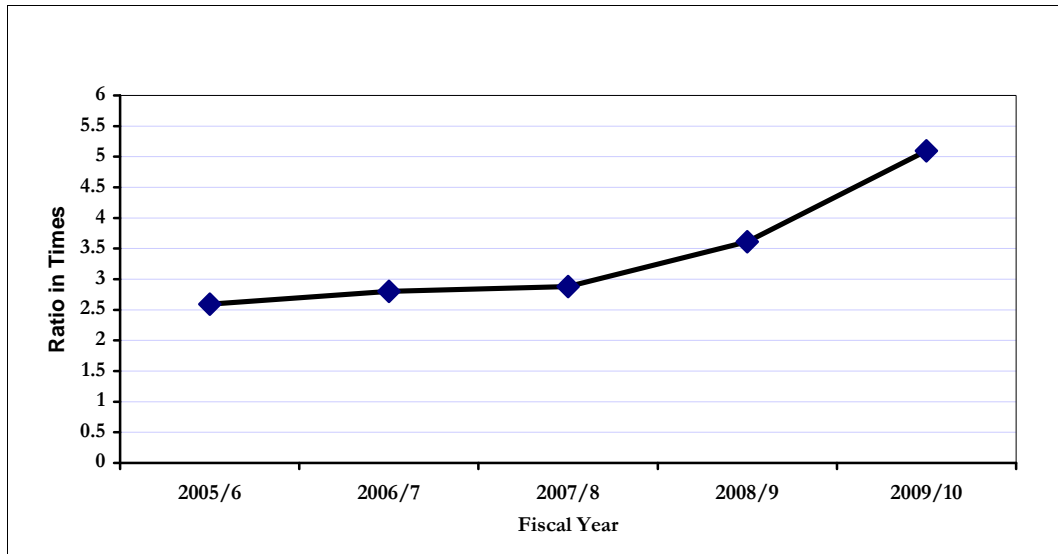
Year	Interest Expenses	Total Deposit	Ratio (%)
2005/6	490.95	18927.306	2.594
2006/7	685.53	24488.856	2.799
2007/8	992.16	34451.726	2.880
2008/9	1686.97	46698.010	3.613
2009/10	2553.85	50094.725	5.098
<b>Mean</b>			<b>3.397</b>

Source: Annual Report of Nepal Investment Bank (2005/06 - 2009/2010)

Above table shows that Interest Expenses to Total Deposit Ratio of NIBL is in fluctuating trend. The highest ratio is 3.61% in the fiscal year 2008/09 and the lowest ratio is 2.594% in the year 2005/6. The average mean point of the interest expenses to total deposit ratio of the study period is 3.397%. Ratios are 2.594%, 2.799%, 2.880%,

3.613% and 5.098% in the year 2005/6, 2006/7, 2007/8, 2008/9 and 2009/10 respectively. The ratio does not indicate higher interest expenses on total deposit. Commercial Banks are dependent upon its ability to generate cheaper fund. Interest Expenses to Total Deposit Ratio is represented in the following diagram clearly

**Figure 4.20**  
**Interest Expenses to Total Deposit Ratio**



### 4.3 Statistical Analysis

#### i) Correlation Coefficient

Correlation coefficient is used to define the relationship between two or more variable. Coefficient of correlation has been studied to find out whether the two available variables are inter correlated or not. If the result falls within the correlated point, the two variables lending and total assets, the widely used method of Karl Pearson's Coefficient of Correlation has been adopted.

$$= \frac{\text{Correlation Coefficient } (r_{x_1 \times x_2})}{\sqrt{N \sum X_1^2 - \sum X_1^2} \sqrt{N \sum X_2^2 - \sum X_2^2}}$$

Here,

$N \sum X_1 X_2$  = No. of product observation and sum of product X 1 and X 2

$\sum X_1 \sum X_2$  = Sum of product X 1 and sum of product X 2

N= Number of pairs of X1 and X 2 observed

r = Karl Pearson's Coefficient of Correlation

## ii) Probable Error

It is a method to determine the reliability of the value of Pearson's coefficient of correlation. It helps in interpreting the value of coefficient of correlation. If r is the calculated correlation coefficient in a sample of n pairs of observation, then its standard error, usually denoted by S.E & given by.

$$S.E(r) = \sqrt{1-r^2}$$

Probable error of the coefficient of correlation can also be calculated from S.E. of the Coefficient of correlation by the following formula:

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

Where r= coefficient of correlation

N= no of observations

The probable error is used to test whether the calculated value of correlation significant or not.

If  $r < 6 * P.E (r)$ , then the value of r is not significant

If  $r > 6 * P.E (r)$ , then the value of r is significant

In this course of study, the correlation coefficient and probable error is used to measure sample relationship between Total credit and Total assets ,Loan and Advance and Total deposit.

### **A. Correlation Coefficient between Deposit & Loan & Advances**

Deposit have played very important role in the performance of commercial banks, similarly loan and advances are also equally important to mobilize the collected deposit. Co-efficient of correlation between deposit and loan & advances measures the degree of relationship between these two variables. The main objectives of computing “r” between these two variables is to justify whether deposit are significantly used as loan & advances in proper way or not .Coefficient of correlation determination between deposit and loan advances of NIBL is shown below

**Table 4.21**  
**Correlation Coefficient between Deposit and Loan and Advances**

<b>Correlation Coefficient (r)</b>	<b>Coefficient of determination (r<sup>2</sup>)</b>	<b>Probable Error (P.E)</b>	<b>6 P.Er</b>
0.999	0.998	0.00069	0.0624

*(Source: Appendix- 1)*

The above table shows that the correlation coefficient between deposit and loan and advances is 0.999. There is highly positive correlation between loan and advances and deposit collection. The coefficient of determination is 0.998. It shows that increase in deposit highly lead to increase loan and advances. In accordance to increase in deposit, NIBL’s loan and advances is in increasing trend.

Probable error (P.E) is calculated to. be 0.00069 and 6 P.E. is 0.0624. Probable error of the correlation coefficient denoted by P.E. is the measure of testing the reliability of the calculated value of r. Here ‘r’ is greater than 6 P.E than there is evidence of significant between loan and advances and deposit.

### **B. Coefficient of Correlation between Total Deposits and Total Assets**

The coefficient of correlation between deposit and asset measures the degree of relationship between these two variables. The table 4.22 presents the correlation coefficient between Total Deposits and Total Assets.

**Table 4.22**

**Correlation Coefficient between Deposit and total assets**

<b>Correlation Coefficient (r)</b>	<b>Coefficient of determination (r<sup>2</sup>)</b>	<b>Probable Error (P.E)</b>	<b>6 P.Er</b>
1	1	0.00004	0.00037

*(Source: Appendix- 2)*

The above table shows that the correlation coefficient between Total Deposits and Total Assets of NIBL is 1. It shows the highly positive correlation between Total Deposits and Total Assets. In addition, coefficient of determination of NIBL is 1. The correlation coefficient is significant because the correlation coefficient is more than 6 P. Er. It refers that there is significant relationship between total deposit and total assets. From the above table, the conclusion can be drawn that NIBL has high degree positive correlation between total deposit and total assets.

**C. Coefficient of Correlation between Loan and advances and Net Profit**

Coefficient of Correlation between Loan and advances and Net Profit is used to measure the degree of relationship between two variable i.e. Loan and advances and net profit of NIBL during the research period, where loan and advances is independent variable ( X ) and net profit is dependent variable ( Y ). The main objective of calculating this ratio is to determine the degree of relationship whether the net profit is significantly correlated or not and the variation of net profit to loan and advances through the coefficient of determination. The following table shows the Coefficient of Correlation between Loan and advances and Net Profit of NIBL for the study period.

**Table No. 4.23**

**Coefficient of Correlation between Loan and advances and Net Profit**

<b>Correlation Coefficient</b>	<b>Coefficient of determination (r<sup>2</sup>)</b>	<b>Probable Error (P.E)</b>	<b>6 P.Er</b>
0.959	0.920	0.024	0.2075

*(Source: Appendix-3)*

The above table shows that the correlation coefficient between Total Profit and Loan and Advance of NIBL is 0.959. It shows the highly positive correlation between Total Profit and Loan and Advance. In addition, coefficient of determination of NIBL is 0.920, which depicts that 92.0 percent of profit is explained by loan and advance. Probable Error ( P.E ) is calculated as 0.00024 and 6 P. Er. is 0.2075. The correlation coefficient is significant because the correlation coefficient is more than 6 P.E r. It refers that there is significant correlation between Loan and deposit. From the above table, the conclusion can be drawn that NIBL has high degree positive correlation between total profit and loan and advances.

#### **D. Coefficient of Correlation between Total Debt and Total Assets**

Coefficient of Correlation between Total Debt and Total Assets measures the degree of the relationship between two variables, i.e. Total Debt and Total assets. In the correlation analysis, Investment is independent variable and net Profit is dependent variable. The following table shows the coefficient of correlation, coefficient of determination, probable error and six times of P.E r. during the fiscal year 2005/6 to 2009/10.

**Table No 4.24**  
**Correlation Coefficient between Total Debt to Total Assets**

<b>Correlation Coefficient</b>	<b>Coefficient of determination (r<sup>2</sup>)</b>	<b>Probable Error (P.E)</b>	<b>6 P.Er</b>
1	1	0.00003	0.000259

*(Source: Appendix-4)*

Above table shows that Correlation Coefficient between total debts to total assets of NIBL is 1, which implies there is highly positive correlation between total debt and total assets. In addition coefficient of determination is 1. It means 100% of assets is contributed by Debt. Obviously, this correlation is significant at all due to coefficient of determination is higher than probable error. Thus, it can be concluded that the degree of relationship between total debt and total assets of NIBL is highly positively correlated.

## E. Correlation Coefficient between loan and advances and non performing assets

**Table No. 4.25**  
**Correlation Coefficient between loan and advances and nonperforming assets**

<b>Correlation Coefficient</b>	<b>Coefficient of determination (<math>r^2</math>)</b>	<b>Probable Error (P.E)</b>	<b>6 P.Er</b>
-0.531	0.282	0.2167	-1.035

*(Source: Appendix-5)*

The above table shows that the Correlation Coefficient between loan and advances and non-performing assets of NIBL. The correlation coefficient between sector wise lending and loan and advances of NIBL is -0.531. There is negative correlation between loan & advances and non performing assets. The coefficient of determination is 0.282, which depicts that 28.20% of NIBL has been explained by the loan and advances. Probable error is calculated to be 0.2167 and 6 P.E. is -1.035. Probable error of the correlation coefficient denoted by P.E. is the measure of testing the reliability of the calculated value of r. Here, “r” is smaller than 6 P.E. then there is evidence of insignificant correlation between Loans and advance and PSL ratio. This further reveals there is insignificant relationship between loan and advances and deposit.

## F. Trend Analysis:

Here, trend analysis of total deposits and loan and advances is projected for the five years. The measure of trend analysis shows the behavior of given variables in the series of time. This trend analysis is carried out to see average performance of the banks for next five years. Trend analysis is based on some assumptions: All the other things will remain unchanged. The bank will run in present condition. The economy will remain in present stage. NRB will not change its guidelines to commercial banks.



**i) Trend Analysis of Total Deposit:**

Deposits are the important part in banking sector. Hence, its trend for next five years will be forecasted for future analysis. This is calculated by using least square method.

$$Y = a + bx$$

Where,

Y= dependent variable,

a= Y- intercept,

b= slope of trend line or annual growth rate

X= deviation from some convenient time periods.

**Table No.4.26**

**Trend of total deposits**

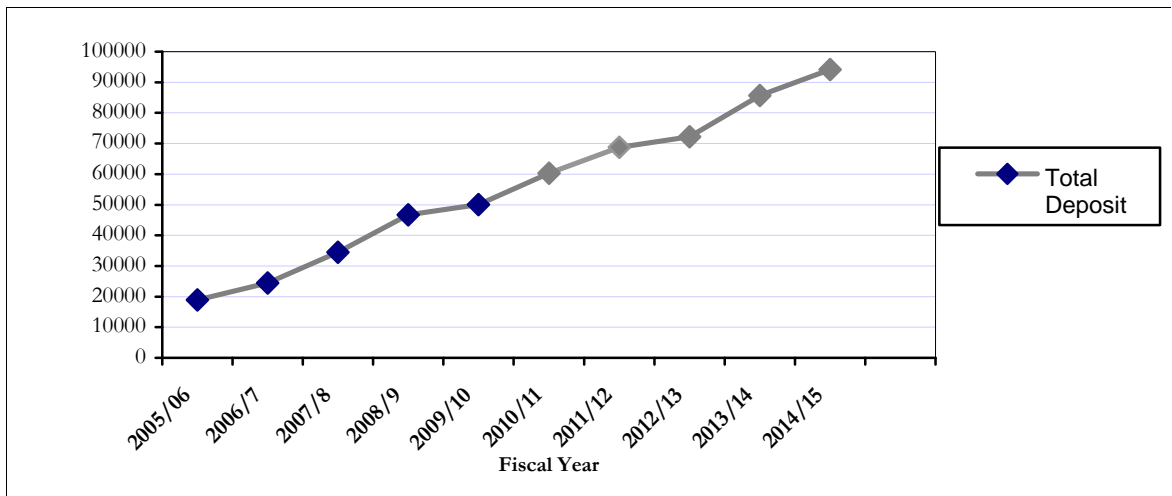
<b>Year (X)</b>	<b>Total Deposit</b>
<b>2005/06</b>	<b>18927</b>
<b>2006/07</b>	<b>24489</b>
<b>2007/08</b>	<b>34452</b>
<b>2008/09</b>	<b>46698</b>
<b>2009/10</b>	<b>50095</b>
<b>2010/11</b>	<b>60295.7</b>
<b>2011/12</b>	<b>68750.2</b>
<b>2012/13</b>	<b>77204.7</b>
<b>2013/14</b>	<b>85659.2</b>
<b>2014/15</b>	<b>94113.7</b>

*(Source: Annual Report of Nepal Investment Bank Appendix-6)*

The following graph helps to show the trend lines of total deposit for the projected five years. The equation  $Y = 34932.20 + 8454.50 * X$

**Figure No.4.26**

**Total Deposit**



Above table and figure shows total deposit of NIBL. The trend of total deposit of NIBL is in increasing trend. The rate of increment of total deposit for NIBL seems to be smoothly increasing trend. The trend analysis shows the projected deposit amount in fiscal year FY 2010/11 to FY 2014/15

**Trend Analysis of total loan and advances**

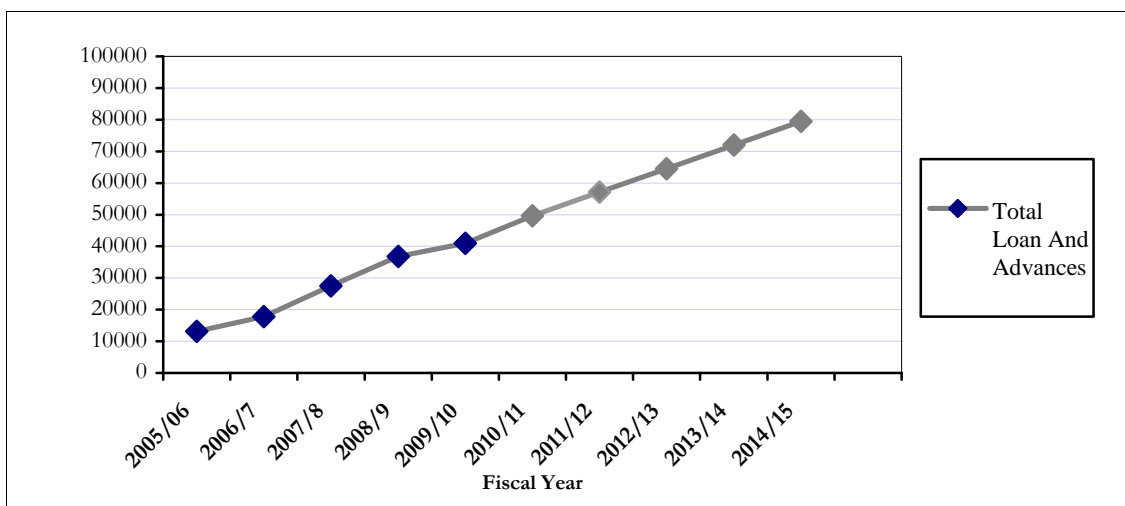
**Table No. 4.27**  
**Trend Analysis of total loan and advances**

Year (X)	Total loan and Advances
2005/06	13178
2006/07	17769
2007/08	27529
2008/09	36827
2009/10	40948
2010/11	49629.6
2011/12	57089.4
2012/13	64549.2
2013/14	72009
2014/15	79468.8

*(Source: Annual Report of Nepal Investment Bank Appendix-7)*

The following graph help to show the trend lines of Loan and Advance for the projected five years. The equation is  $Y = 27250.20 + 7459.8 * X$

**Figure No.4.27**  
**Trend analysis of Total Loan and Advance Total loan and advances**



The given table and figure shows trend values of loan & advances of NIBL. The trend of trend values of loan and advances of NIBL is in increasing trend. It is suggested to Increase in loan and advance in same way to make better profit. The trend analysis Shows amount for the fiscal year FY 2010/11 to FY 2014/15.

**iii ) Trend Analysis of Total Assets:**

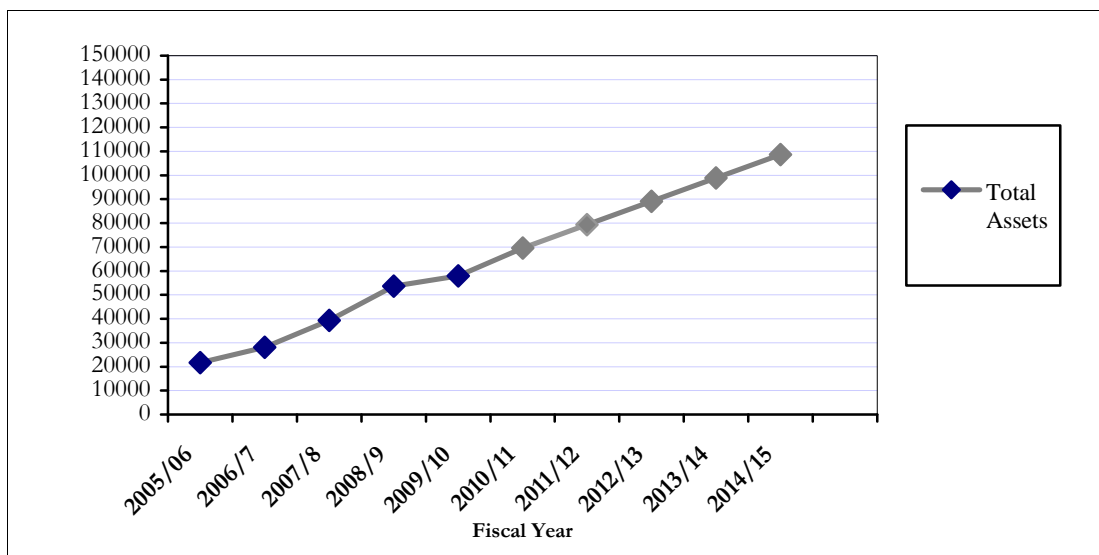
**Table No. 4.28**  
**Trend of Total Assets**

<b>Year (X)</b>	<b>Total Assets</b>
<b>2005/06</b>	<b>21732</b>
<b>2006/07</b>	<b>28074</b>
<b>2007/08</b>	<b>39406</b>
<b>2008/09</b>	<b>53596</b>
<b>2009/10</b>	<b>57936</b>
<b>2010/11</b>	<b>69527.8</b>
<b>2011/12</b>	<b>79320.8</b>
<b>2012/13</b>	<b>89113.8</b>
<b>2013/14</b>	<b>98906.8</b>
<b>2014/15</b>	<b>108699.8</b>

*(Source: Annual Report of Nepal Investment Bank, Appendix-8)*

The following graph helps to show the trend lines of Total Assets for the projected five years. The equation is  $Y = 40148.8 + 9793 * X$

**Figure No.4.28**  
**Trend Analysis of Total Assets**



The given table and figure shows trend of Total Assets of NIBL. The trend of trend values of Total Assets of NIBL is in increasing trend. The rate of increment of Total Assets for NIBL seems to be moderately increasing. It is suggested to maintain the same type of increment regularly to make better profit. The trend analysis shows the projected deposit amount for the fiscal year FY 20010/11 to FY 2014/15

**iv) Trend Line of Net profit**

**Table No. 4.29**  
**Trend Analysis of total net profit**

Year (X)	Total net Profit
2005/06	350.54
2006/07	501.34
2007/08	696.73
2008/09	900.62
2009/10	1265.95
2010/11	1412.066

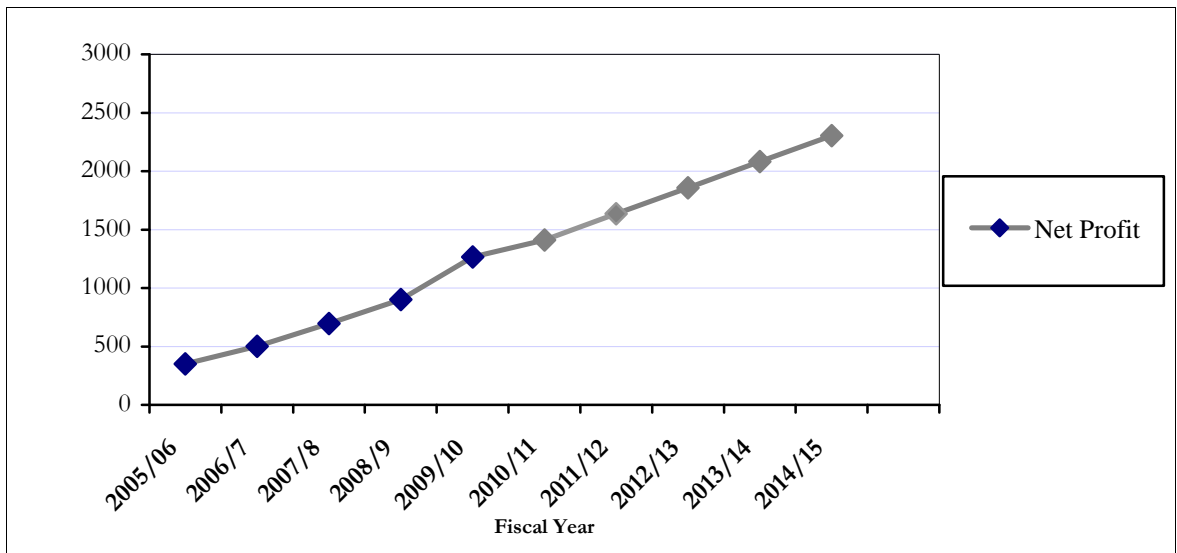
<b>2011/12</b>	<b>1635.076</b>
<b>2012/13</b>	<b>1858.086</b>
<b>2013/14</b>	<b>2081.096</b>
<b>2014/15</b>	<b>2304.106</b>

(Source: Annual Report of Nepal Investment Bank, Appendix-9)

The following graph helps to show the trend lines of Net Profit for the projected five Years. The equation is  $Y = 703.04 + 2330.1 * X$

**Figure No 4.29**

**Total net profit**



The above table and figure shows that the Total Profit of NIBL is in increasing trend. The rate of increment of total profit seems to be aggressively in increasing trend. It is better for company but this type of increment should be maintained regularly. The trend analysis shows the deposit amount in fiscal year 2010/11 to fiscal year 2014/15.

#### **4.4 Major Findings of Study**

##### **➤ Liquidity Ratio**

The cash and bank balance to total deposit of NIBL shows the fluctuating trend during the study period. The mean ratio is 0.1276 times in the study period. Cash and bank balance to current deposit of the bank shows the fluctuating trend during the study period. The mean average calculation is 1.4979 times in the study period. This means that the bank is able to maintain good liquidity position. The cash and bank balance to interest sensitive ratio of NIBL is in fluctuating trend. The mean ratio is 0.3461 times. This means that the bank is able to maintain this ratio in the financial condition. Therefore, the liquidity management is in good position of NIBL. This means that the bank is able to maintain good financial condition.

##### **➤ Assets Management Ratio**

Loan and advances to fixed deposits ratio are increasing trend till F.Y. 2007/08 and sin decreasing trend onwards. The mean ratio is 2.7726 times at the research period. The total loan and advances to total deposit ratio of NIBL is in increasing trend. The average mean ratio of NIBL is 0.7654 times in the study period. Similarly credit and advance to total asset is not so fluctuating trends. The average mean ratio is 66.64%. It shows that the bank has capability of utilizing total assets in the form of credit and advances. The total non- performing assets to total assets of NIBL is in decreasing trend and there is no non performing assets in the current year 2009/10. The mean ratio is 85%. The bank is able to obtain higher lending opportunity. The ratio indicated high contribution made by lending and investing activities. Thus, credit risk management is in a good position.

##### **➤ Leverage Ratio**

The Debt to equity ratio of NIBL is in decreasing trend during the study period. The average mean ratio is 13.06 times. Excess amount of debt capital structure results heavy burden in payment of interest. Risk of liquidation increases if the debt cannot be repaid in time. The analysis indicated that the bank is highly leveraged because the claim of the outsiders exceeds than those of the owners over the bank assets. The Debt to assets ratio of NIBL is high or in other words, they have excessively geared capital structure. The average mean ratio in 5 years research period is 0.92 times. It means almost 92% of total assets are financed by the outsider's funds. It is seen that

there is not much deviation in the ratio for the five years study period. Total assets to net worth ratio of the bank are decreasing and fluctuating trend thereafter. In overall the study period the average ratio at that time is 14.27 times. It represents good condition of Total assets to net worth ratio.

➤ **Profitability Ratio**

Profitability ratios are very helpful to measure the overall efficiency in operation of a financial institution. The total net profit to gross income ratio of NIBL is in increasing and decreasing trend. The mean ratio is 60.51. The total interest to total income ratio of NIBL is in fluctuating trend. The highest ratio is 1.665 times in year 2009/10 and lowest ratio is 1.206 times in year 2006/7. The mean ratio is 1.365 times in the study period. The ratio indicates the high contribution made by lending and investing activities.

The operating profit to loan and advances ratio of NIBL is in fluctuation trend. The highest ratio is 4.7095% in the year 2009/10 and lowest ratio 3.5595% in the year 2008/9. The average mean ratio over the period is 4.0349%. This shows the better profitability position of the bank.

That return on loan and advances ratio of NIBL is in increasing credit management is in good position. The Net profit to total assets ratio of NIBL is in increasing trend. The highest ratio is 2.19% in 2009/10 and lowest ratio is 1.61% in the year 2005/6. The mean ratio is 1.808%. This shows the normal earning capacity through asset utilization.

The Earning per share of NIBL is in fluctuating trend. The highest EPS is Rs 62.569 in the year 2006/7 and lowest EPS Rs.37.416 in the year 2008/9. The average means EPS of NIBL is 28.34 in the study period. This shows the better profitability in the study years.

That price-earning ratio earning of NIBL is in increasing trend. The highest price-earning ratio is 42.336s in year 2007/8 and lowest ratio 13.42 times in year 2009/10. The average mean ratio of NIBL is 28.34 times in the study period. This shows the better profitability in the last years. This means that the better profitability in the coming last years. It represents high expectation of company in market and high demand of share. However, it is recommended to risk in invest in market price.

➤ **Lending Efficiency Ratio**

The loan loss provision to total loan and advances ratio of NIBL is in decreasing trend. The highest ratio is 3.05% in year 2005/6 and lowest ratio 1.54% in year 2009/10. The mean ratio of the study period is 2.17%. These indicate the good quality of assets in total volume of loan and advances. The ratio is continuously decreasing this which indicates that bank's performance is increasing. Thus, credit management is in good position.

The Non-performing loan to total loan and advance of NIBL is in decreasing and increasing trend. The mean ratio of the study period is 1.35%.. The ratio is continuously decreasing up to 2008/9 but it is slightly increased in 2009/10 this which indicates efficient operation of credit management.

The interest expenses to total deposit ratio of NIBL is in fluctuating trend. The highest ratio is 5.098% in year 2009/10 and lowest ratio 2.594% in year 2005/6. The mean point of interest expenses to total deposit ratio of the study period is 3.397%. These indicate the good quality of assets in total volume of loan and advances. The ratio does not indicate higher interest expenses to total deposit. Commercial banks are dependent upon its ability to generate cheaper fund.

#### **4.5 Statistical Tools**

➤ **Correlation Coefficient**

The correlation coefficient between deposit and loan advances is 0.999. There is highly positive correlation between loan and advances and deposit collection. The coefficient of deposit collection. It shows that increase in deposit highly lead to increase loan and advances. 'r' is greater than 6 P.E. there is evidence of significant correlation between loan and deposit. That further reveals there is significant relationship between loan and advances and deposit.

The coefficient of correlation between deposit and total assets of NIBL is 1. It shows the highly positive correlation. In addition, coefficient of determination of NIBL means there is 100% of total assets is explained by total deposit. The correlation coefficient is significant because the correlation coefficient is more than of 6 P.Er.



The correlations coefficient between total profit and loan and advances is 0.959. There is highly positive correlation between total profit and loan and advances. The coefficient of determination is 0.920, which depicts that 92% of profit has been explained by the loan and advances. 'r' is greater than 6 P.E. then there is evidence of significant correlation between loan and deposit.

The correlation coefficient between loan and advances and non performing asset of NIBL is -0.531. There is negative correlation between loan and advances and non performing assets. The coefficient of determination is 0.282, which depicts that 28.2% of non performing assets have been explained by the loan and advances. 'r' is smaller than 6 P.E. then there is evidence of significant correlation between loan and advance and PSL ratio.

#### ➤ **Trend Analysis**

The trend of total deposit of NIBL is in increasing trend. The rate of increment of total deposit for NIBL seems to be smoothly in increasing trend. The trend values of loan and advances of NIBL are in increasing trend. It is suggested to increase loan and advance in the same way to make better profit. The trend of Total Assets of NIBL is in increasing trend. The rate of increment of Total Assets for NIBL seems to be moderately increasing trend. It is better for company. This type of increment should be maintained regularly. The trend of Total Profit of NIBL is also in increasing trend. The rate of increment of Total Profit for NIBL seems to be aggressively in increasing trend. It is better for the company and this type of increment should be maintained regularly.

## CHAPTER V

### SUMMARY, CONCLUSION AND RECOMMENDATION

The research is about the credit Management of Nepal Investment bank. In this chapter, summary conclusion and recommendation are included.

#### 5.1 Summary

Development of any nation would be daydream until and unless an adequate amount of capital is invested and mobilized in productive sectors like industries trade and of every nook and corners of the country. In fact, the development economy of the world is result of substantial investment in such productive sector. In order to boost up the economy and the social life of any country. It is extremely essential to have a mechanism through which small amount of saving can be collected and transferred into efficient uses. Hence, finance plays a vitals role and thus contributes in the economic development of nation and the banks provide such financial services.

The basis of business is burrowing from individuals, firms and occasionally government i.e. receiving deposit from them. With these resources and bank's own capital, banks disburse loan or extend credit and also invest insecurities. Bank is an institution, which deals with the transaction of money. They perform several financial monetary and economic activities that are essential to accelerate the rate of economic growth of the country.

At present, 31 commercial banks have been operating in Nepal. After the adaptation of liberal policy by the government in 1990 number of banks and financial institutions are increasing day by day. They have been rendering high quality banking services to the people. There is cut throat competition between banks and financial institutions.

All the summary and conclusion are made according to obtained data from analysis. Recommendation has made which. These all ratio shows that the bank is maintain the good liquidity position of the bank. Cash and bank balance to current deposit is also fluctuating. The mean average calculation is 1.4979 times. Cash and bank balance would sufficient to meet the demand of current depositors. The average mean of cash and bank balance to interest sensitive ratio is 0.3461 times. It shows the bank is able

to maintain good financial condition. In the assets management ratio, credit advances to fixed deposit ratio is increasing trends. The average mean of NIBL is 2.7726 times at research period. In aggregate is shows the better performance but credit and advances to total deposit position in minimum than averages. NIBL bank has generally mixed or fluctuating increasing trends of credit Advance to Total Assets ratio. The average mean ratio is 66.64%. It shows that bank has capability in utilizing total assets in the form of credit and advance. Whereas investment in credit advance is done safely not taking more risk. That's why assets management position of the bank shows better performance in the recent years. Non-performing assets to total assets ratio is opportunity during the study period. Therefore, credit management is in good position of the bank. In leverage ratio Debit to equity ratio is in constants trend and the average mean ratio for total debt to equity ratio is 13.06 times Total debt to total assets ratio is 92 times, which means 92% of the bank's assets are financed with debt, and only the remaining 7% of the financing comes from shareholder's equity. High total debt to total assets ratio posses' higher financial risk and vice-versa. Total assets to net worth ratio of the bank are decreasing and fluctuating trend thereafter. In over all the study period the average ratio at the time is 14.27 times, it represents good condition of total assets to net worth ratio. In the aspect of profitability position, total net profit to gross income, the total interest income to total income ratio of NIBL is in increasing and decreasing trend. The mean ratio is 60.51% in the study period. The ratio indicates the high contribution made by leading and investing activities. The total interest income to total income ratio of NIBL is in fluctuating trend. The mean ratio is 1.365 times in the study period. The operating profit to total assets ratio of NIBL is in increasing trend the mean ratio is 1.808%. This show the normal earning capacity through asset utilization. Earning per share of NIBL Bank is in increasing trend. The average ratio is 53.952 times in the study period. These mean that the better probability in the coming last years. It represents high expectation of company in market and high demand of share. After analyzing the lending efficiency of the bank, the loan loss provision to total loan and advances ratio of NIBL is in decreasing trend. The mean ratio of the study period is 2.17%. The ratio is continuously decreasing this indicates that bank increasing performance. Thus, credit management is in a good position. The Non-performing loan to total loan and advance ratio is also decreasing trend. This ratio indicates the more efficient operating of credit management. The interest expenses to total deposit ratio of NIBL in the fluctuating

trend. The average mean point of interest expense to total deposit ratio is 3.397% during the study period. That this ratio does not indicate higher interest expenses on total deposit. In statistical analysis, correlation analysis and trend analysis have been calculated. Correlation coefficient between total credit and total assets is 1, which shows high degree of positive correlation. It can be concluded that assets and total are increasing and can be said that increasing assets will have positive impact towards loan and advances. There is highly positive correlation between loan and advances and deposit collection. Similarly, correlation coefficient between total debts to Total Assets of NIBL is 1. Which implies there is highly positive correlation between debit and Total assets. The correlation coefficient between sector wise lending and loan advances of NIBL is -0.531. There is moderate negative correlation between loan and advances and nonperforming assets. Trend analysis tool are done for future forecasting. Trend analysis for total deposit is calculated to see future trend of trend values of loan & advances of NIBL is increasing trend similarly The trend of Total Assets of NIB is also increasing trend. The trend of Total Profit of NIB is in increasing trend. The rate of increment of Total of NIBL seems to be aggressively increasing trend.

## **5.2 Conclusions**

The study is conducted on credit management of Nepal Investment Bank, which is one of the leading banks in Nepal. NIBL has been maintaining a steady growth rate over this period. NIBL has earned a net profit of Rs 1266 million for the fiscal year 2009/10 and this comes to be 40.56% more as compared to the same period in the previous fiscal year. NIBL earned operating profit of Rs 1928 million for the fiscal year 2009/10 and this comes to be 47.11% more as compared to the same period in the fiscal year. Similarly, total deposit is Rs 50095 million for the fiscal year 2009/10 and this comes to be 7.27% more as compared to the same period in the previous fiscal year. Similarly, total loan is Rs 40948 million which is increase by 11.19% compare as previous fiscal year.

Nepal Investment bank has adequate liquidity position. It shows that bank's investment is appropriate. NIBL bank shows the fluctuating trend during the study period. Now in Nepal, many banks and financial institution are functioning to collect deposit and invest money somewhere in the investigable sectors. Remittance has also

help to increase the amount of deposit in bank. On the other hand due to political crisis economic sectors have been damaged. Most of the projects have been withdrawn due to security problem. So, banks are utilizing their fund in home loan, auto loan and share loan etc in consumer banking.

Loan and advances to fixed deposits ratio and the total loan advances to total deposit ratio of NIBL are increasing trend in overall. The mean ratio is 2.7726 times and 0.7654 times in the study period. Similarly credit and advances to total asset is not so fluctuating trends. The average mean ratio is 66.64%. The total Non- performing assets ratio of NIBL is in decreasing trend. The mean ratio is 0.85%. The bank is able to obtain higher lending opportunity. The ratio indicates the high contribution made by lending and investing activities. Thus, credit management is in a good position. The Debit to equity ratio of NIBL is in increasing trend during the study period. The analysis indicates that the bank is highly leveraged because the claim of the outsiders exceeds than those of the owners over the bank assets. The Debt to assets ratio of NIBL is high or in other words, they have excessively geared capital structure. 92% of total assets of NIBL is financed by the outsider's funds. Total assets to net worth ratio of the bank are decreasing and fluctuating trend thereafter. Probability ratios are very helpful to measure the overall efficiency in operation of a financial institution. The total net profit to gross income ratio of NIBL is in increasing and decreasing trend. The mean ratio is 14.059 . These are able to obtain higher efficiency of the bank. Therefore, credit management is in good position of the bank. The bank is able to obtain higher efficiency. This means that credit management is in good position. Loan loss provision to total loan and advances ratio of NIBL is in decreasing trend. This shows that good quality of assets in total volume of loan and advances. Total non-performing assets to total assets ratio is also in decreasing trend. It indicates proper manage of total asset. This ratio indicates the more efficient operating of credit management. Ratio are decreasing trend it indicates the bank is decreasing the non-performing loan from total loan. Interest expenses to total deposit ratio of NIBL is increased in fiscal year 2009/10. That this ratio does not indicate higher interest expenses on total deposit. The trend of Total Deposit, Total Asset, Loan and Advance and Total Profit of NIBL is in increasing trend. Equity portion of the bank is slightly increasing in the recent year due to issue of directives by Nepal Rastra Bank (NRB) the entire bank to increase its paid up capital. Every commercial has to meet

2000million paid up capitals till 2070 B.S. NIBL has currently Ordinary Shares of 24090977 Rs. 100 each 240909097700 paid up capital. NRB has issued that direction to provide more safety to the customers. Therefore, bank has continuously increasing their capital every year.

### **5.3 Recommendation**

These findings may be useful for them who are concerned directly or indirectly with the basis of above analysis and findings of the study, following suggestions and Recommendation can be drawn out.

- Generally banks have to maintained liquid assets. The current ratio of the NIBL is considerable. This can be regarded as good liquidity position. The liquidity position affects external and internal factors such as prevalent investment situations, central bank requirements and so on. Considering the growth position of financial market, the lending policy management capabilities, strategic planning and fund flow situation, bank should maintain enough liquid assets to pay short-term obligations. So, it is recommended to maintain sound liquidity position to NIBL.
- Banking sector is seriously affected by the non-performing loan. All banks are not far from this above fact. If non-performing loan increases, the overall banking business will be affected. Banks should sincere while granting loan and to do affective follow up for recovery of non-performing loan.
- Banks should exercise more in credit creation and reducing the interest rate for loan and advances. This helps them to maintain more competitive.
- Banks could do better by offering modern banking facilities and new product for the development of banking industry.
- Cash and bank balance of NIBL is moderate. Banks efficiency should be increased to satisfy the demand of depositor at low of cash and bank balance does not provide return to the bank. Therefore, some percentage of the cash and bank balance should be invested in profitable sectors.
- Bank is suggested to make policy to ensure rapid identification of delinquent loans. Bank should make immediate follow-up of loan until it is recovered.

The recovery of loan is very challenging as well as important part of the bank. Therefore, bank must be careful to strengthen credit collection policy.

- NIBL should avoid extending credits merely based on oral information presented at the credit interview. Historical financial and trade records should be obtained or proper assessment of the proposal.
- Banks should regularly follow the credit customers to confirm that whether the customers have utilized their credit for the same purpose or not, committed at the time of taking credit from the banks.
- Banks could do better by offering modern banking facilities and new product for the development of banking industry.
- NRB recommended following the NRB directives which will help to reduce credit risk arising from defaulter, lack of proper credit appraisal, defaulter by Blacklisted borrowers and professional. Government has established Credit information bureau, which will provide suggestion to commercial bank. So NIBL is suggested to collect as much information about borrowers and only lend to non-risky area and to non-defaulter. NIBL bank should be fulfilling some social obligations by extending their resources to rural area and promoting the development of poor and disadvantages group. In order to do so, they should open their branches in the remote area with the objective to provide the banking services. The minimum deposit amounts should be reduced.
- The economical liberalization policy adopted by Nepal Government has created an environment of cutthroat competition in the banking sectors. In the context NIBL bank is suggested to formulate and implement sound and effective financial and non-financial strategies to minimize their operational expenses to meet required level of profitability.
- International relation of NIBL is satisfactory in comparison to other banks. Due to tough competition the bank should make negotiation with the international banks to increase its transactions on the international areas.
- According to NRB directives, all the commercial bank should increase the capital up to Rs 2000 million by 2070 B.S. NIBL is increasing the paid up capital to meet NRB directive. Either capitalization of profit, declaration of Bonus share or right share issue can make the increment in capital.

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## Appendix 1

### Correlation Coefficient between Deposit & Loan & Advances

Year	Total Deposit (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2005/06	18927.306	13178	358242912	173659684	249424038
2006/07	24488.856	17769	599704068	315737361	435142482
2007/08	34451.726	27529	1186921424	757845841	948421565
2008/09	46698.01	36827	2180704138	1356227929	1719747614
2009/10	50094.725	40948	2509481473	1676738704	2051278799
<b>TOTAL</b>	<b>174660.623</b>	<b>136251</b>	<b>6835054016</b>	<b>4280209519</b>	<b>5404014499</b>

$$a) \text{ Mean } (\bar{X}) = \frac{SX}{N} = \frac{174660.623}{5} = 34932.1$$

$$\text{Mean } (\bar{Y}) = \frac{SY}{N} = \frac{136251}{5} = 27250.2$$

(b) Coefficient of Correlation (r) =

$$\frac{nSXY - SX.SY}{\sqrt{nSX^2 - (SX)^2} \sqrt{nSY^2 - (SY)^2}}$$

$$= \frac{5 \times 5404014499 - 174660.623 \times 136251}{\sqrt{5 \times 6835054016 - (174660.623)^2} \sqrt{5 \times 4280209519 - (136251)^2}}$$

$$= \frac{3222387952}{60571.75 \times 53260.80} = 0.999$$

(c) Coefficient of determination (r<sup>2</sup>) = (0.999)<sup>2</sup> = 0.998

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

$$= 0.6745 * \frac{1 - 0.998}{\sqrt{5}}$$

$$= 0.00069$$

e) P.Er = 0.0624

## Appendix 2

### Correlation Coefficient between Deposit & Total assets

Year	Deposit (X)	Total Assets (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2005/06	18927.306	21732	358242912	472279824	411328214
2006/07	24488.856	28074	599704068	788149476	687500143
2007/08	34451.726	39406	1186921424	1552832836	1357604715
2008/09	46698.01	53596	2180704138	2872531216	2502826544
2009/10	50094.725	57936	2509481473	3356580096	2902287988
<b>TOTAL</b>	<b>174660.623</b>	<b>200744</b>	<b>6835054016</b>	<b>9042373448</b>	<b>7861547604</b>

$$a) \text{ Mean } (\bar{X}) = \frac{SX}{N} = \frac{174660.623}{5} = 34932.1$$

$$\text{Mean } (\bar{Y}) = \frac{SY}{N} = \frac{198108}{5} = 40148.8$$

(b) Coefficient of Correlation (r) =

$$\frac{nSXY - SX.SY}{\sqrt{nSX^2 - (SX)^2} \sqrt{nSY^2 - (SY)^2}}$$

$$= \frac{5 \times 7861547604 - 174660.623 \times 200744}{\sqrt{5 \times 6835054016 - (174660.623)^2} \sqrt{5 \times 9042373448 - (200744)^2}}$$

$$= \frac{4245665915}{60571.75 \times 70097.89} = 1$$

(c) Coefficient of determination (r<sup>2</sup>) = (1)<sup>2</sup> = 1

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

$$= 0.6745 * \frac{1 - 1}{\sqrt{5}}$$

$$= 0.00004$$

e) 6.P.Er = 0.00037

### Appendix 3

#### Correlation Coefficient between Loan & advance & Net Profit

Year	Total Deposit	Net Profit (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2005/06	18927.306	350.54	358242912	122878.292	6634777.85
2006/07	24488.856	501.4	599704068	251401.96	12278712.4
2007/08	34451.726	696.73	1186921424	485432.693	24003551.1
2008/09	46698.01	900.62	2180704138	811116.384	42057161.8
2009/10	50094.725	1265.95	2509481473	1602629.4	63417417.1
<b>TOTAL</b>	<b>174660.623</b>	<b>3715.24</b>	<b>6835054016</b>	<b>3273458.731</b>	<b>148391620.2</b>

$$a) \text{ Mean } (\bar{X}) = \frac{SX}{N} = \frac{174660.623}{5} = 34932.1$$

$$\text{Mean } (\bar{Y}) = \frac{SY}{N} = \frac{3715.24}{5} = 743.048$$

(b) Coefficient of Correlation (r) =

$$\frac{nSXY - SX.SY}{\sqrt{nSX^2 - (SX)^2} \sqrt{nSY^2 - (SY)^2}}$$

$$= \frac{5 \times 148391620.2 - 174660.623 \times 3715.24}{\sqrt{5 \times 6835054016 - (174660.623)^2} \sqrt{5 \times 3273458.731 - (3715.24)^2}}$$

$$= \frac{93051967.9}{60571.75 \times 1601.34} = 0.959$$

(c) Coefficient of determination (r<sup>2</sup>) = (0.959)<sup>2</sup> = 0.920

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

$$= 0.6745 * \frac{1 - 0.920}{\sqrt{5}}$$

$$= 0.024$$

e) 6.P.Er = 0.2075

## Appendix 4

### Correlation Coefficient between Total Debt and Total Assets

Year	Total Debt (X)	Total Assets (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2005/06	19915	21732	396607225	472279824	432792780
2006/07	25713	28074	661158369	788149476	721866762
2007/08	36187	39406	1309498969	1552832836	1425984922
2008/09	49103	53596	2411104609	2872531216	2631724388
2009/10	52720	57936	2779398400	3356580096	3054385920
<b>TOTAL</b>	<b>183638</b>	<b>200744</b>	<b>7557767572</b>	<b>9042373448</b>	<b>8266754772</b>

$$a) \text{ Mean } (\bar{X}) = \frac{SX}{N} = \frac{183638}{5} = 36727.6$$

$$\text{Mean } (\bar{Y}) = \frac{SY}{N} = \frac{198108}{5} = 40148.8$$

(b) Coefficient of Correlation (r) =

$$\frac{nSXY - SX.SY}{\sqrt{nSX^2 - (SX)^2} \sqrt{nSY^2 - (SY)^2}}$$

$$= \frac{5 \times 8266754772 - 183638 \times 200744}{\sqrt{5 \times 7557767572 - (183638)^2} \sqrt{5 \times 9042373448 - (200744)^2}}$$

$$= \frac{4469547188}{63764.59 \times 70097.89} = 1$$

(c) Coefficient of determination (r<sup>2</sup>) = (1)<sup>2</sup> = 1

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

$$= 0.6745 * \frac{1 - 1}{\sqrt{5}}$$

$$= 0.00003$$

e) 6.P.Er = 0.000259

## Appendix 5

### Correlation Coefficient between loan and advances and nonperforming assets

Year	Loan & Advance (X)	Non-performing Assets (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2005/06	13178	272.79	173659684	74414.3841	3594826.62
2006/07	17769	421.97	315737361	178058.6809	7497984.93
2007/08	27529	309.47	757845841	95771.6809	8519399.63
2008/09	36827	375	1356227929	140625	13810125
2009/10	40948	0	1676738704	0	0
<b>TOTAL</b>	<b>136251</b>	<b>1379.23</b>	<b>4280209519</b>	<b>488869.7459</b>	<b>33422336.18</b>

$$a) \text{ Mean } (\bar{X}) = \frac{SX}{N} = \frac{136251}{5} = 27250.2$$

$$\text{Mean } (\bar{Y}) = \frac{SY}{N} = \frac{1379.23}{5} = 275.846$$

(b) Coefficient of Correlation (r) =

$$\frac{nSXY - SX.SY}{\sqrt{nSX^2 - (SX)^2} \sqrt{nSY^2 - (SY)^2}}$$

$$= \frac{5 \times 33422336.18 - 136251 \times 1379.23}{\sqrt{5 \times 4280209519 - (136251)^2} \sqrt{5 \times 488869.7459 - (1379.23)^2}}$$

$$= \frac{-20809785.83}{53260.80 \times 736.26} = -0.531$$

(c) Coefficient of determination (r<sup>2</sup>) = (-0.531)<sup>2</sup> = 0.282

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

$$= 0.6745 * \frac{1 - 0.282}{\sqrt{5}}$$

$$= 0.21670$$

e) P.Er = -1.035

## Appendix-6

### (A) Trend Analysis of Total Deposit:

Year (x)	Total Deposit (Y)	X= x-2007/8	X <sup>2</sup>	XY
2005/6	18927	-2	4	-37854
2006/7	24489	-1	1	-24489
2007/8	34452	0	0	0
2008/9	46698	1	1	46698
2009/10	50095	2	4	100190
<b>Total N=5</b>	<b>Y=174661</b>	<b>X=0</b>	<b>X<sup>2</sup>=10</b>	<b>XY=84545</b>

*Source: Annual Report of Nepal Investment Bank Limited*

Let the trend line be

$$Y = a + bx \dots\dots\dots(1)$$

Where

X=x – Middle year

$$a = \frac{\sum Y}{N}$$

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

NIBL

$$a = 34932.20$$

$$b = 8454.50$$

where as

$$Y_c = 34932.20 + 8454.5 \text{ of NIBL}$$

## Appendix-7

### A) Trend Analysis of Loan and Advance:

Year (x)	Loan and Advance (Y)	X=x-2007/8	X <sup>2</sup>	XY
2005/6	13178	-2	4	-26356
2006/7	17769	-1	1	-17769
2007/8	27529	0	0	0
2008/9	36827	1	1	36827
2009/10	40948	2	4	81896
<b>Total N=5</b>	<b>Y=136251</b>	<b>X=0</b>	<b>X<sup>2</sup>=10</b>	<b>XY=74598</b>

*Source: Annual Report of Nepal Investment Bank Limited*

Let the trend line be

$$Y = a + bx \dots\dots\dots(1)$$

Where

X=x - Middle year

$$a = \frac{\sum Y}{N}$$

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

NIBL

$$a = 27250.20$$

$$b = 7459.8$$

where as

$$Y_c = 27250.20 + 7459.8 \text{ of NIBL}$$



## Appendix-8

### A)Trend Analysis of Total Assets:

Year (x)	Total Assets(Y)	X=x-2006/7	X <sup>2</sup>	XY
2005/6	21732	-2	4	-43464
2006/7	28074	-1	1	-28074
2007/8	39406	0	0	0
2008/9	53596	1	1	53596
2009/10	57936	2	4	115872
<b>Total N=5</b>	<b>Y=200744</b>	<b>X=0</b>	<b>X<sup>2</sup>=10</b>	<b>XY=97930</b>

*Source: Annual Report of Nepal Investment Bank Limited*

Let the trend line be

$$Y=a + bx \dots\dots\dots(1)$$

Where,

X=x – Middle year

$$a = \frac{\sum Y}{N}$$

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

NIBL

$$a = 40148.8$$

$$b = 9793$$

Where as

$$Y_c = 40148.8+ 9793 \text{ of NIBL}$$

## Appendix-9

### (A) Trend Analysis of Net Profit:

Year(X)	Net Profit (Y)	X=x-2007/8	X <sup>2</sup>	XY
2005/06	350.54	-2	4	-701.08
2006/07	501.34	-1	1	-501.34
2007/08	696.73	0	0	0
2008/09	900.62	1	1	900.62
2009/10	1265.95	2	4	2531.9
<b>Total N=5</b>	<b>Y=3515.18</b>	<b>X=0</b>	<b>X<sup>2</sup>=10</b>	<b>XY=2230.1</b>

*Source: Annual Report of Nepal Investment Bank Limited*

Let the trend line be

$$Y = a + bx \dots\dots\dots(1)$$

Where

X = x- Middle year

$$a = \frac{\sum Y}{N}$$

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

NIBL

$$a = 703.04$$

$$b = 2230.1$$

where as

$$Y_c = 703.04 + 2230.1 \text{ of NIBL}$$

## Annex

### No. of Commercial Banks in Nepal

Sn	Name of Bank	Special Features
1	Nepal Bank Limited	First bank
2	Nepal Rastra Bank	Central bank
3	Rastriya Banijya Bank	Largest commercial bank
4	Nabil Bank Ltd.	First private commercial bank
5	NIBL	Won 3 “Bank of the Year”
6	Standard Chartered Bank	JV between ANZ Grindlays and Nepal Bank Ltd.
7	Himalayan Bank Ltd.	JV with Habib Bank of Pakistan
8	Nepal SBI Bank	JV between Employees Provident Fund and State Bank of India
9	Nepal Bangladesh Bank	Technical collaboration with I.F.I.C. Bank Ltd., Bangladesh
10	Everest Bank Ltd	JV with Punjab National Bank of India
11	Bank of Kathmandu	JV with Syam Bank of Thailand
12	Nepal Credit and Commerce Bank Ltd.	JV with a leading bank of Sri Lanka
13	Lumbini Bank Ltd.	Narayangadh H/O
14	Nepal Industrial and Commerce Bank Ltd.	Employed a senior banker from India to head its operation
15	Machhapuchchhre Bank Ltd.	Pokhara H/O
16	Kumari Bank Ltd.	
17	Laxmi Bank Ltd.	Birgunj H/O
18	Siddhartha Bank Ltd.	
19	Agricultural Bank Ltd.	Upgraded From Development Bank
20	Global Bank Ltd.	
21	Citizens Bank Ltd.	

22	Prime Commercial Bank Ltd.	
23	Bank of Asia-Nepal Ltd.	
24	Sunrise Bank Ltd.	
25	Development Credit Bank Ltd	
26	NMB Bank Ltd.	Upgraded from Merchant Finance
27	Kist Bank Ltd.	Highest no. of Branches
28	Janata bank Ltd.	
29	Civil Bank	
30	Mega Bank Ltd.	Highest No. of shareholders
31	Century Bank Ltd.	

*[www.nrb.org.np, December 2010]*