

**CREDIT RISK MANAGEMENT OF NEPAL INVESTMENT
BANK LIMITED AND NABIL BANK LIMITED**

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RECOMMENDATION

This is to certify that the thesis:

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I hereby declare that the work done in thesis entitled " **CREDIT RISK MANAGEMENT OF NEPAL INVESTMENT BANK LIMITED AND NABIL BANK LIMITED** " has been submitted to Shanker Dev Campus, Faculty of Management, Tribhuvan University, is my own created work reported in the form of partial fulfillment of the requirement of Master's of Business studies (M.B.S.) course under the supervision of Mr. Rishi Raj Gautam and Mr. Madhusudan Gautam of Shanker Dev Campus, T.U.

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ABBREVIATION

ADB	: Agricultural Development Bank
AGM	: Annual General Meeting
BOK	: Bank of Kathmandu Limited
BPS	: Book-value Per Share
B.S.	: Bikram Sambat (Abbreviation of Bikram Era)
CEO	: Chief Executive Officer
CV	: Coefficient of Variation
DPS	: Dividend per Share
EBL	: Everest Bank Limited
EMLV	: Estimate market level value
EPS	: Earning Per Share
F/Y	: Fiscal Year
GDP	: Gross Domestic Product
HBL	: Himalayan Bank Limited
G/N	: Government of Nepal
IMC	: International Money Conference
IMF	: International Monetary Fund
MPS	: Market Price of Share
NABIL	: Nabil Bank Limited
NBL	: Nepal Bank Limited
NEPSE	: Nepal Stock Exchange
NIBL	: Nepal Investment Bank Limited
NICB	: Nepal Industrial & Commercial Bank Limited
NPV	: Net Present Value
NRB	: Nepal Rastra Bank
PE	: Price Earnings
RBB	: Rastra Banijya Bank
SBI	: Nepal State Bank of India Limited
SCBNL	: Standard Chartered Bank Nepal Limited
SEBO/N	: Security Board of Nepal

CHAPTER – I

INTRODUCTION

1.1 Background of the Study

Credit risk management is the heart of commercial banking; consequently the formulation and implementation of lending policies are among the most important responsibilities of directors and management. Well formulated lending policies and careful lending practices are essential if a bank is to perform its credit. Credit management affects on the company's profitability and liquidity so it is one of the crucial decisions for the financial institutions. The banks take almost care in analyzing the creditworthiness of the borrowing customer to ensure that the interest and the principal amount on loans are timely recovered without much trouble and legal process. A sound lending policy is essential for the good performances of the bank and further to attain economic objectives directed towards acceleration of the development. Lending policy should be carefully analyzed and the banks should be careful while performing its credit creation effectively and to minimize the risk factor.

Liquidity refers to availability of liquid assets or that state of position of a bank that pronounces its capacity to meet its entire obligation. It refers to the capacity of bank to pay cash against deposits. People deposit money at the bank in different accounts with the confidence that the bank will repay their money when they need. To maintain such confidence of the depositors, the bank must keep this point in mind while investing its excess fund in different securities at the time of lending. So that it can meet current or short - term obligation when they become due for payment.

Bank should always know the purpose of loan demanded by a customer because if the borrower misuse the loan granted by the bank he will never able to repay interest and principal. In order to avoid such circumstances, loans should be allowed to the selected borrowers and it should demand all the essential detailed information about the scheme of project in which the bank is lending for. Finance companies must keep in mind the overall development plans of the nation and the credit policy of the concerned authority i.e. central bank. Banking plays a significant role in the development of nations. Bank is a financial institution which primary classes in borrowing and lending. Modern bank prefers varieties of functions. Therefore, it is difficult to decide the

function of a modern bank because of their complexity and versatility in operation. Various authors have defined the word 'Bank' in different ways. A commercial bank is dealer in money and it substitutes for money such a cheque or bills of exchange, it also provides a variety of financial service.

Banks are those financial institutions that offer the widest range of financial services especially credit, savings, and payment services and perform the wisest range of financial services of any business firm in the economy. As a financial institution a bank links the surplus unit with the deficit unit of the economy. Banks today provide a number of financial services to their customers. This multiplicity of bank's functions and services has led to banks being labeled "financial departmental stores" and to such advertising slogans as your bank – a full service financial institution. Customers can satisfy virtually every type of financial services needs at one financial institution in one location.

The world business scenario has been changing very fast. Most countries around the globe have efficiently eliminated state monopolies of business. The volume of international trade has been increasing year after year. Due to globalization many international companies have been actively doing their business across the national boundaries. This competitive market barrier is becoming the major problem for the survival. Now due to these factors, financial institutions face significant change in a time of new alignments in domestic market and increased international competition.

1.2. Focus of the Study

Present situation of Nepalese market is not so good for any kind of business, banking business is totally focus on lending business, which is naturally a risky business, as per present situation finance companies are playing the vital roles in the growth of Nepalese economy. So what kinds of precautions are taken by bank for its survival is very serious subject. As loan is the core area of the commercial banking. It plays the significance impact on the finance companies liquidity and profitability. But the most worry factor in banking industry is the total management of loan. Due to the excessive amount of non- performing assets in commercial bank, there is the wide spread suspicion on the performance on the commercial bank.

So the main focus point of this study is as follows.

-) What types of risk are existing in the banking business?
-) What is the technique of credit risk management?
-) What is the framework of risk management?
-) What central bank plans to control the commercial bank?
-) What is the current condition of finance companies regarding the credit risk position?

1.3. Statement of the Problem

As financial institutions are becoming main sources of mobilizing the financial resources, the large amount of commercial bank funds are concentrated on total loan portfolio. Therefore, the success and failure of the bank largely depend on the total credit risk management of finance companies. In order to analyze the credit risk management of commercial bank following research problems are formulated.

-) What is the credit risk management of commercial bank?
-) What is the liquidity, asset, and credit risk and profitability of bank in general?
-) What are the total compositions of credit of commercial bank?
-) What is the loan loss provision status that has been established by commercial bank?
-) What are the effects on bank's total performance by the recent regulations relating to loan classification and loan loss provisioning?
-) What is the effect that has been caused by non-performing assets of commercial bank on their profitability and liquidity managements?

1.4 Objectives of the Study

This study aims to examine its efficient in effectiveness, systematization and sincerity in disbursing and recovery loan and risk related factor. The main objective of the study is to evaluate the credit risk management of commercial bank in Nepal. In order to achieve the basic objective, the following other objectives are:

-) To examine the credit risk position of the selected commercial banks in Nepal (NIBL and NABIL).
-) To compare the liquidity management, asset management efficiency, profitability position, risk position, investment practices of aforesaid Banks.

1.5. Significance of the Study

The significance of the study enlightens about the credit risk management of respective commercial bank. This signifies the credit risk management whether their fund was better utilized or not. The study also compels the management of respective banks for self-assessment of what they have done in the past and guides them in their future plans and programs. The proposed study would be of enormous assistance to the executives of commercial bank on how they should manage the different composition of loans. The study would be important as it provide theoretical as well as conceptual framework of different aspect of credit risk management.

This study is concerned with measuring and analyzing various financial indicators and its related ratios, trend analysis and various statistical tools as well and financial tools. This study comprises all the aspect of financial analysis for credit risk management so it would be helpful to all future scholars and potential researcher.

1.6. Limitations of the Study

No study can be free from its limitations. As a partial fulfillment for the degree of Masters of Business Studies, the scope of the study is limited within the framework of ratio analysis only. The study doesn't cover aggregate credit risk management techniques.

-) Since the study is fully based on the secondary data collected from various sources.
-) The study is based on data and information provided by commercial bank.
-) The study has been limited to the viewpoint of the credit risk management.
-) The study is about only five fiscal year 2005/06 to 2009/10.
-) Only two commercial banks NIBL and NABIL have been selected for the study purpose.

1.7. Organization of the Study

The present study is organized in such way that the stated objectives can easily be fulfilled. The structure of the study will try to analyze the study in a systematic way. The study report has presented the systematic presentation and finding of the study. The study report is designed in five chapters which are as follows:

Chapter-I: Introduction

This chapter describes the 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.

Chapter-II: Review of Literature

This chapter describes various related books, articles, reports and other publications have been studied and reviewed in this part of the dissertation. This chapter broadly consists of two segments- review of conceptual framework and review of previous studies.

Chapter-III: Research Methodology

It describes about the various source of data related with study and various tools and techniques employed for presenting the data.

Chapter-IV: Presentation and Analysis of Data

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

Review of literature means reviewing research studies of the related area of the study so that all the past and previous studies, their conclusion and perspective of deficiency may be known and further researcher can be conducted or done. In other words it's just like fact are finding based on sound theoretical framework oriented towards discovery of relationship guided by experience, resonating and empirical investigation. The primary purpose of literature is to learn and it helps researcher to find out what research studies have been conducted in one's chosen field of study, and what remains to be done. For review study, the researcher uses different books and journal, reviews and abstracts, indexes, reports, and dissertation or research studies published by various institutions, encyclopedia etc. This section has been divided in two sections:

- I) Conceptual Review
- II) Review of Related Studies

2.1 Conceptual Review

2.1.1 Origin of Bank

The words BANK was instigate form Latin words Bancus, French words Banque and Italian words Banca, which means refer that a Bench where sitting over there invest, exchange and keep record of money and cash. Banking system was started from 'Bank of Venice, 1157 Bank of Barcelona. Actually banking system was inaugurated after established of Bank of England. The concept of the banking has been developed from the ancient history with the effort of ancient goldsmiths.

The Banking system in Nepal was developed gradually from the past. The history states that King Gunakamadev had received loans from the public in the 8th century to renovate "Kathmandu City". The foundation of banking system in Nepal was established by a businessperson named Shankhadhar Shakha in 10th century. He had paid back all the loans taken from the public and since then Nepal Sambat had stated in our country. Later on in the 14th century, King Jayasthiti Malla assign 'TANKADHARI' one is that dealt with the lending of money to the public. Ranadeep Singh established 'TEJARATH ADDA' in the 1933th B.S in order

to protect people from higher interest rate. it charged its creditors with a low interest rate of 5% per annum. However 'TEJARATH ADDA' was the main financial institution that led to the development of modern banking system into the country.

The actual banking system of Nepal starts from the establishment of Nepal Bank Limited (NBL) as the first modern bank in our country Nepal in B.S. 1994 Kartik 30th according to the Nepal Bank Act 1993. After two decade Nepal Rastra Bank established in 14th Baisakh, 2013 BS as a being central bank of Nepal under “Nepal Rastra Bank Act 2012” to perform the function of the central banking in Nepal. It established to promote, control, direct, supervision and manages banking activities. Nepal Industrial Development Corporation (NIDC) was established In 2016 BS under NIDC act 2016. It established for promote industrialization in Nepal. “Rastriya Banijya Bank” was established on 10th Magh, 2022 BS under Rastriya Banijya Bank act 2021 which was the second commercial bank of Nepal. With the establishment of RBB, a noticeable progress could be seen in banking industry of Nepal. Both the banks have majority of shares owned by the government of Nepal. In 2024 magh 7th BS Agriculture Development Bank (ADB) was established under Agricultural Development Bank act 2024. ADB was established combined merge of cooperative bank and bhumisudhar Bachat Corporation.

In 2041 Ashad 29 Nepal Arab Bank limited was first joint venture bank established in Nepal which is known as NABIL Bank in today. After that investment bank (Nepal Indoswis bank), standard charter bank (Greenland bank), Himalayan bank, SBI bank etc instigate accordingly. As the time passed, a need for the more commercial banks arose. At the present time various commercial bank established and some are in process for operation. Today there are altogether 32 commercial banks, 79 Development Banks, 78 Finance Companies, 16 Micro Credit Development Banks and various cooperative firm are functioning in the our country in Nepal. Still many other commercial banks are in the process of opening in the market.

2.1.2 Concept of Credit

Credit is the sum amount of money lent by the creditor (Bank) to the borrower (Customers) either on the basis of security or without security. Sum of the money lent by a bank, is known as credit (Oxford Advanced Learners Dictionary, 1992). Credit and advances is an important item

on the asset side of the balance sheet of a 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 (Varshney & Swaroop, 1994: 42).

Credit is financial assets resulting from the delivery of cash or other assets by a lender to a borrower in return for an obligation of repay on specified on demand. Banks generally grants credit on four ways.

Overdraft

Cash Credit

Direct Credit

Discounting of Bills

2.1.3 Types of Credit

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 ness and level of transaction.

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.

Term Credit:

It refers to money lent in lump sum to the borrowers. It is principle form of medium term debt financing having maturities of 1 to 8 years. The bank credits with maturities exceeding 1 years are called term credits. 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).

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.

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 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.30,000.

Hire Purchase Financing (Installment Credit):

Hire-Purchase credits are characterized by periodic repayment of principle and interest over the maturity of the credit. Hirer agrees to take the goods on hire at a stated rental including their repayment of principle as well as interest with an option to purchase. A recent survey of commercial banks indicates those banks are planning to offer installment credits on a variable rate basis. It can be secured and unsecured as well as direct and indirect installment credits on a variable rate basis. It can be secured and unsecured as well as direct and indirect installment credit.

Housing Credit (Real Estate Credit):

Financial institutions 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.

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 projects. Maturities on developers for 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 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).

Consortium Credit:

No single financial institution grant credit to the project due to single borrower limit or other reason and 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 assets.

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.

Bank Guarantee:

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

Letter of Credit (L/C):

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 since the bank of importer do not open separate L/C for the trade of same commodities (Jhonson, 1940:85).

2.1.4 Meaning of Risk

Risk refers to uncertainty on the investment faced by the investors. It is the possibility that actual outcomes may be different from those expected. Risk can be defined as the possibility of deviation of the actual return from the expected return. Kupper (2000) defines risk as the volatility of corporation's market value. Risk management, on the other hand, is the process of measuring or assessing risk and then developing strategies to manage the risk. In general, the strategies employed include transferring the risk to another party, avoiding the risk, reducing the negative affect of the risk, and accepting some or all of the consequences of a particular risk.

2.1.5 Types of Risk Faced by Commercial banks

Risk and uncertainties are the integral part of banking business. In banking sector, risk refers to the possibility that the bank will turn into liquidation. There are several inherent risk in banking which can be classified into three broad categories i.e. Credit Risk, Market Risk and Operational Risk.

Primarily, risk in the banking context is credit risk through lending, which occupies about 60% of total risk portfolio. Therefore, this study is mainly focused on the credit risk. However, the brief introductions of Market Risk and Operational Risk have also been included. The major sources of risk in banking business are briefly discussed as below:

i. Credit Risk

Credit risk is most simply defined as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms. Anthony Saunders defines the credit risk as “the risk that the promised cash flows from loans and securities held by FIs (Financial

Institutions) may not be paid in full". Credit risk involves inability or unwillingness of a customer or counterparty to meet commitments in relation to lending, trading, hedging, settlement and other financial transactions. Santomero (1997) views credit risk is generally made up of transaction risk or default risk and portfolio risk. The portfolio risk in turn comprises intrinsic and concentration risk. The portfolio risk depends on both external and internal factors. The external factors are the state of the economy, wide swings in commodity/equity prices, foreign exchange rates and interest rates, trade restrictions, economic sanctions, Government policies, etc. The internal factors are deficiencies in loan policies/administration, absence of prudential credit concentration limits, inadequately defined lending limits for Loan Officers/Credit Committees, deficiencies in appraisal of borrowers' financial position, excessive dependence on collaterals and inadequate risk pricing, absence of loan review mechanism and post sanction surveillance etc.

Another variant of credit risk is counterparty risk. Counterparty risk comes from non-performance of a trading partner. The non-performance may arise from counterparty's refusal to perform due to an adverse price movement caused by systematic factors, or from some other political or legal constraint that was not anticipated by the principals. Diversification is the major tool for controlling nonsystematic counterparty risk. Counterparty risk is like credit risk, but it is generally viewed as a more transient financial risk associated with trading than standard creditor default risk. In addition, counterparty's failure to settle a trade can arise from other factors beyond a credit problem.

So, the goal of credit risk management is to maximize a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. Bank should also consider the relationships between credit risk and other risks. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any banking organization.

ii. Market Risk

Market risk is the risk incurred in the trading of assets and liabilities due to changes in interest rates, exchange rates, and other asset prices. So, Market risk is exposure to the uncertain market value of the firm's asset. Major factors affecting Market risk are:

-) Liquidity Risk
-) Interest Rate Risk
-) Foreign Exchange Risk

A. Liquidity Risk:

Anthony Saunders says “Liquidity risk arises whenever financial institutions' liability holders, such as depositors or insurance policyholders, demand immediate cash for their financial claims”. When liability holders demand cash immediately – that is, put their financial claims back to the FI – the FI must either borrow additional funds or sell off assets to meet the demand for the withdrawal of funds. An institution is said to have liquidity if it can easily meet its liability holders' demand for cash either because it has cash on hand or can otherwise raise or borrow cash.

In banking sector, Liquidity risk is created when banks hold different sizes of assets and liabilities and mismatch occurs in maturity of the assets and liabilities. Extreme illiquid asset in bank may result in bankruptcy where as excess liquid asset may carry interest rate risk over the period of time. As it is fatal risk, prudent liquidity management is the primary function of banking sector. Liquidity management is also to make sure that expected shortfall amounts are funded at a reasonable cost, ensure excess fund are invested properly with reasonable returns and without carrying any interest rate risk to the bank

B. Interest Rate Risk (IRR)

Interest rate risk is the risk incurred by a financial institution when the maturities of its assets and liabilities are mismatched. Interest Rate Risk is the probability of decline in earnings, due to the adverse movements of the interest rates in various markets. The applicable interest earned on assets and liabilities and hence net interest margin is the function of market variables and it may get changed overnight or over a period of time according to the market situation. Changes in the interest rate can significantly alter net interest income depending on the mismatch of assets and

liabilities held by the bank. Changes in interest rates also affect the market value of bank's equity.

C. Foreign Exchange Risk:

Foreign exchange risk is the risk that exchange rate changes can affect the value of a bank's assets and liabilities denominated in foreign currencies. The bank is also exposed to foreign exchange risk, which arises from the maturity mismatching of foreign currency positions. In the foreign exchange business, banks also face the risk of default of the counterparties or settlement risk. While such type of risk crystallization will not cause principal loss, banks may have to undertake fresh transactions in the cash/spot market to replace the failed transactions. Thus, the bank may incur replacement cost, which depends upon the currency rate movements.

iii. Operational risk

Operational risk *is* associated with the problems of accurately processing, settling, and taking or making delivery on trades in exchange for cash. It also arises in record keeping, processing system failures and compliance with various regulations. The Basel Committee on Banking Supervision, Basel September (2000), defines operational risk as “the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.”

Operational risk arises from inadequate control systems, operational problems and breaches in internal controls, fraud and unforeseen catastrophes leading to unexpected losses for a bank. Many of the operational-risk-related functions such as regulatory compliance, finance management, frauds, IT, legal, and insurance are carried out by the staff and thus human resources itself becomes a cause for operational risk

2.2.1 Review of Credit Risk Related Unified NRB Directives 2010

2.2.1.1 Credit Risk

Credit risk is the major risk that banks are exposed to during the normal course of lending and credit underwriting. Within Basel II, there are two approaches for credit risk measurement: the standardized approach and the internal ratings based (IRB) approach. Due to various inherent constraints of the Nepalese banking system, the standardized approach in its simplified form, Simplified Standardized Approach (SSA), has been prescribed in the initial phase.

2.2.1.2 Simplified Standardized Approach (SSA):

In comparison to Basel I, SSA aligns regulatory capital requirements more closely with the key elements of banking risk by introducing a wider differentiation of risk weights and a wider recognition of credit risk mitigation techniques. The advantage of implementing this approach is twofold. This approach allows transitional advantage for countries like us by avoiding excessive complexities associated with the advanced approaches of Basel II while at the same time it will produce capital ratios more in line with the actual economic risks that banks are facing, compared to the present Accord.

Under this approach commercial banks are required to assign a risk weight to their balance sheet and off-balance sheet exposures. These risk weights are based on a fixed weight that is broadly aligned with the likelihood of a counterparty default. As a general rule, the claims that have already been deducted from the core capital shall be exempt from risk weights for the measurement of credit risk.

Claims on foreign government, their central banks as well as foreign corporates shall be generally risk-weighted on the basis of the consensus country risk scores of export credit agencies (ECA). Wherever there are claims relating to unrated countries, they shall generally be risk weighted at 100 percent. However, these claims shall be subject to supervisory review and higher risk weight shall be assigned where the review process deems appropriate.

All kinds of claims including loans & advances as well as investments shall be risk weighed net of specific provisions. Generally provision related to any receivable or investment is not defined as general or specific. In such situation, the total provision against any claim/exposure (other than the loans and advances) shall be considered as specific provision. However, provisions eligible for the supplementary capital shall not be allowed for netting while calculating risk weighted exposures. In case of loans, advances and bills purchased the provisions created in lieu of Pass loans only are classified as General loan loss provision. All other provisions are components of specific loan loss provision. Hence, general loan loss provision doesn't comprise provisions created in respect of rescheduled/restructured and non performing loans. It also doesn't include additional provisions created for personal guarantee loans or lending in excess of Single Obligor Limits. However, provisions created in excess of the regulatory requirements and not attributable to identifiable losses in any specific loans shall be allowed to be included in the General Loan Loss Provision.

In order to be consistent with the Basel-II framework, the credit risk for the regulatory capital purpose shall be computed by segregating the exposure in the following 11 categories.

- a) Claims on government & central bank
- b) Claims on other official entities
- c) Claims on banks
- d) Claims on corporate & securities firms
- e) Claims on regulatory retail portfolio
- f) Claims secured by residential properties
- g) Claims secured by commercial real state
- h) Past due claims
- i) High risk claims
- j) Other assets
- k) Off balance sheet items

2.2.1.3 Risk Measurement and Risk Weights:

a. Claims on Government & Central bank

1. All claims on Government of Nepal and NRB shall be risk weighed at 0 %.
2. Claims on foreign government and their central banks shall be risk-weighted on the basis of the consensus country risk scores as follows:

ECA risk scores	0-1	2	3	4 to 6	7
Risk weights	0%	20%	50%	100%	150%

b. Claims on other official entities

3. Claims on the Bank for International Settlements, the International Monetary Fund, the European Central Bank and the European Community will receive a 0% risk weight.
4. Following Multilateral Development Banks (MDBs) will be eligible for a 0% risk weight
 -) World Bank Group, comprised of the International Bank for Reconstruction and Development (IBRD) and the International Finance Corporation (IFC),
 -) Asian Development Bank (ADB),
 -) African Development Bank (AfDB),
 -) European Bank for Reconstruction and Development (EBRD),

-) Inter-American Development Bank (IADB),
-) European Investment Bank (EIB),
-) European Investment Fund (EIF),
-) Nordic Investment Bank (NIB),
-) Caribbean Development Bank (CDB),
-) Islamic Development Bank (IDB), and
-) Council of Europe Development Bank (CEDB).

5. The standard risk weight for claims on other Multilateral Development Banks will be 100%.

6. Claims on public sector entities (PSEs) will be risk-weighted as per the ECA country risk scores.

ECA risk scores	0-1	2	3 to 6	7
Risk weights	20%	50%	100%	150%

c. Claims on banks

7. All claims, irrespective of currency, excluding investment in equity shares and other instruments eligible for capital funds, on domestic banks/financial institutions that fulfill Capital Adequacy Requirements will be risk weighed at 20% while for the rest, it will be 100%.

Banks should make use of the publicly available information of the immediately preceding quarter of the respective banks to gauge their status on capital adequacy.

8. Claims on a foreign bank excluding investment in equity shares and other instruments eligible for capital funds shall be risk weighed as per the ECA Country risk score subject to the floor of 20%. The primary basis for applying the ECA Country Risk score shall be the country of incorporation of the bank. Where the bank is a branch office, the ECA score of the country where the corporate office is located shall be used while in the case of a subsidiary the basis shall be the country where the subsidiary is incorporated.

ECA risk scores	0-1	2	3 to 6	7
Risk weights	20%	50%	100%	150%

However, the claims on foreign banks incorporated in the SAARC region and which operate with a buffer of 1% above their respective regulatory minimum capital requirements may be risk

weighed at 20%. The banks shall be responsible to submit the latest capital adequacy position of such banks and demonstrate that they fulfill the eligibility requirements. Such capital adequacy position submitted by the banks should not be prior to more than one financial year. Moreover, such claims shall be subject to a supervisory review and supervisors may require the bank to risk weigh the claims on ECA country risk scores where the review process deems necessary.

d. Claims on corporate & securities firms

9. The risk weight for claims on domestic corporates, including claims on insurance companies and securities firm will be 100%. The domestic corporates includes all firms and companies incorporated in Nepal as per prevailing Acts and regulations.

10. The claims on foreign corporate shall be risk weighed as per the ECA Country risk score subject to the floor of 20% as follows:

ECA risk scores	0-1	2	3	4 to 6	7
Risk weights	0%	20%	50%	100%	150%

e. Claims on regulatory retail portfolio

11. Claims⁵ that qualify all criteria listed below may be considered as regulatory retail portfolio and risk weighed at 75%, except for past due loans. Such claims however, have to be in strict compliance with the Product paper developed by the bank and approved by their respective board of directors

Criteria:

) *Orientation criteria:* - exposure is to an individual person or persons or to a small business. Bank should obtain written declaration from the borrower to the effect that their indebtedness is within the threshold across all banks and FIs..

) *Product criteria:* - The exposure takes the form of any of the following:

Revolving credits and lines of credit, (including overdraft, hypothecation etc.)

Term loans and leases (e.g. hire purchase, auto loans and leases, student and educational loans)

Small business facilities and commitments,

Deprived sector loans up to a threshold of Rs.10 million (Ten Million only)

) *Granularity criteria:* - NRB must be satisfied that the regulatory retail portfolio is sufficiently diversified to a degree that reduces the risks in the portfolio, warranting the

75% risk weight. No aggregate exposure⁷ to one counterpart can exceed 0.5 % of the overall regulatory retail portfolio.

J) *Low value individual criteria:* - The total aggregated exposure to one counterpart⁸ cannot exceed an absolute threshold of Rs.10 million (Nepalese Rupees Ten Million only)

12. Banks which have claims that fulfill all criterion except for granularity may risk weigh those claims at 100%

f. Claims secured by residential properties

13. Lending to individuals meant for acquiring or developing residential property which are fully secured by mortgages on residential property, that is or will be occupied by the borrower or that is rented, will be risk-weighted at 60%. However, banks should ensure the existence of adequate margin of security over the amount of loan based on strict valuation rules. Banks have to develop product paper and get it approved from the board of directors to regulate this kind of lending. The claims in order to be eligible for this category have to be in strict compliance with this product paper

14. Where the loan is not fully secured, such claims have to risk weighed at 150%

15. When claims secured by residential properties are or have been past due at any point of time during the last two years, they shall be risk-weighted at 100%, net of specific provisions.

g. Claims secured by commercial real estate

16. Claims secured by mortgages on commercial real estate, except past due, shall be risk weighed at 100%. Commercial real estate hereby refers to mortgage of Office buildings, retail space, multi-purpose commercial premises, multi-family residential buildings, multitenanted commercial premises, industrial or warehouse space, hotels, land acquisition, development and construction etc.

h. Past due claims

17. Any loan, except for claim secured by residential property, which is or has been past due at any point of time during the last two years, will be risk-weighted at 150% net of specific provision.

i. High risk claims

- 18. 150% risk weight shall be applied for venture capital and private equity investments.
- 19. Exposures on Personal loan in excess of the threshold of regulatory retail portfolio and lending against securities (bonds and shares) shall attract a risk weight of 150%. Similarly, exposures on credit card shall also warrant a risk weight of 150%.
- 20. Investments in the equity and other capital instruments of institutions, which are not listed in the stock exchange and have not been deducted from Tier 1 capital, shall be risk weighed at 150% net of provisions.
- 21. Investments in the equity and other capital instruments of institutions, which are listed in the stock exchange and have not been deducted from Tier 1 capital, shall be risk weighed at 100% net of provisions.
- 22. The claims which are not fully secured or are only backed up by personal guarantee shall attract 150% risk weight.
- 23. Where loan cannot be segregated/or identified as regulatory retail portfolio or qualifying residential mortgage loan or under other categories, it shall be risk weighed at 150%.

j. Other assets

-) 23. With regard to other assets, following provisions have been made; Interest receivable/claim on government securities will be risk-weighted at 0%.
-) Investments in equity or regulatory capital instruments issued by securities firms will be risk-weighted at 100%.
-) Cash in transit and other cash items in the process of collection will be risk-weighted at 20%. For this purpose, cash items shall include Cheque, Draft, and Travelers Cheques.
-) Fictitious assets that have not been deducted from Tier 1 capital shall be risk weighed at 100%.
-) All other assets will be risk-weighted at 100% net of specific provision.

k. Off balance sheet items

- 24. Off-balance sheet items under the simplified standardized approach will be converted into equivalent risk weight exposure using risk weight as follows:

Off Balance Sheet Exposure	Risk Weight
Any commitments those are unconditionally cancelable at any time by the bank without prior notice, or that effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness (for example bills under collection)	0
% Forward exchange contracts.	10%
Short Term Trade-related contingencies Contingent liabilities arising from trade-related obligations, which are secured against an underlying shipment of goods for both issuing and confirming bank and are short term in nature. This includes documentary letters of credit, shipping guarantees issued and any other trade-related contingencies with an original maturity up to six months.	20%
Undertaking to provide a commitment on an off-balance sheet items	20%
Unsettled 10 securities and foreign exchange transactions between bank to bank and between bank and customer	20%
Long Term Trade-related contingencies Contingent liabilities arising from trade-related obligations, which are secured against an underlying shipment of goods for both issuing and confirming bank and are long term in nature. This includes documentary letters of credit, shipping guarantees issued and any other trade-related contingencies with an original maturity of over six months	50%
Performance-related contingencies Contingent liabilities, which involve an irrevocable obligation to pay a third party in the event that counterparty fails to fulfill or perform a contractual non monetary obligation, such as delivery of goods by a specified date etc. This includes issue of performance bonds, bid bonds, warranties, indemnities, underwriting commitments and standby letters of credit in relation to a non monetary obligation of counterparty under a particular transaction.	50%
Long term irrevocable Credit Commitments Any un-drawn portion of committed credit lines sanctioned for a period	50

of more than 1 year. This shall include all unutilized limits in respect of revolving working capital loans except for trade finance exposures e.g. Overdraft, Cash credit, working capital loan etc.	
Short term irrevocable Credit Commitments Any un-drawn portion of committed credit lines sanctioned for a period of upto 1 year. This shall include all unutilized limits in respect of revolving working capital loans except for trade finance exposures e.g. Overdraft, Cash credit, working capital loan etc.	20
Repurchase agreements, securities lending, securities borrowing, reverse repurchase agreements and equivalent transactions. This includes sale and repurchase agreements and asset sales with recourse, where the credit risk remains with the purchasing bank.	100
Direct credit substitutes Any irrevocable off-balance sheet obligations which carry the same credit risk as a direct extension of credit, such as an undertaking to make a payment to a third party in the event that a counterparty fails to meet a financial obligation or an undertaking to a counterparty to acquire a potential claim on another party in the event of default by that party, constitutes a direct credit substitute. This includes potential credit exposures arising from the issue of financial guarantees and credit derivatives, confirmation of letters of credit (acceptances and endorsements), issue of standby letters of credit serving as financial guarantees for loans, securities and any other financial liabilities, and bills endorsed under bill endorsement lines (but which are not accepted by, or have the prior endorsement of, another bank).	100
Unpaid portion of partly paid shares and securities	100
Other Contingent Liabilities	100

2.2.1.4 Credit Risk Mitigation:

Banks may use a number of techniques to mitigate the risks to which they are exposed. The prime objective of this provision is to encourage the banks to manage credit risk in a prudent and

effective manner. As such, credit risks exposures may be collateralized in whole or in part with cash or securities, or a loan exposure may be guaranteed by a third party. Where these various techniques meet the minimum conditions mentioned below, banks which take eligible financial collateral are allowed to reduce their credit exposure to counterparty when calculating their capital requirements to take account of the risk mitigating effect of the collateral. However, credit risk mitigation is allowed only on an account by account basis, even within regulatory retail portfolio. As a general rule, no secured claim should receive a higher capital requirement than an otherwise identical claim on which there is no collateral. Similarly, the effects of the CRM shall not be double counted and capital requirement will be applied to banks on either side of the collateralized transaction: for example, both repos and reverse repos will be subject to capital requirements. Those portions of claims collateralized by the market value of recognized collateral receive the risk weight applicable to the collateral instrument. The remainder of the claim should be assigned the risk weight appropriate to the counter party. Where the same security has been pledged for both the funded and non funded facilities, banks should clearly demarcate the value of security held for funded and non funded facility. In cases where the bank has obtained same security for various forms of facilities; banks are eligible to claim the CRM benefit across all such exposures up to the eligible value of CRM.

a. Minimum conditions for eligibility:

In order to obtain capital relief towards credit risk mitigation, there are certain basic condition that needs to be fulfilled. Supervisors will monitor the extent to which banks satisfy these conditions, both at the outset of a collateralized transaction and on an on-going basis.

1. *Legal certainty:* - Collateral is effective only if the legal mechanism by which collateral is given is robust and ensures that the lender has clear rights over the collateral to liquidate or retain it in the event of default. Thus, banks must take all necessary steps to fulfill local contractual requirements in respect of the enforceability of security interest. The collateral arrangements must be properly documented, with a clear and robust procedure for the timely liquidation of collateral. A bank's procedures should ensure that any legal conditions required for declaring the default of the customer and liquidating the collateral are observed. Where the collateral is held by a custodian, the bank must seek to ensure that the custodian ensures adequate segregation of

the collateral instruments and the custodian's own assets. Besides that, banks must obtain legal opinions confirming the enforceability of the collateral arrangements in all relevant jurisdictions.

2. *Low correlation with exposure:* - In order for collateral to provide protection, the credit quality of the obligor and the value of the collateral must not have a material positive correlation. For example, securities issued by the collateral provider - or by any related group entity - would provide little protection and so would be ineligible.

3. *Maturity Mismatch:* - The maturity of the underlying exposure and the maturity of the hedge should both be defined conservatively. The effective maturity of the underlying should be gauged as the longest possible remaining time before the obligor is scheduled to fulfill its obligation. The collateral must be pledged for at least the life of the exposure. In case of mismatches in the maturity of the underlying exposure and the collateral, it shall not be eligible for CRM benefits.

4. *Currency Mismatch:* - Ideally the currency of the underlying exposure and the collateral should be the same. Where the credit exposure is denominated in a currency that differs from that in which the underlying exposure is denominated, there is a currency mismatch. Where mismatches occur, it shall be subject to supervisory haircut of 10%.

5. *Risk Management:* - While CRM reduces credit risk, it simultaneously may increase other risks to which a bank is exposed, such as legal, operational, liquidity and market risks. Therefore, it is imperative that banks employ robust procedures and processes to control these risks, including strategy; consideration of the underlying credit; valuation; policies and procedures; systems; control of roll-off risks; and management of concentration risk arising from the bank's use of CRM techniques and its effect with the bank's overall credit profile. In case where these requirements are not fulfilled, NRB may not recognize the benefit of CRM techniques.

6. *Qualifying criteria for guarantee:-* A guarantee (counter guarantee) to be eligible must represent a direct claim on the protection provider and must be explicitly referenced to specific exposures or a pool of exposures, so that the extent of the cover is clearly defined and irrefutable.

Other than non-payment by a protection purchaser of money due in respect of the credit protection contract it must be irrevocable in that there must be no clause in the contract that would increase the effective cost of cover as a result of deteriorating credit quality in the hedged exposure. It must also be unconditional in that there should be no clause in the protection contract outside the control of the bank that could prevent the protection provider from being obliged to pay out in a timely manner in the event that the original counter party fails to make the payments due. On the qualifying default or non-payment of the counter party, the bank may in a timely manner pursue the guarantor for any monies outstanding under the documentation governing the transaction. The guarantor may make one lump sum payment of all monies under such documentation to the bank, or the guarantor may assume the future payment obligations of the counter party covered by the guarantee. The bank must have the right to receive any such payments from the guarantor without first having to take legal actions in order to pursue the counter party payment.

b. Eligible Collaterals:

1. Cash deposit (as well as certificates of deposit or fixed deposits or other deposits) with the bank. The banks may only claim these as CRM only if it has specific authority to recover the amount from this source in case of default.
2. Fixed Deposit Receipts/Certificates of deposits/other deposits of other Banks and FIs, who fulfill the capital adequacy requirements, subject to a 20% supervisory arranged.
3. Gold.
4. Securities issued by the Government of Nepal and Nepal Rastra Bank.
5. Guarantee of the Government of Nepal
6. Financial guarantee/counter guarantee of domestic banks and FIs who meet the minimum capital adequacy requirements subject to a haircut of 20%.
7. Securities/Financial guarantee/Counter guarantee issued by sovereigns.
8. Securities/Financial guarantee/Counter guarantee issued by MDBs in the list specified in 3.3 b (3 & 4)
9. Securities/Financial guarantee/Counter guarantee issued by banks with ECA rating 2 or better. The supervisory haircut shall be 20% and 50% for the banks with ECA rating of 0- and 2 respectively.

c. Methodology for using CRM:

Step 1: Identify the accounts eligible for capital relief under credit risk mitigation.

Step 2: Assess the value of the exposure and the eligible collateral. The value of the eligible collateral is the lower of the face value of the instrument or the outstanding amount of exposure

Step 3: Adjust the value of the eligible collateral in respect of the supervisory haircut in terms of currency mismatch and other eligibility requirements.

Step 4: Compare the adjusted value of the collateral with the outstanding exposure.

Step 5: The value of the eligible CRM is the lower of the adjusted value of the collateral and the outstanding exposure.

Step 6: Plot the eligible CRM in the appropriate category of credit risk.

The sum total of net amount of eligible CRM as per “Form No.4 Exhibit of claims with eligible credit risk mitigants” shall be consistent with the “Form No.3 Eligible Credit Risk Mitigants” prescribed in this framework.

2.2.2 Classification of Loan and Advances

From the effective Fiscal year 2058/59, banks should classify outstanding amount of Loans and Advances on the basis of aging. Loan and advantages should be classified into the following four categories:

1. Pass Loans

Loans and advance whose principle amount not due and past due for a period up to 3 month shall be included in this category. These are classified as Performing Loans.

2. Sub-Standard Loans

All loans and advances that are past due for a period of 3 month to 6 month shall be included in this category.

3. Doubtful Loans

All loans and advances, which are past due for a period of 6 month to one year, shall be included in this category.

4. Loss Loans

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

Provision for good loan

Loan and advances fully secured by gold, silver, fixed deposits receipts and Nepal Government securities should be included under “pass” category. Where collateral of fixed deposit receipt or Nepal Government securities or NRB bonds is placed as securities against loan for other purposes, such loan is classified on the basis of aging.

Additional arrangement for “Loss” Loan Provision

Even if the loan is not due, loans having any or all of the following discrepancies shall be classified as “Loss”

- ☞ The borrower has been declared bankrupt
- ☞ The credit has not been used for the purpose originally intend.
- ☞ The borrower is absconding or cannot be found
- ☞ Owing to non-recovery, initiation as to auctioning of the collateral has passed six months and if the recovery process is under litigation.
- ☞ Loans provided to the borrowers included in the blacklist and where the credit information bureau blacklists the borrower
- ☞ Non-security at all or security that is not in accordance with the borrower’s agreement with the bank
- ☞ Purchased or discounted bills are not realized within 90 days from the due date

Additional arrangement in respect of term loan

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

Loan Loss Provision Policy

NRB has issued the directives which commercial banks should make provision against the loan disbursed them. The loan loss provision on the basis of the outstanding loans and advances classified as per NRB Directives should be provides as follows:

Loan Loss Provision Policy

S.N	Classification of Loans	Define as	Age	LLP
01	Pass or Good	Performing Loan	Principle not overdue up to 3 months	1%
02	Sub-Standard	Non-Performing Loan	Principle overdue by more than 3 month to 6 months	25%
03	Doubtful	Non-Performing Loan	Principle overdue by more 6 month to 12 months	50%
04	Loss or Bad	Non-Performing Loan	Principle overdue by more than 12 months	100%

Additional Provisioning for Personal Guarantee Loans

Where the loan is extended only against personal guarantee, a statement of the assets, equivalent to the personal guarantee amount not claimable by any other shall be obtained. Such loans shall be classified as per above and where the loans fall under the category of Pass, Substandard and Doubtful in addition to the normal loan loss provision applicable for the category, an additional provision by 20 % point shall be provided. Classification of such loans and advances shall be prepared separately. Hence the loan loss provision required against the personal guarantee loan will be 21%, 45% and 70% for Pass, Standard and Doubtful category respectively.

Rescheduling and restructuring of Loan

In respect of loans and advances falling under the category of Substandard, Doubtful or Loss, banks may reschedule or restructure such loans only receipt of a written plan of action from the borrower citing the following reasons:

- ☞ Evidence of existing of adequate loan documentation
- ☞ The internal and external cause contribution to deterioration of the quality of loan.

- ☞ The reduced or risk inherent to borrower/enterprise determined by analyzing its balance sheet and profit and loss account in order to estimate recent cash flows and to project future ones, in addition to assessing market conditions.
- ☞ An evaluation of the borrower/enterprise's management with particular emphasis on efficiency, commitment and high standards of business ethics

Loan Loss Provision in respect of rescheduled, restructured or swapped loan

- ☞ Expect for priority sector, in respect of all types of rescheduling or restructured or swapped loan, if such credit falls under Pass category according to Nepal Rastra Bank directives, loan loss provision shall be provided at minimum 12.50%
- ☞ In case of rescheduling or restructuring or swapping or insured of insured or guaranteed priority sector credit, the loan loss provisioning shall be provided at one fourth of the percentage.
- ☞ In respect of swapped loans, the bank accepting the loans in swapping has to provide loan loss provision classifying the loan is swapping shall obtain certification from the concerned bank of financial institution as to the existing classification.

2.3 Review of Articles and Journals

Lawrence (2006) has taken Basel II as a big opportunity for risk management. There are three stages in the credit process: the first is the simple risk control of the business- avoiding being over concentrated in any one sector, estimating the probability of defaulting and assessing recovery. In emerging markets, such as China, collection and recovery processes have to be better understood. The legal governance structure of liens has to be vastly improved and this will come in time with the new legal regulations being legislated. However, banks cannot afford to count on the legal system as has been painfully learnt from the Netting cases or the sovereign jurisprudence. These are operational risks that must be taken account of.

The second phase is the link between economic capital and return. Clearly banks would like to set minimum rates of return they expect to earn on their portfolios after provisioning. The link between economic profit and risk is the next stage in advancing the practice of credit risk management.

Finally, the third stage is when risk management is used as a strategic management tool to align Risk Adjusted Return on Economic Capital (RAROC) with ROE. In most emerging markets, where many commercial banks have been protected from foreign banking invasion, the landscape is now changing. In Malaysia, new legislation will allow regional banks to bank locally and in China, the new foreign bank regulations will allow investment banks, commercial banks and fund managers to enter the market, putting stress on the current “big four” oligopolistic structure. It is precisely in emerging markets where Basel II is an invaluable tool to go through the three stages set out above. This regulation is thus an important catalyst to implement all processes including analytic modeling – this includes better predictability of probability of default, exposure at default and loss given default - the business architecture that goes with it including the right corporate governance, the organization, the risk monitoring and reporting.

Banks that fail to have deep understanding of credit risk management will continue being caught in the time warp of the old banking paradigm and be targets for acquisitions by larger banks that have stronger risk management policies in place. The only key to survival and sustainable success is to reengineer and reform the risk strategy that maximizes shareholder value. It would thus be fallacious for the CEO to think of Basel II as just a compliance issue but he should rather use it as an opportunity to really get on top of using risk management as a cornerstone of strategic decision making.

Crosby et al (2007) in their article “Banking lending valuations on commercial property” elaborates that the banking community are trying to identify the value on which they can apply a loan value ratio and thus protect their loan in the future should the borrower default. A simplistic understanding the value therefore suggest that figure provided should be the figure which has a life for the length of the loan. However the very concept is economically impossible in any market with volatility. Values can only be snapshots in time. They do not have a self life.

For this reason EMLV is conceptually and practically redundant in real estate markets. It appears on the surface to be a solution to the banks’ requirement for the reduced risk property lending. In reality, it may indeed transfer that risk by demanding a level of protection to the bank that the valuation cannot give. But if values agree to it, it could open the way to successful negligence

claims in the result of poor lending decisions. This is because the concepts appears the determinants of the virtually certain level of value below which the value will not fall for an indeterminate time into the future. Values are vulnerable to claims that their valuation was too high, should values fall below that level at any time during the loan. Sustainable value is predicated on having a shelf life but the application believes this fundamental requirement. Values must have a time point. The concept is redundant, the target unidentifiable and the definition ambiguous. It is little wonder that the application appears mechanistic. Market value is an obtainable and useful piece of information to the lender. Worth in the market sets this in context and gives the lender a view of whether market prices are at current sustainable levels. In obtaining worth, the value is obliged to carry out both quantitative and qualitative investigation into the future and this generates other analyses at different time points during the course of the loan.

Mundul (2008) in his article entitled “Understanding of credit derivative” emphasizes Credit derivative enable financial institution and companies to transfer credit risk to a third party and thymus reduce their exposure to the risk of an obligor’s default. Credit enhancement technique, which helps reduce the credit risk of an obligation, play a key role in encouraging loans and investment in debts. In legal term credit derivative are privately negotiated bilateral contract to transfer credit risk from one party to another. Some credit enhancement methodologies have existed for the in debts. Some credit enhancement methodologies have existed for a longtime with the support of guarantee, letter of credit or insurance product. However such mechanism works best during economic upturns. As an alternative to commercial risk mechanism, various financial mechanisms have been developed over the past few decades. Such credit risks instruments are normally refer to as credit derivatives. Credit derivative helps to transfer credit risk away from the lender to some other party. Now credit derivative grew popular both as tools for hedging credit risk exposure as well as method of investing in certain types of credit risk.

Credit derivative not only helps corporation and financial institution to manage to their credit risk but also enabled a new set of individual retail client to invest in bonds and stocks previously unaffordable. Through credit derivative individual investor ca invest indirectly in foreign bonds at a lower price. Credit derivative helps investor isolated credit, and transfer it to other investor

who are better suited to managing it or who finds the investment opportunity more interesting.

There are many credit instruments in the market they are:

- Total return swap (TRS)
- Credit default swaps (CDS)
- Credit linked notes (CLN)
- Credit spread option (CSO)

According to the behavior of the asset or deal above credit instrument can be used and minimizing the risk. In this way credit derivative provide protection against credit peril and risk.

2.3.2 Review of Thesis

Regmi (2004) conducted a thesis “A study on credit practices of joint venture commercial banks with reference to Nepal SBI Bank Ltd and Nepal Bangladesh Bank Ltd.”

The basic objectives of this thesis are:

-) To determine impact of deposit in liquidity and its effect on lending practices.
-) To know the volume of contribution made by both bank in lending.
-) To examine lending efficiency and its contribution in profit.
-) To analyze trend of deposit utilization towards loan and advances and net profit and their projection for next five years.

The major findings of this study are

In liquidity ratio, current ratio of NSBL is higher than that of NBBL. The ratio of liquid fund to current liability of NSBL is higher than NBBL. The ratio of cash and bank balance to deposit of NSBL is higher than that of NBBL. The ratio of cash and bank balance to interest sensitive deposit of NSBL is higher than NSBL. The ratio of loans and advances to total assets of NBBL is higher than NSBL. The mean ratio of investment to loans and advances and investment of NSBL is higher than that of NBBL. The ratio of total investment to total deposit of NSBL is higher than that of NBBL.

The ratio of credit to government enterprises to total credit of NBBL is higher than that of NSBL. The mean ratio of credit to bills paid and discount to total credit ratio o NBBL is higher than that of NSBL. The performance of NBBL is better than NSBL. Return on equity and earnings per share of NBBL are higher than that of NSBL.

Correlation between deposit and loans & advances of both banks have positive. Also correlation between total income and loans & advances of both bank have positive relation. Coefficient of correlation between net profit and loans & advances of NSBL is negative as other variables like increase in interest suspense and loan loss provision affects net profit. Coefficient of correlation between net profit and loans & advances of NBBL is positive.

Shrestha (2005) has conducted research topic on “*A study of Non performing Loan & loan loss provision of Commercial Bank, A case study of NABIL, SCB and NBL.*” has made study about a part of credit risk associated with those banks.

The main objectives of her study were:

-) To find out the proportion of non-performing loan in the selected commercial banks.
-) To find out the factors leading to accumulation of non performing loan in commercial banks.
-) To study and analyze the guidelines and provisions pertaining to loan classification and loan loss provisioning.
-) To find out the relationship between loan and loan loss provision in the selected commercial bank.
-) To study and the impact of loan loss provision on the profitability of the commercial banks.

The major findings of the study are as follows:

The NBL has the highest portion of the loan in total asset followed by NABIL and SCBNL. She concludes that the SCBL shows the risk-averse attitude. Likewise the non-performing loan to total loan is found highest in NBL, NABIL and SCBNL. Likewise the Loan Loss Provision is also highest in NBL where as the SCBL has the least Loan Loss Provision.

Likewise, the NBL has the highest portion of Loss loan followed by NABIL and SCBL. This study is more concentrated on non-performing loans; however, there exists lots of areas in credit risk management where further research is called for. In context of credit risk, collateral risk, concentration risk, organization risk management system can be studied.

Subba (2006) has carried out in his research "Study to Credit management of commercial banks i.e. Machchhapuchhre Bank Ltd. and Kumari Bank Ltd." Researcher has analyzed how the selected commercial banks have managed different types of risk in this competitive Nepalese banking Industry. The major objective of this thesis was:

-) To analyze the Credit Risk of selected commercial banks in Nepal
-) To analyze the Market Risk and Operation Risk of MBL and KBL banks in Nepal.
-) To evaluate problems and weakness in credit risk management of MBL and KBL bank.

The major finding of his study was that MBL and KBL minimizing the risk is the major challenge. For combating the risk, both the banks have taken several measures. One of the major measures is capital adequacy ratio. The capital adequacy ratio depicts that both KBL and MBL has higher CAR than statutory requirement.

Credit risk management of both banks have Credit Policies Guidelines (CPG). Similarly, NPL is regularly monitored by both the banks on regular basis and provisioning is done on quarterly basis by categorizing the loan as per NRB guidelines. Similarly, sector wise and security wise lending is being analyzed by these banks on monthly basis.

In the operational risk, the major steps banks are taking to reduce it are preparing and implementing the different operational guidelines and policies & frequently monitoring their compliance. Most of these polices are prepared as per NRB guidelines. Similarly, employees' training is also the major tools for minimizing the operation risk in these banks. For minimizing the loss arising due to occurrence of the above risks, capital and reserve have been maintained by these banks within the standard prescribed by NRB. However, the trend of Capital Adequacy ratio of these banks suggests that both the banks need to increase their capital fund, which is possible mainly by issuing shares, debentures or preference share.

Shrestha (2007) on the research topic on "A study of Credit risk management of Nepalese commercial banks comparative study between Kumari bank Ltd. and Machhapuchchhre bank ltd." has made study about a part of credit risk associated with those banks. The study aims to examine and analyze how the selected commercial Banks have managed mainly credit risk in this competitive Nepalese banking industry. The specific objectives of this study are:

-) To examine the credit risk position of the selected commercial banks in Nepal (KBL and MBL).
-) To analyze the credit risk management system and practices of KBL and MBL.
-) To evaluate the organizational structure of KBL and MBL to manage the credit risk.

The following major findings have been obtained:

The major problems in credit risk are related to the broad areas of concentrations, credit processing, and market- and liquidity-sensitive credit exposures. From the analysis of primary data, it is found that the majority of the respondents of both banks have favored with the bank's single sector, which is upto 10 % of total loan. However, the sector wise lending of KBL and MBL have extended in a single sector. Similarly, the exposure on the single sector of KBL and MBL exceeds 10 % of total loan in 3 and 5 sectors respectively. The single sector loan to core capital shows that the ratio crossed 100% in 2 sectors of both KBL and MBL. In regard to concentration risk, KBL has more risk in manufacturing and others sector where as MBL has more risk on manufacturing and Whole seller and sectors as the single sector credit to core capital ratio in these sectors is more than 100 %. MBL has very high loan concentration on manufacturing sector. it was found that both banks have been extending credit in those highly concentrated sectors after getting approval from the board of director. This clarifies that concentration risk is the main source of credit risk for KBL and MBL.

The lack of systematic and thorough credit processing is also the major source of credit risk in these banks. The problems in credit processing include lack of thorough credit assessment, absence of testing and validation of new lending techniques, subjective decision-making by senior management, lack of effective credit review process, failure to monitor borrowers or collateral values, and failure of banks to take sufficient account of business cycle effects etc. Both banks have ranked 1st to the manufacturing sector where as the Agriculture sector has been ranked the last on the basis of priority. KBL has chosen others sector and real estate business in 2nd and 3rd position respectively, where as the MBL has just opposite preference in these sectors.

Likewise, KBL has ranked Character, Collateral and Capacity of borrower first, second and third criterion for granting credit where as MBL ranked Character, Capacity and Capital first, second

and third priority respectively. From the analysis of lending against various collaterals, it has been found that both the banks have lent highest amount of loan against the movable/ immovable property. MBL has granted loan without any collateral. The average amount of loan without collateral is Rs. 3 million annually. KBL has not granted any loan without backing any collateral.

Limbu (2008) has conducted thesis topic on “Credit Management of NABIL Bank Limited” highlighted that aggregate performance and condition of Nabil bank. In the aspect of liquidity position, cash and bank balance reserve ratio shows the more liquidity position. Cash and bank balance to total deposit has fluctuating trend in 5 years study period. Cash and bank balance to current deposit is also fluctuating. The average mean of Cash and bank balance to interest sensitive ratio is able to maintain good financial condition.

The main objectives of the research are as follow.

-) To evaluate various financial ration of the Nabil Bank.
-) To analyze the portfolio of lending of selected sector of banks
-) To determine the impact of deposit in liquidity and its effect on lending practices.
-) To offer suitable suggestions based on findings of this study.

The major findings of the research are:

In the aspect of assets management ratio, assets management position of the bank shows better performance in the recent years. Non-performing assets to total assets ratio is decreasing trend. The bank is able to obtain higher lending opportunity during the study period. Therefore, credit management is in good position of the bank. In leverage ratio, Debt to equity ratio is in an increasing trend. High total debt to total assets ratio possess higher financial risk and vice-versa. 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 bank is in increasing trend. The study shows the little high earning capacity of NABIL through loan and advances. Earning per share and The Price earning ratio of NABIL is in increasing. Thus, credit management is in a good position. NABIL has been maintaining a steady growth rate over this period. In the study every aspect of banks seems to be better and steady in every year. Its all analysis indicates better future of concern bank.

Shrestha (2009) has conducted research topic on “Credit risk management of Nabil Bank Limited and Nepal Investment Bank Limited in Nepal” The main objective of the study is to evaluate the credit risk management.

The specific objectives of the study have been formulated as follows:

-) To evaluate the status of the loan portfolio of the banks
-) To evaluate problems and weakness in credit risk management.
-) To review the prevailing laws rules and regulation enforced by Nepal Rastra Bank and assess its impact on profitability and liquidity of bank.
-) To offer suitable suggestions based on findings of this study.

The major findings and recommendation of the research are the liquidity position of NIB is comparatively better than NABIL. The mean current ratio of NIB is little higher than NABIL. Cash and bank balance to total deposit ratio of NIB has higher than NABIL. The loan & advances to total deposit ratio of NABIL is lower than NIB. The total investment to total deposit of NABIL is higher than NIB. NABIL mobilize its funds on investment in various securities efficiently. NABIL has invested more portions of total assets on government securities. So an asset management aspect of NABIL is better than NIB.

The profitability position of NABIL and NIB are Return on loan & advances ratio of NABIL is higher than that of NIB. Return on total assets ratio of NABIL is little higher than NIB. However, NABIL seems successful in managing and utilizing the available assets in order to generate revenue. The credit risk ratio shows the proportion of no-performing loan in total Loan & Advances. Average credit risk ratio of NIB is higher than NABIL. According to NRB directives NPL ratio must be less than 5%. The liquidity risk of the bank defines its liquidity need for deposit. The average mean ratio of NIB is greater than that of NABIL. The analysis shows that both banks have the Asset Risk Ratio in fluctuating trend.

Khanal (2010) In her dissertation topic on “An analysis of Credit risk Management of Himalayan Bank and Nabil Bank Limited” The main objective of the study is to evaluate the credit risk and lending management of HBL and NABIL bank., the following specific objectives have been formulated.

-) To evaluate the status of the loan portfolio management of the stated banks viz HBL and NABIL.
-) To evaluate problems and weakness in credit risk management of HBL and NABIL bank.
-) To examine relationship between total investments, deposits, loans and advances net profit and asset and compare them

The major findings of the research are the overall aspect of liquidity position of NABIL is comparatively better than HBL. But the cash and bank balance to total deposit in the preceding years and investment to govt. securities to current assets in the succeeding years of HBL is better. Assets management aspect of NABIL is better than HBL which is justified by higher Mean loan & advances to total deposit ratio, loan & advances to total assets, lower interest earned to operating ratio, higher interest earned to total assets ratio, investment in share and debentures to total assets for NABIL whereas investment to total deposit ratio and investment on govt. securities to total assets of HBL is higher. All these ratios show that NABIL has emphasis on loan and advances out of its total assets rather than investment. HBL has comparatively more investment in govt. securities and other investment which is less productive however it is low risky.

NABIL has earned higher profit in relation to every aspects of the bank than HBL which is justified by higher mean return on loan and advances, return on total assets, return on equity, total interest earned to total working fund, lower interest earned to total operating ratio, lower interest paid to total assets of NABIL. NABIL has better management of loan & advances because of having lower average non performing loan & advances to total loan ratio. Liquidity risk of HBL is lower. NABIL has lower credit risk However HBL has also decreasing trend of ratios. HBL and NABIL banks have positive correlation between deposit and loan & advances, total assets and net profit, but there negative correlation between deposit and total investment & total investment and net profit of HBL. Comparatively NABIL has strong relationship between these variables. Total deposit, loan & advances, net profit of HBL and NABIL are in increasing trend. The overall all financial performance of NABIL is better than HBL. But HBL is also operating smoothly in many aspects. Investment policy ensures maximum amount of credit to all sectors with proper utilization.

CHAPTER - III

RESEARCH METHODOLOGY

3.1 Research Design

Research is a theory building activity. Research design is the plan, structure and strategy of investigations conceived so as to obtain answer to research questions and to control variances.

"A research design is the arrangement of condition for collection and analysis of data in a manner that aims to combined relevance to the research purpose with economic in procedure" (Kothari, 1989:59).

Since the main objectives of this study is to analysis credit management of the banks, all the indicators that shows the credit management of the banks were calculated using data obtained from the five year end internally generated accounting records maintained by sampled Banks. The study depends on the secondary data. Various financial parameters and effective research techniques are employed to evaluate the credit management of the banks. Furthermore, various descriptive as well as analytical techniques are used. The study is designed as to give a clear picture of the Bank's financial circumstances with the help of available data with useful suggestions and recommendation.

3.2 Nature and Sources of Data

The study is mainly conducted on secondary data relating to the study of credit management of samples Banks, as they are they are available at concerned Banks. For the purpose of the study, various related books, booklets, magazine, journals, newspaper and thesis made in this field have been referred. Besides necessary suggestions are taken from various experts both inside and outside the bank whenever required. Secondary data are mostly used for this research purpose.

3.3 Population and Sample

Population refers to the entire group of people, events, or things of interest that the researcher wishes to investigate. A small portion chosen form the population for studying its properties is called sample. The researcher cannot normally survey everyone in the population so a small part of the total population is taken to represent the total population. Hence, a sample is a collection

of items or elements from a population or universe. The method of selecting for study a small portion of the population to draw conclusion about characteristics of the population is known as sampling. Sampling may be defined as the selection on part of the population on the basis of which a judgment or inference about the universe is made.

Here, the total 31 commercial banks shall constitute the population of the data and two bank under the study constitute the sample under the study. So among the various commercial banks in the banking industry, Here Nepal Investment Bank Limited and NABIL Bank has been selected as sample for the present study. Likewise, financial statements of five years (beginning from 2005/06 to 2009/10) are selected as samples for the purpose of it.

3.4 Data collection procedure:

Especially the annual report of NIBL and NABIL 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 web site 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 data are arranged, tabulated under various heads and then 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 tool for analysis,

- 1 Financial Analysis.
- 2 Statistical Analysis.

3.6.1 Financial Tools

Stakeholders of a business firm perform several types of analyses 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.

3.6.1.1 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 low 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.

$$\text{Cash Reserve Ratio} = \frac{\text{Cash and bank balance}}{\text{Total deposit}}$$

ii. Cash and Bank Balance to current Assets Ratio

Cash and bank balance are the 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.

$$\text{Cash and bank balance to current assets ratio} = \frac{\text{cash and bank balance}}{\text{current assets}}$$

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 deposits are not interest sensitive. Fixed deposits have a fixed term to maturity and Current deposits are not sensitive toward 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 deposits to the change interest rate.

$$\text{Cash and bank balance to interest sensitive deposit ratio} = \frac{\text{Cash and bank balance}}{\text{sensitive deposit}}$$

B. Activity Ratio:

It is also known as efficiency turnover ratio or assets management ratio. Its measures how efficiently the firm utilize the assets. Turnover means; how much number of times the assets flow through a firm's operations 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. Various ratios are as follows.

i. Credits Advances to Fixed Deposit Ratio:

Fixed deposits are the long-term interest bearing obligations and credits and advances is 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 in comparison to fixed

deposit for the income generating purpose. The ratio is slightly differ with the former one, because it only includes the fixed deposits, where as the former on includes all the deposits. The following formula is used to obtain this ratio.

$$\text{Credits and Advances to Fixed Deposit Ratio} = \frac{\text{Credits and Advances}}{\text{Fixed Deposits}}$$

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 deposits) 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.

$$\text{Credits and Advances to Total Deposits Ratio:} = \frac{\text{Credit and Advances}}{\text{Total Deposits}}$$

iii. Credit and Advances to Total Assets Ratios:

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:

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

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. Here, 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:

Total Debt = long term Debt + current liability

$$\text{Total Debt to Equity Ratio} = \frac{\text{Total Debt}}{\text{Equity}} \times 100\%$$

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 assets. 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:

$$\text{Total Debt to Total Assets Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}} \times 100\%$$

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.

$$\text{Total Assets to Net Worth Ratio} = \frac{\text{Total Assets}}{\text{Net Worth}} \times 100\%$$

E. Profitability Ratio

This 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 ratios are 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-

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

ii. Interest Income to Total Income Ratio

The ratio measures the volume of interest income 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.

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

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 its fund 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 generating 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 measures 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-

D. 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 its 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 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.

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

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.

$$\text{Interest Expenses to Total Deposit Ratio} \times \frac{\text{Interest Expenses}}{\text{Total Deposit Ratio}}$$

3.7 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.

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

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 only." In simple correlation the effect of others is not included rather these are taken as constant considering them to have no serious effect on the dependent.

$$r_{x_1x_2} = \frac{N \sum X_1X_2 - (\sum X_1)(\sum X_2)}{\sqrt{[N \sum X_1^2 - (\sum X_1)^2]} \sqrt{[N \sum X_2^2 - (\sum X_2)^2]}}$$

Whereas,

$r_{x_1x_2}$ = Correlation between X_1 and X_2

$N \sum X_1X_2$ = 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.):

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

$$\text{c.v.} = \frac{\hat{\sigma}}{x} * 100$$

= 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:

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

Here, r = Correlation coefficient

N = Number of pairs 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 of the probable error, the coefficient of correlation is practically certain, i.e., the value of 'r' is significant.

Times 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
DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter deals with the presentation, analysis of data NIBL and NABIL in order to fulfill the objectives of this study. To obtain best result, the data have been analyzed according to the research methodology as mentioned in third chapter. The purpose of this chapter is to introduce the data analysis and interpretation. With this analysis, efforts have been made to highlight the credit risk management of NIBL and NABIL can be visualized. For analysis, different types of analytical methods and tools such as financial analysis and statistical analysis are used.

4.2 Financial Statement Analysis

4.2.1 Ratio Analysis

4.2.1.1 Liquidity Ratio:

(a) Current Ratio:

This ratio measures the liquidity position of the commercial banks. It indicates the ability of Banks to meet the current liquidity.

Table 4.1
Current assets to current liabilities

Year	Ratio (in times)	
	NIBL	NABIL
2005/06	2.215	2.08
2006/07	2.174	1.83
2007/08	1.014	1.35
2008/09	1.039	1.2
2009/10	1.099	1.16
Mean	1.508	1.524
S.D.	0.627	0.409
C.V.	0.416	0.268

Source: Annual Report of Concern Bank

Table 4.1 shows the current ratio of selected commercial banks during the study period. The current ratio of NIBL bank is fluctuating and NABIL is in decreasing trend. In general, it can be said that all the banks have sound ability to meet their short- term obligations. In the case of NABIL current ratio has high ratio in each year. In an average, liquidity position of NABIL is greater than NIBL i.e. $1.524 > 1.508$ due to high mean ratio. So, NABIL is sound in meeting short-term obligation than NIBL. Likewise, S. D. and C.V. of NIBL is more than NABIL i.e. $0.627 > 0.409$ and $0.416 > 0.268$. It can be said that current ratio of NABIL is more consistent than NIBL. Lastly from the above analysis it is known that NABIL has better liquidity position because it has higher ratio. However both banks have not met the standard ratio as the standard ratio is 2:1. The following figure shows the current ratio of NIBL and NABIL bank.

Figure 4.1
Current assets to Current Liabilities Ratio

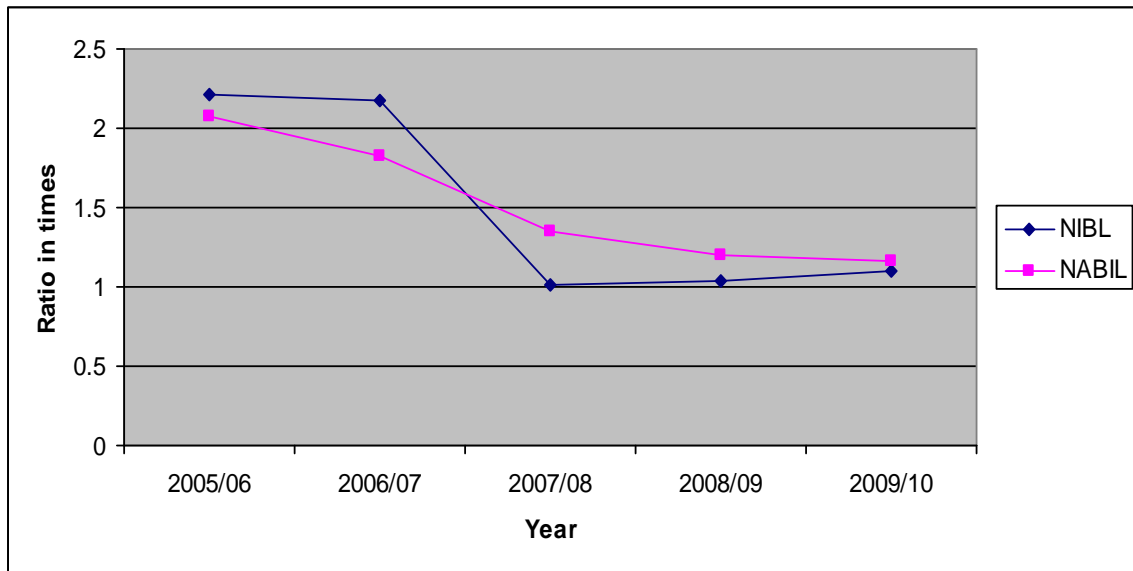


Figure 4.1 represent current asset to current liability of NIB and NABIL. The ratio of both bank have decreasing. Figure shows the line if NABIL falling slowly but NIBL has fall aggressively and increasing at last. The highest current ratio of NIBL is 2.215 times and lowest ratio is 1.039. Similarly the highest current ratio of NABIL is 2.08 times and lowest ratio is 1.16 times respectively.

(b) Cash and Bank Balance to Total Deposits Ratio

Table 4.2

Cash and Bank Balance to Total Deposits Ratio

Year	Ratio in Percent (%)	
	NIBL	NABIL
2005/06	12.34	3.26
2006/07	9.97	5.99
2007/08	10.9	8.37
2008/09	16.95	9.03
2009/10	13.61	3.02
Mean	12.754	5.934
S.D.	2.725	2.791
C.V.	0.214	0.470

Source: Annual Report of Concern Bank

From the table 4.2 analysis, cash and bank balance to total deposits ratio of the NIBL and NABIL are fluctuating but decreasing trend. The highest ratio of NIBL and NABIL are 16.95% and 9.03% respectively in the year 2008/09 respectively. The average ratio of NIBL is greater than that of NABIL i.e. 12.754% > 5.934%. It signifies that NIBL has sound liquid fund to make immediate payment to the depositors from the mean point of view. Likewise, S. D. and C.V. of NABIL is more than NIBIL i.e. 0.2.791 > 2.725 and 0.470 > 0.214. It can be said that cash and bank balance to total deposits ratio of NABIL is more inconsistent than NIBL. Following figure show the cash and bank balance to total deposit ratio.

Figure 4.2

Cash and Bank Balance to Total Deposits Ratio

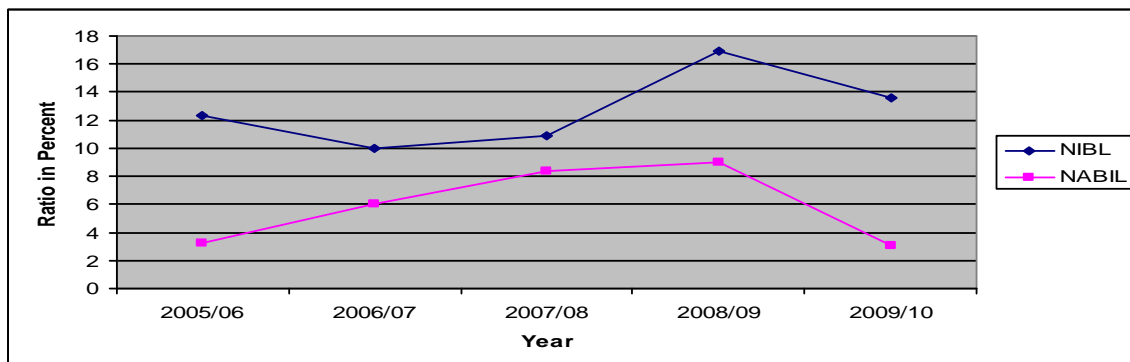


Figure 4.2 shows cash and bank balance to total deposit ratio of NIBL and NABIL. The figure shows both banks have fluctuating trend. The line of NIBL is higher which depicted that higher ratio than NABIL. The highest ratio of NIBL and NABIL are 16.95% and 9.03% and lowest ratio of NIBL and NABIL are 9.97% and 3.02% respectively.

(c) Cash and Bank Balance to Current Assets Ratio

Table 4.3

Cash and Bank Balance to Current Assets Ratio

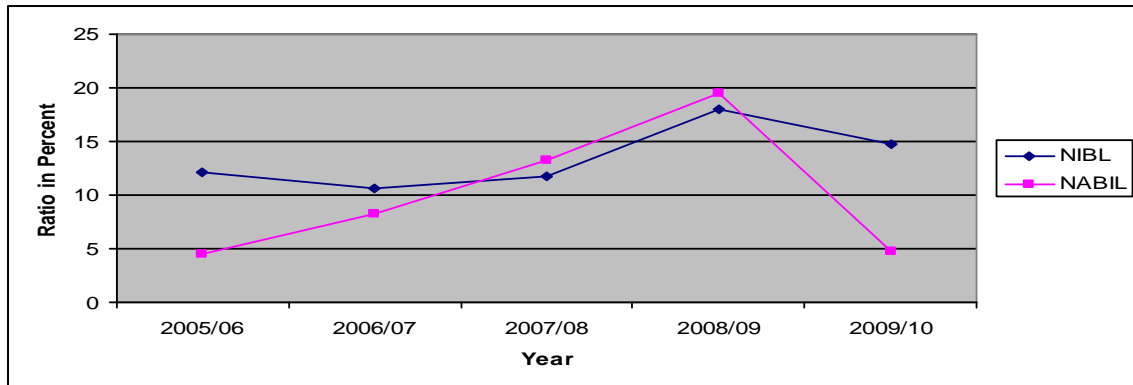
Year	Ratio in Percent (%)	
	NIBL	NABIL
2005/06	12.16	4.55
2006/07	10.65	8.25
2007/08	11.78	13.27
2008/09	17.95	19.46
2009/10	14.75	4.73
Mean	13.458	10.052
S.D.	2.925	6.338
C.V.	0.217	0.631

Source: Annual Report of Concern Bank

Table 4.3 shows that the cash and bank balance to current assets ratio of NIBL is in increasing trend except in 2009/10 and NABIL is increasing trend and decrease in last year 2009/10. The highest ratio of NIBL is 17.95% in year 2008/09 and lowest ratio 10.65% in year 2006/07. The mean ratio is 13.458% similarly, the highest ratio of NABIL is 19.45% in 2008/09 and lowest ratio is 4.55% in 2005/2006. The mean ratio of NABIL is 10.052%. While observing the data, we notice that NIBIL has higher mean ratio. It means NIBIL has slightly sound liquid assets than that of NABIL out of its current assets from the mean point of view. Lower S.D and C.V. of NIBL shows that it has consistency in the ratios i.e. $2.925 < 6.338$ and $0.217 < 0.631$ than NABIL. Following figure show the cash and bank balance to current asset ratio.

Figure 4.3

Cash and Bank Balance to Current Assets Ratio



The figure 4.3 shows the cash and bank balance to current ratio of both banks have been increasing till 2008/09 and decreasing at last. The highest cash and bank balance to current ratio of NIBIL is 17.95% in F/Y 2008/09 and lowest ratio is 12.16% in F/Y 2005/06. Similarly the highest ratio of NABIL is 19.46% in F/Y 2008/09 and lowest ratio is 4.55% in F/Y 2005/06.

(d) Investment on Government Securities to Current Assets Ratio

Table 4.4

Investment on Government Securities to Current Assets Ratio

Year	Ratio in Percent (%)	
	NIBL	NABIL
2005/06	13.14	16.60
2006/07	13.76	28.36
2007/08	9.89	23.09
2008/09	5.74	21.38
2009/10	9.09	26.85
Mean	10.324	23.256
S.D.	3.258	4.658
C.V.	0.316	0.200

Source: Annual Report of Concern Bank

Table 4.4 shows that the investment on government treasury bills to current assets of NIBL and NABIL are in fluctuating trend. The highest ratio of NIBL is 13.76% in 2006/07 and NABIL is 28.36% in 2006/07 and the lowest ratio of NIBL and NABIL are 5.74% in 2008/09 and 16.60% in 2005/06 respectively. NABIL has higher ratio and mean too. It means NABIL has invested more money in risk free assets than that of NIBL. In another word NIBL has emphases on more loans and advances and other short term investment than investment in govt. securities. Higher C.V. and S.D. of NABIL shows that it has inconstancy in the ratios (i.e. $0.316 > 0.200$ and $4.658 > 3.258$). Following figure show the investment on government treasury bills to current assets of NIBL and NABIL.

Figure 4.4

Investment on Government Securities to Current Assets Ratio

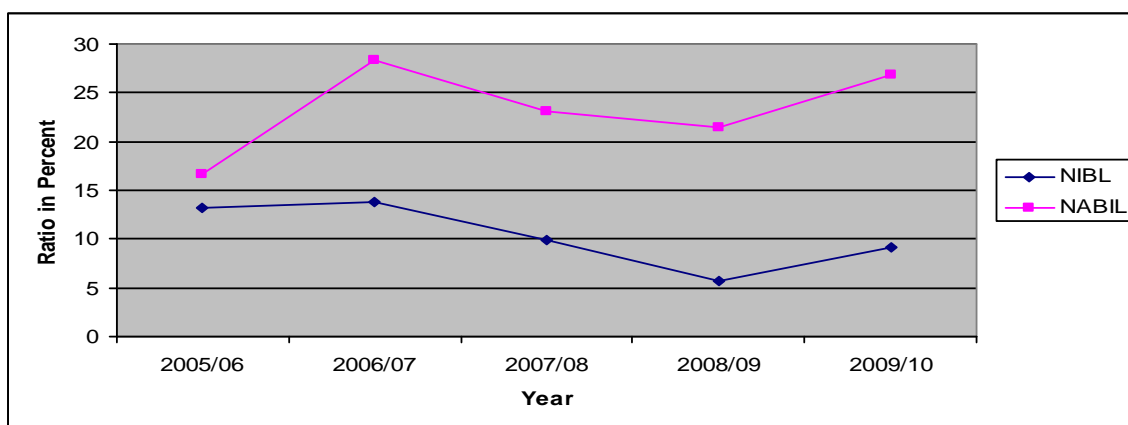


Figure 4.4 shows investment on government treasury bills to current assets of NIBL and NABIL are in fluctuating trend. The highest total investment to total deposit ratio of NIBL is 13.76% 2006/07 and NABIL is 26.85% in F/Y 2006/07 and lowest ratio of NIBL is 5.74% in F/Y 2008/09 and NABIL is 16.60% in fiscal year 2005/06. Investment on government treasury bills to current assets of NABIL is higher in every year of study period.

4.2.1.2 Assets Management Ratio

a.) Loan and Advances to Total Deposits Ratio

The ratio measures the extent to which the banks are successful to mobilize their total deposits on loan and advances.

Table 4.5
Loan and Advances to Total Deposits Ratio

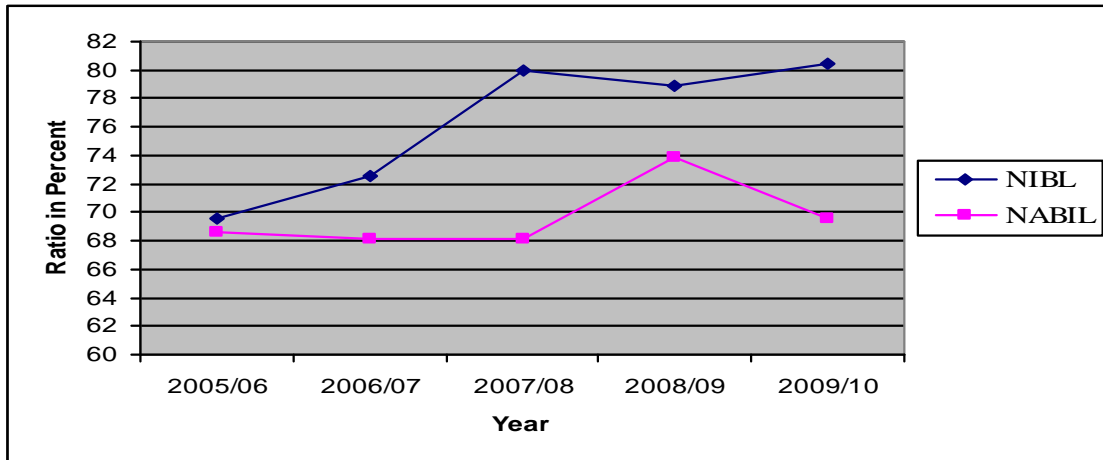
Year	Ratio in Percent (%)	
	NIBL	NABIL
2005/06	69.62	68.64
2006/07	72.56	68.13
2007/08	79.91	68.18
2008/09	78.86	73.85
2009/10	80.48	69.53
Mean	76.286	69.67
S.D.	4.890	2.405
C.V.	0.064	0.035

Source: Annual Report of Concern Bank

Above table show the loan and advance to total deposit ratio of NIBL and NABIL. A high ratio of loan and advances indicates better mobilization of collected deposits and vice versa. But it should be noted that too high ratio might not be better from liquidity and default point of view. The Table shows that these two banks have mobilized their collected deposits in variable trend. In average NIBL has mobilized 76.286% and NABIL has mobilized 69.666% of their collected deposit in loan and advances. NIBIL has higher ratio in each year and average too. The highest ratio of NIBL is 80.48 in 2009/10 and highest of NABIL is 73.85 in F/Y 2008/09. According to NRB directives above 70% to 90% of loan and advances to total deposit ratio is able to better mobilization of collected deposit. So all the year NIBL has not met the NRB requirement however NABIL has met the NRB requirement. Higher S.D. and C.V. (i.e. $4.890 > 2.405$ and $0.064 > 0.035$) of NIBL shows that NIBL has inconstancies in the ratios. The loan and advance to total deposit ratio is presented in following figure.

Figure 4.5

Loan and Advances to Total Deposits Ratio



The figure 4.5 shows the loan and advances and total deposit ratio of both banks have been fluctuating trend. The highest loan and advance to total deposit ratio of NABIL is 73.85% in F/Y 2008/09 and lowest ratio is 68.13% in F/Y 2006/07. Similarly the highest ratio of NIBL is 80.48% in F/Y 2009/10 and lowest ratio is 69.62% in F/Y 2005/06.

(b) Total Investment to Total Deposits Ratio

Table 4.6

Total Investment to Total Deposits Ratio

Year	Ratio in Percent (%)	
	NIBL	NABIL
2005/06	39.3	31.94
2006/07	34.37	38.32
2007/08	28.07	31.14
2008/09	15.85	28.99
2009/10	17.24	29.45
Mean	26.966	31.968
S.D.	10.323	3.749
C.V.	0.383	0.117

Source: Annual Report of Concern Bank

Table 4.6 represents that the investment to total deposit ratio of NIBL and NABIL are in fluctuating trend. The mean of the ratio of NIBL and NABIL are 26.996% and 31.986% respectively. NABIL has higher ratio beside 2005/06 year and mean too. It signifies NABIL has successfully allocated its deposit in investment portfolio in comparison with NIBL. Lower S. D and C.V. of NABIL shows that NABIL has more constancy in the ratios, i.e. $0.383 > 0.117$. It means NIBL has more volatility in ratio than NABIL. The following figure shows the investment to total deposit ratio of NIBL and NABIL.

Figure 4.6
Total Investment to Total Deposits Ratio

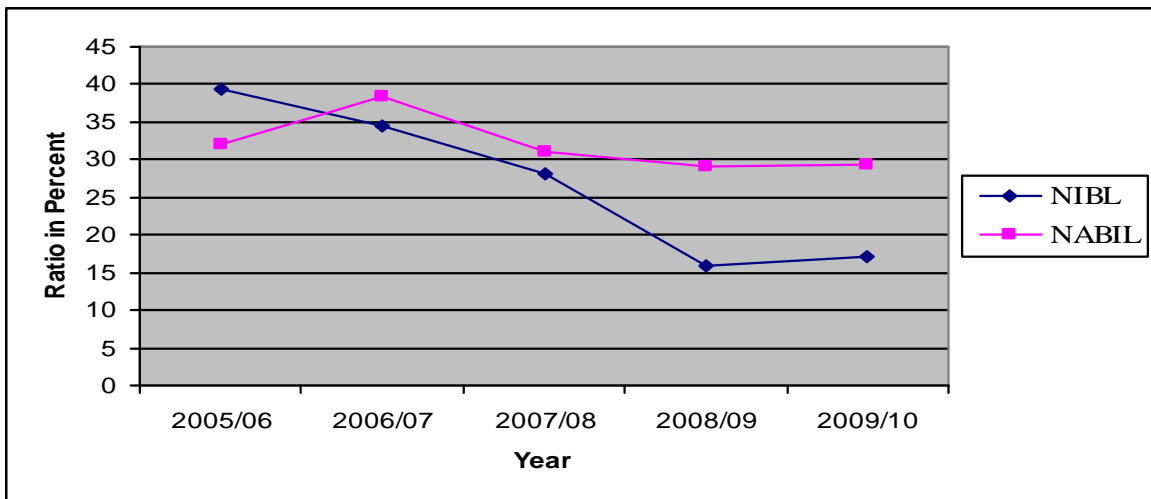


Figure 4.6 shows the total investment to total deposit ratio of NIBL and NABIL are fluctuating trends. The highest total investment to total deposit ratio of NIBL is 39.3% in F/Y 2005/06 and NABIL is 38.32% in fiscal year 2006/07. Similarly the lowest total investment to total deposit ratio of NIBL is 15.85 in F/Y 2009/10 and NABIL is 28.99% in F/Y 2008/09.

(c) Loan and Advances to Total Working Fund Ratio

Table 4.7

Loan and Advances to Total Working Fund Ratio

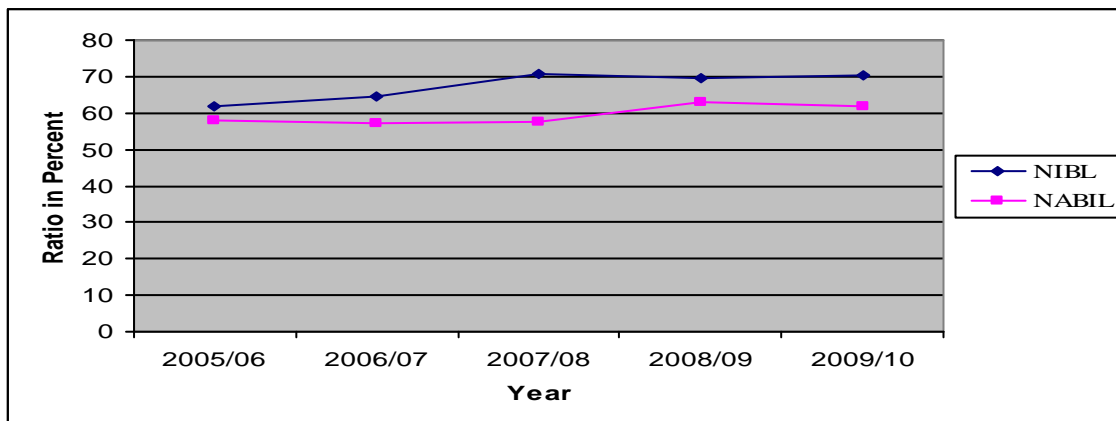
Year	Ratio in Percent (%)	
	NIBL	NABIL
2005/06	61.78	57.87
2006/07	64.4	57.04
2007/08	70.82	57.54
2008/09	69.47	62.89
2009/10	70.35	61.88
Mean	67.364	59.44
S.D.	4.039	2.724
C.V.	0.059	0.046

Source: Annual Report of Concern Bank

Table 4.7 shows the loan and advances to total assets ratio of NIBL and NABIL are fluctuating trend. While observing their ratios; NIBL is better mobilizing of fund as loan and advances and it seems quite successful in generating higher ratio in each year. The mean of NIBL and NABIL are 67.364% and 59.44% respectively. So NIBL has higher ratio than that of NABIL. It reveals that in total assets, NIBL has high proportion of loan and advances. Lower S.D. and C.V. of NABIL show that NABIL has constancies in the ratios as well.

Figure 4.7

Loan and Advances to Total Working Fund Ratio



The figure 4.7 represents the loan and advances to total assets ratio of NIBL and NABIL are in fluctuating trend. The highest ratio of NABIL is 62.89% in F/Y 2008/09 and lowest ratio is 57.04% in fiscal year 2006/07. Similarly the ratio of NIBL is 70.82% in F/Y 2007/08 and lowest ratio is 61.78% in F/Y 2005/06.

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

Table 4.8

Investment on Govt. Securities to Total Working Fund Ratio

Year	Ratio in Percent (%)	
	NIBL	NABIL
2005/06	11.82	10.31
2006/07	11.43	17.64
2007/08	8.12	12.51
2008/09	4.77	8.45
2009/10	7.33	15.23
Mean	8.694	12.828
S.D.	2.951	3.692
C.V.	0.339	0.288

Source: Annual Report of Concern Bank

Table 4.8 shows that the investment on government treasury bills to total working fund of NIBL and NABIL are in fluctuating trend. The highest ratio of NIBL is 11.82% in 2005/06 and NABIL is 17.64% in 2006/07 and the lowest ratio of NIBL and NABIL are 4.77% and 8.45% in 2008/09 respectively. From the table we notice that mean ratio of NIBL and NABIL are 8.694% and 12.828% respectively. NABIL has higher ratio in every year. It means NABIL has invested higher money in risk free assets than that of NIBL. NIBL has invested more money in risky assets out of its total assets. In another word NIBL has emphasizes on more loans and advances and other short term investment than investment in govt. securities out of its total assets. Higher C.V. of NIBL shows that inconstancies in the ratio.

Figure 4.8

Investment on Govt. Securities to Total Working Fund Ratio

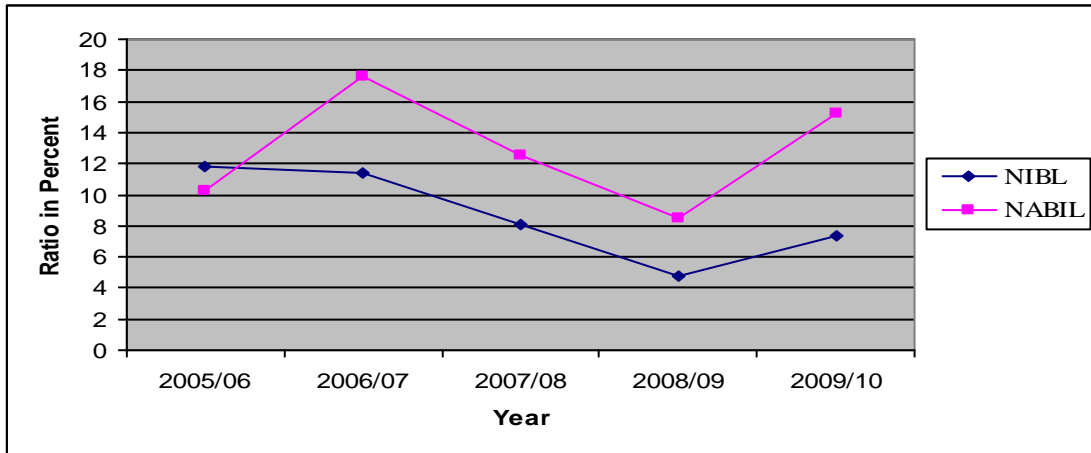


Figure 4.8 represents investment on government treasury bills to total working fund of NIBL and NABIL are in fluctuating trend. The highest ratio of NIBL is 11.82% in F/Y 2005/06 and lowest ratio is 4.77% in F/Y 2008/09. Similarly the highest ratio of NABIL is 17.64% in F/Y 2006/07 and lowest ratio is 8.45% in fiscal year 2008/09.

4.2.1.3 Profitability Ratios

(a) Return on Loan and Advances Ratio

Table 4.9

Return on Loan and Advances Ratio

Year	Ratio in Percent (%)	
	NIBL	NABIL
2005/06	2.66	4.92
2006/07	2.82	4.34
2007/08	2.53	3.49
2008/09	2.44	3.74
2009/10	3.14	3.53
Mean	2.718	4.004
S.D.	0.276	0.615
C.V.	0.102	0.153

Source: Annual Report of Concern Bank

Table 4.9 shows that return on loan and advances ratio of NIBL and NABIL are in fluctuating trend. The highest ratio of NIBL is 3.14% in the year 2009/10 and lowest ratio 2.44% in year 2008/09. The mean ratio is 2.718%. This shows the normal earning capacity of NIBL in loan and advances whereas highest ratio of NABIL is 4.92% in year 2005/06 and lowest ratio is 3.34% in 2006/07. The mean ratio is 4.004% of NABIL.

From the table we notice that NABIL has higher ratios in each year and mean too. So it seems successful by generating higher ratio. It can be concluded that NABIL has better utilized the loan and advance for the profit generation in comparison with NIBL. However if we see the latest data NIBL has improved it little bit more. It is bad aspect of NABIL as it has decreasing trend but NIBL increasing trend at last consecutive year. The return on loan and advance is presented in following figure.

Figure 4.9
Return on Loan and Advances Ratio

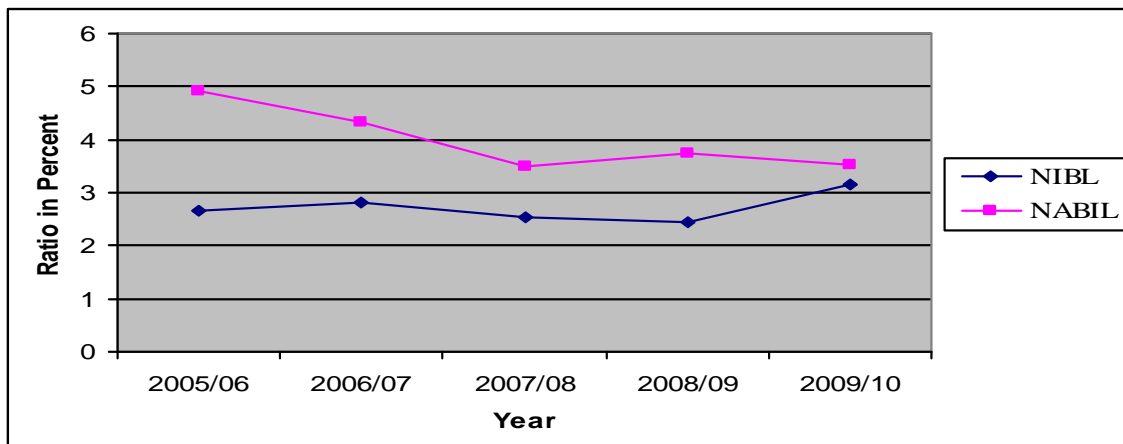


Figure 4.9 shows the return on loan and advances ratio of NIBL and NABIL are in fluctuating trend. NABIL has decreasing slope where as NIBL is increasing trend. The highest ratio of NIBL is 3.14% in the year 2009/10 and lowest ratio 2.44% in year 2008/09. Similarly highest ratio of NABIL is 4.92% in year 2005/06 and lowest ratio is 3.34% in 2006/07.

(b) Return on Total Working Fund Ratio

Table 4.10
Return on Total Working Fund Ratio

Year	Ratio in Percent (%)	
	NIBL	NABIL
2005/06	1.64	2.84
2006/07	1.82	2.47
2007/08	1.79	2.01
2008/09	1.69	2.35
2009/10	2.21	2.18
Mean	1.83	2.37
S.D.	0.225	0.325
C.V.	0.123	0.133

Source: Annual Report of Concern Bank

Table 4.10 shows that ROA of NIBL is fluctuating but increasing trend and NABIL has decreasing trend. NABIL seems successful in managing and utilizing the available assets in order to generate revenue since its ROA ratio is higher than that of NIBL i.e. 2.37% > 1.83% of total assets in an average. NABIL has also higher ratio beside in last F/Y 2009/10. It indicates NABIL has utilized their total asset in income generating purpose but decreasing tendency. NIBL is doing well in the last year whereas NABIL is not doing well in the latest year as it has decreasing trend. Lower C.V. of NIBL shows that it has constancies in the ratios i.e. 0.123 < 0.133.

Figure 4.10
Return on Total Working Fund Ratio

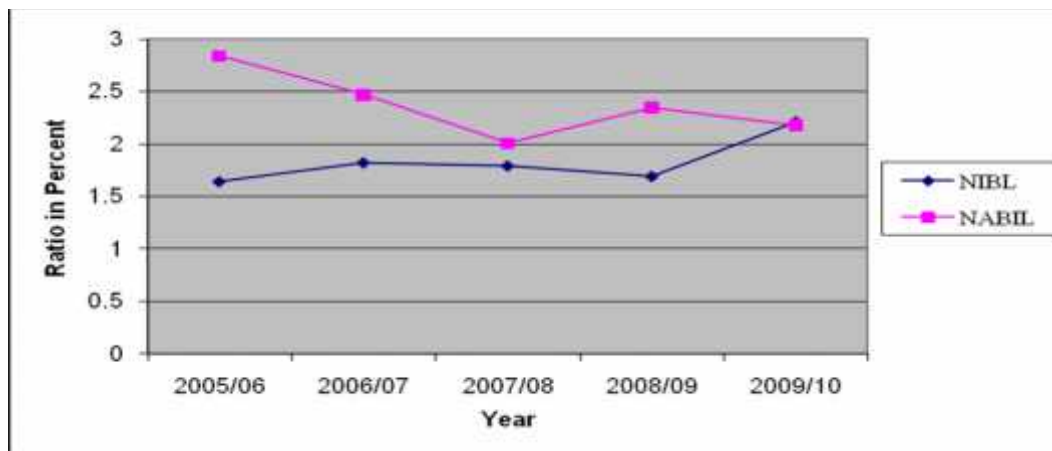


Figure 4.10 shows the return on total working fund ratio of NIBL and NABIL are in fluctuating trend. NABIL has decreasing slope where as NIBL is increasing trend. The highest ROA of NIBL is 2.21% in the year 2009/10 and lowest ratio 1.64% in year 2005/06. Similarly highest ratio of NABIL is 2.84% in year 2005/06 and lowest ratio is 2.01% in 2007/08.

(c) Return on Equity

Table 4.11
Return on equity Ratio

Year	Ratio (%)	
	NIBL	NABIL
2005/06	18.66	33.91
2006/07	18.65	32.79
2007/08	25.94	30.6
2008/09	23.05	32.94
2009/10	27.61	29.7
Mean	22.78	31.988
S.D.	4.105	1.761
C.V.	0.180	0.055

Source: Annual Report of Concern Bank

Table 4.11 shows that ROE of NIBL and NABIL are fluctuating trend. NABIL seems successful in managing and utilizing the shareholder capital in order to generate revenue since its ROE ratio is higher than that of NIBL i.e. 31.988% > 22.78% of total equity in an average. NABIL has also higher ratio in each year. However it noted that NIBL is doing well in the latest year as it has increased its ROE in the latest year drastically. Lower C.V. and S.D. of NABIL shows that it has consistencies in the ratios (i.e. 0.180 < 0.055). In conclusion NABIL has utilized its shareholder capital in order to generate revenue than NIBL.

Figure 4.11
Return on equity Ratio

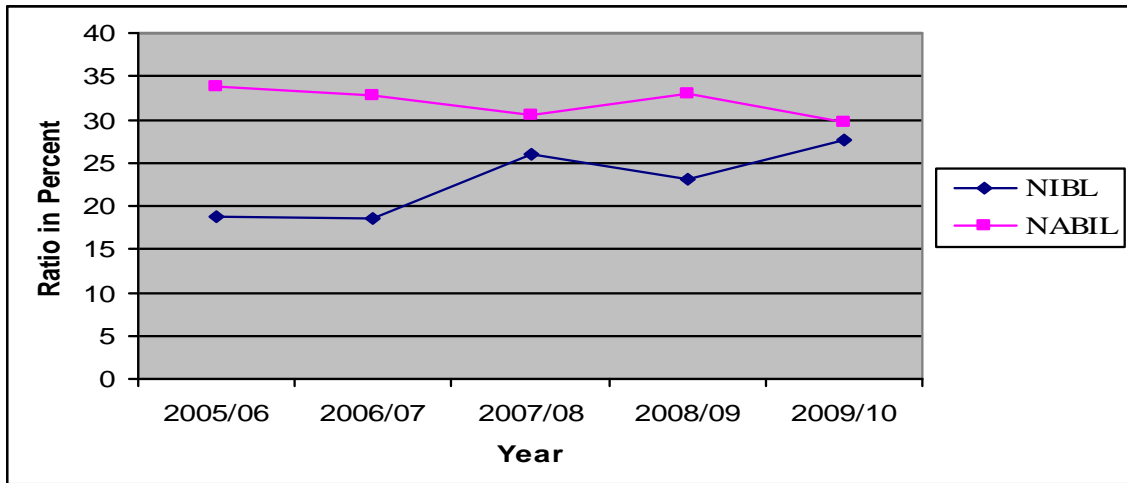


Figure 4.11 shows the return on equity ratio of NIBL and NABIL. ROE of NABIL constant slope where as NIBL is in increasing trend. The highest ROE of NIBL is 27.61% in the year 2009/10 and lowest ratio 18.65% in year 2006/07. Similarly highest ratio of NABIL is 33.91% in year 2005/06 and lowest ratio is 29.7% in 2009/10.

(d) Total Interest Earned to Total Working Fund Ratio

Table 4.12

Total Interest Earned to Total Working Fund Ratio

Year	Ratio (%)	
	NIBL	NABIL
2005/06	5.5	5.87
2006/07	5.74	5.83
2007/08	5.64	5.33
2008/09	6.16	6.38
2009/10	8.12	7.76
Mean	6.232	5.06
S.D.	1.084	1.048
C.V.	0.174	0.166

Source: Annual Report of Concern Bank

Table 4.12 shows interest earned to total working fund ratio of NIBL and NABIL. NIBL has increasing trend of ratio except in 2007/08 and NABIL has also increasing trend of ratio except in 2007/08. However, NIBL seems more conscious about managing its assets in order to earn more interest ratio because it has higher average ratio. NIBL has 6.232% average ratio whereas NABIL shows 5.06% average ratio. The mean ratio of NIBL is more than that of NABIL. In comparison, NIBL seems effective in earning interest to some extent but it must break the decreasing trend in coming year. NABIL is also following the same way. Lower C.V. and S.D. of NABIL shows that it has consistencies in the ratios. The following figure shows the interest earned to total working fund ratio of NIBL and NABIL.

Figure 4.12
Total Interest Earned to Total Working Fund Ratio

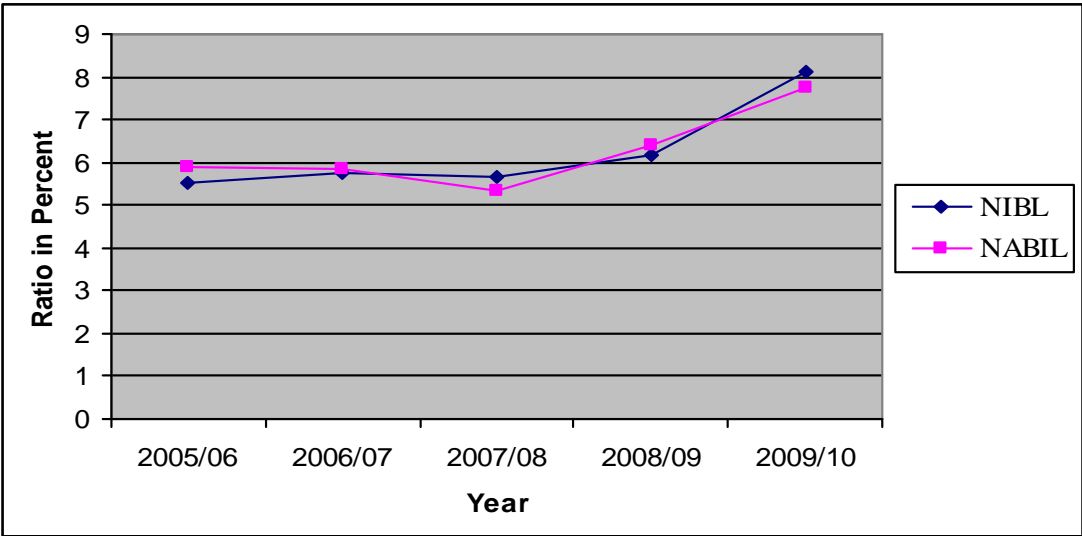


Figure 4.12 shows the interest earned to total working fund ratio of NIBL and NABIL. The figure depicted both bank has increasing trend. The highest interest earned to total working fund ratio of NIBL and NABIL are 8.12% and 7.76% in the fiscal year 2009/10 and lowest ratio are 5.5% and 5.33% in fiscal year 2005/06 and F/Y 2007/08 respectively.

(e) Total interest Earned to Total Operating Income Ratio

Table 4.13

Total interest Earned to Total Operating Income Ratio

Year	Ratio (in times)	
	NIBL	NABIL
2005/06	1.222	0.964
2006/07	1.272	1.073
2007/08	1.33	1.185
2008/09	1.544	1.260
2009/10	1.701	1.464
Mean	1.414	1.189
S.D.	0.202	0.190
C.V.	0.143	0.159

Source: Annual Report of Concern Bank

Table 4.13 shows interest earned to operating income ratio of NIBL and NABIL. Both banks have increasing ratio during study period. NIBL has greater share of total interest earn in its total operating income in all years. The mean ratio of NIBL and NABIL are 1.414 % and 1.189 times respectively. NIBL has higher ratio, it indicates the high contribution in operating income made by lending and investing activities (core banking activity). NABIL has lower ratio, it indicates that high contribution in operating income do not made by lending and investing activities (core banking activity). High contribution in operating income made by lending and investing activities (core banking activity) is not good for long run but in short run it is not so bad. Thus, from short-term view, NIBL is in good condition but from long-term view, NABIL is in good condition as well doing gradually increasing. The S.D. and C.V of NIBL is 0.202, 0.143 similarly NABIL has 0.190, 159 respectively. It indicates that NIBL has relatively consistent in interest earned to total operating income due to lower C.V than that of NABIL. The following figure represents the interest earned to total operating income.

Figure 4.13

Total interest Earned to Total Operating Income Ratio

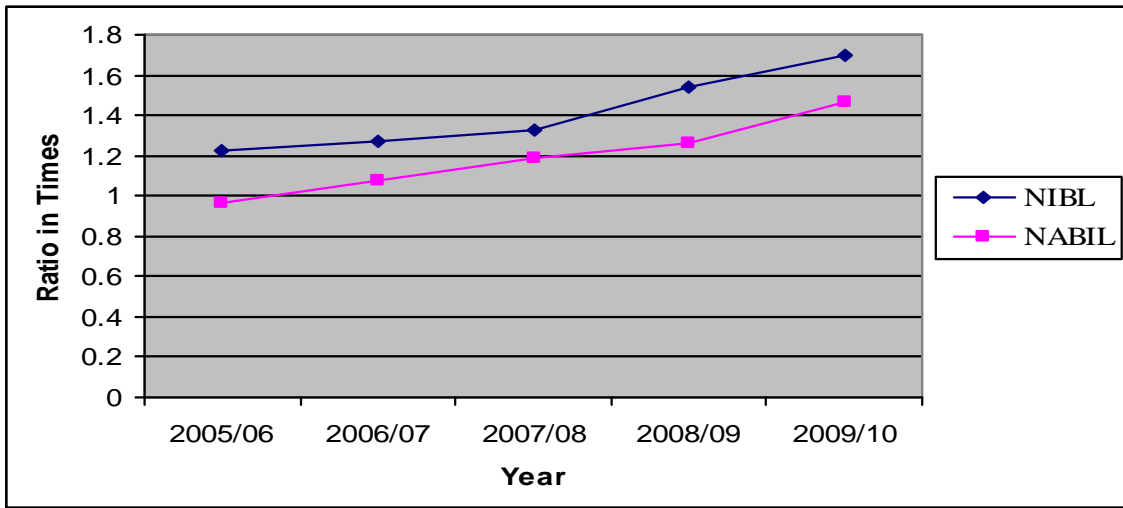


Figure 4.13 shows the interest earned to operating income ratio of NIBL and NABIL. The figure depicted both bank has increasing trend. The highest interest earned to operating income ratio of NIBL and NABIL are 1.701 times and 1.464 times in the fiscal year 2009/10 and lowest ratios are 1.222 times and 0.964 times in year 2005/06.

(F) Total Interest paid to Total Working Fund Ratio

Table 4.14

Total Interest Paid to Total Working Fund Ratio

Year	Ratio (%)	
	NIBL	NABIL
2005/06	2.3	1.6
2006/07	2.48	2.04
2007/08	2.55	2.04
2008/09	3.18	2.63
2009/10	4.45	3.76
Mean	2.992	2.414
S.D.	0.879	0.837
C.V.	0.294	0.347

Source: Annual Report of Concern Bank

Table 4.14 shows total interest paid to total working fund of NIBL and NABIL has increasing trend. The highest ratio of NIBL is 4.45 in 2009/10 and lowest ratio is 2.3 in 2005/06. Similarly highest ratio of NABIL is 3.76 in 2009/10 and lowest ratio is 1.6 in 2005/06. the average ratio of NIBL is 2.992 and NABIL is 2.414 respectively. Due to the higher ratio in each year and average too of NIBL, it seems high interest paid and less conscious about borrowing cheaper fund. Lower C.V of NIBL shows that it has homogeneity in the ratios (i.e. $0.294 < 0.347$). The following show the interest paid to total working fund ratio.

Figure 4.14
Total interest Paid to Total Working Fund Ratio

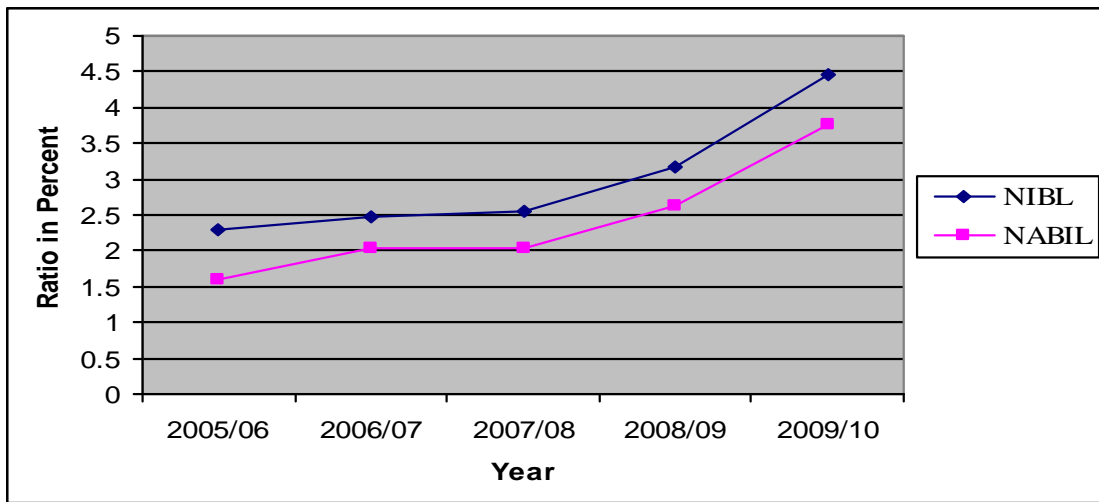


Figure 4.14 shows the total interest paid to total working fund ratio of NIBL and NABIL. The figure depicted both banks have increasing trend. The highest interest paid to total working fund ratio of NIBL and NABIL are 4.45 percent and 3.76 percent in the fiscal year 2009/10 and lowest ratios are 2.33 percent and 1.60 percent in year 2005/06.

4.2.1.4 Risk Ratio

A) Credit Risk Ratio/Non-Performing Loan to Total Loan Ratio

Table 4.15
Credit Risk Ratio

Year	Ratio (%)	
	NIBL	NABIL
2005/06	2.07	1.38
2006/07	2.37	1.12
2007/08	1.12	0.74
2008/09	0.58	0.81
2009/10	0.63	1.5
Mean	1.354	1.11
S.D.	0.825	0.336
C.V.	0.609	0.303

Source: Annual Report of Concern Bank

Table 4.15 shows that NPL to total loan and advances of NIBL is in fluctuating but decreasing trend and NABIL has fluctuating but increasing trend. Decreasing trend is the good sign of the efficient credit management. NABIL seems effective in first year but increase gradually its NPA. But NIBL has high in first year but decreasing gradually in its NPA. From mean point of view, non-performing loan to total loan and advances ratio of NIBL and NABIL are 1.345% and 1.11% respectively during the study period. These Ratios indicate the more efficient operating of credit management of both banks according to NRB directives because according to NRB directives NPL ratio must be less than 5%. However, in comparison, NABIL has efficient operating of credit management than that of NIBL from the mean point of view. The following figure presents credit risk ratio of NIBL and NABIL.

Figure 4.15
Credit Risk Ratio

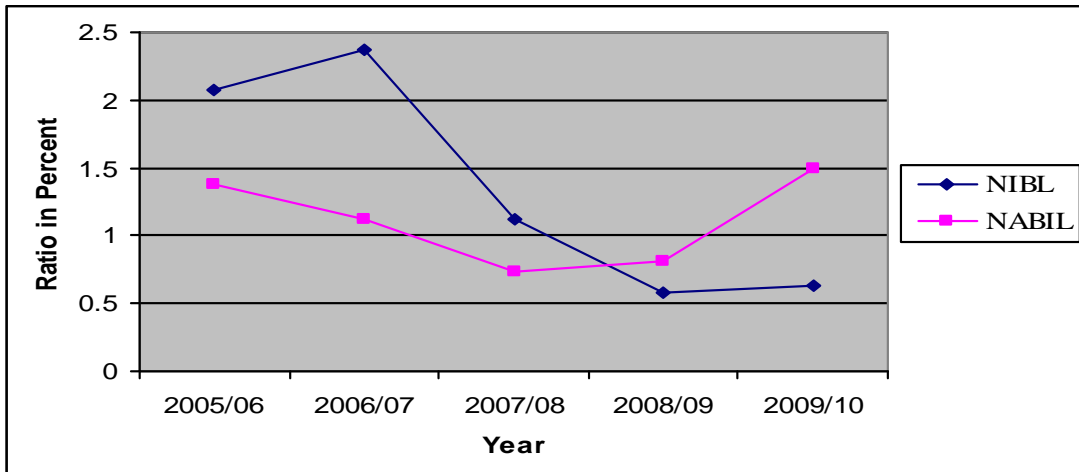


Figure 4.15 shows the non performing loan to total loan and advances ratio of NIBL and NABIL. The figure depicted both banks have fluctuating trend. The highest non performing loan to total loan and advances ratio of NIBL is 2.37% in F/Y 2006/07 and lowest is 0.58 in 2008/09. Similarly highest non performing loan to total loan and advances ratio of NABIL is 1.5 percent in F/Y 2009/10 and lowest is 0.74 percent in the fiscal year 2007/08.

B) Liquidity Risk Ratio:

Table 4.16
Liquidity Risk Ratio

Year	Ratio (%)	
	NIBL	NABIL
2005/06	12.34	3.26
2006/07	9.97	5.99
2007/08	10.89	8.37
2008/09	16.95	9.03
2009/10	13.61	3.02
Mean	12.752	5.934
S.D.	2.726	2.791
C.V.	0.214	0.470

Source: Annual Report of Concern Bank

Table 4.16 shows liquidity risk ratio of NIBL and NABIL. Liquidity i.e. cash and bank balance to total deposits ratio of the NIBL is in fluctuating trend whereas ratio of NABIL is in increasing trend except last year 2009/10. The highest ratio of NIBL and NABIL are 16.95% and 9.03% respectively in the year 2008/09 respectively. The average ratio of NIBL is greater than that of NABIL (i.e.12.752% > 5.934%). It signifies that NIBL has sound liquid fund to make immediate payment to the depositors at demand from the mean point of view. It means NIBL kept its more deposit as cash and bank balance but NABIL kept less than NIBL. However if we see the latest data both banks have decreasing its deposit as cash and bank balance. The following chart shows the liquidity risk of NIBL and NABIL.

Figure 4.16
Liquidity Risk Ratio



Figure 4.16 shows the liquidity risk ratio of NIBL and NABIL. The figure depicted both banks have fluctuating trend of liquidity risk ratio. The highest liquidity risk ratio of NIBL is 16.95% in F/Y 2008/09 and lowest is 9.97 in 2006/07. Similarly highest liquidity risk ratio of NABIL is 9.03 percent in F/Y 2008/09 and lowest is 3.02 percent in the fiscal year 2009/10.

C) Asset Risk Ratio:

Table 4.17
Asset Risk Ratio

Year	Ratio (%)	
	NIBL	NABIL
2005/06	1.48	0.93
2006/07	1.77	0.71
2007/08	0.91	0.51
2008/09	0.49	0.58
2009/10	0.52	1.06
Mean	1.034	0.758
S.D.	0.574	0.232
C.V.	0.555	0.307

Source: Annual Report of Concern Bank

Table 4.17 shows the asset risk ratio of NIBL and NABIL. The analysis shows that NIBL has decreasing trend of asset risk ratio beside 2006/07. NIBL has highest and lowest ratio is 1.77% and 0.49% in the year 2006/07 and 2008/09 respectively. Similarly NABIL has the highest and lowest ratio of 1.06% and 0.51% in the year 2009/10 and 2007/08 respectively. The mean ratio of NIBL is higher than that of NABIL (i.e.1.034% > 0.758 %). Above data shows that NIBL has the higher asset risk ratio analyzing mean point of view, But NIBL decreasing its asset risk ratio current year but NABIL increasing asset risk in present year. The following figure shows the asset risk ratio.

Figure 4.17
Asset Risk Ratio

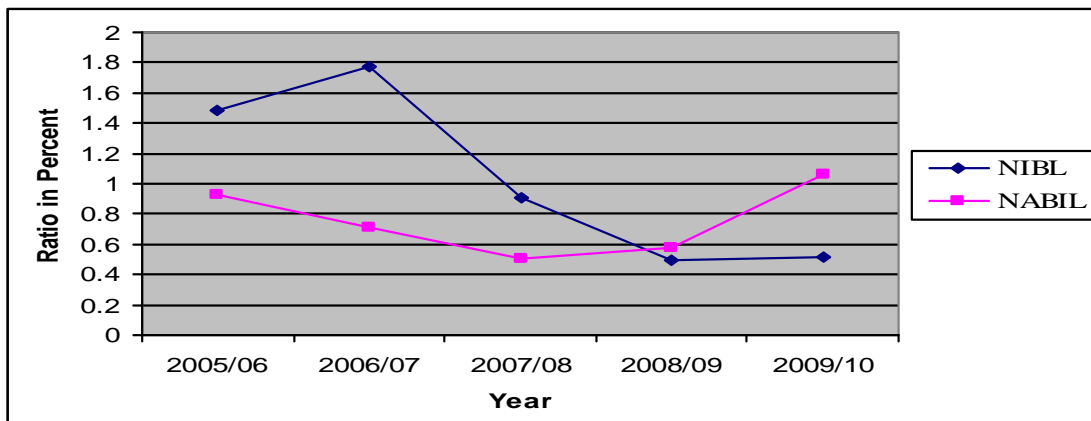


Figure 4.17 shows the asset risk ratio of NIBL and NABIL. The figure depicted both banks have fluctuating trend. The highest asset risk ratio of NIBL is 1.77 percent in F/Y 2006/07 and lowest is 0.49 percent in 2008/09. Similarly highest asset risk ratio of NABIL is 1.06 percent in F/Y 2009/10 and lowest is 0.51 percent in the fiscal year 2007/08.

4.3 Statistical Analysis

Statistical tool is one of the important tools to analyze the data. There are various tools for the analysis of tabulated data such as, mean, standard deviation, regression analysis, co-relation analysis, trend analysis, various types of tests etc. There is used following convenient statistical tools are used in this thesis study.

4.3.1. Relationship between Total Deposits and Total Investment

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

Table 4.18

Relationship between Total Deposits and Total Investment

Name of Bank	Base of Evaluation			
	R	r ²	P.E.	6 x P.E.
NIBL	0.938	0.8798	0.0362	0.2175
NABIL	0.978	0.9565	0.0131	0.0787

Source: Through SPSS Data Editor

Table 4.18 shows that coefficient of correlation between deposits and investment of NIBL is 0.938. i.e. positive correlation between these two variables and the value of coefficient of determination (R²) is 0.8798 which means 87.98% of investment decision depends upon deposit and least are determined by other variables. Similarly probable error is 0.0362 and 6 x P. E. is 0.2175 which shows that R is higher than 6 x P. E. Therefore it reveals that relationship between deposits and investment is significant.

Likewise, in case of NABIL, coefficient of correlation between investment and deposit (r) is 0.978 that means there is a high degree of positive correlation between two variables. The value

of coefficient of determination (R^2) is also 0.9565 which means 95.65% of investment decision depend upon deposit and 4.35% investment is depend upon other variables. Similarly probable error is 0.0131 and 6 x P. E. is 0.0787 which shows that R is greater than 6 x P. E. Therefore it reveals that relationship between deposit and investment is significant i.e. correlation is certain. This correlation coefficient indicates that the NABIL has performed better a little bit in order to provide investment through deposit than that of NIBL.

4.3.2 Relationship between Total Deposits and Loans and Advances

The following table describes the relationship between total deposits and loan and advances of NIBL and NABIL with comparatively under five-year period. In this case, total deposits are independent variable say (X) and loan and advances is dependent variable say (Y).

Table 4.19

Relationship between Total Deposits and Loans and Advances

Name of Bank	Base of Evaluation			
	R	R^2	P.E.	6 x P.E.
NIBL	0.999	0.998	0.0006	0.0036
NABIL	0.993	0.986	0.0042	0.0253

Source: Through SPSS Data Editor

Table 4.19 shows that the coefficient of correlation between deposits and loan and advances of NIBL and NABIL are 0.999 and 0.993 respectively. This shows the highly positive relationship between these two variables i.e. loan and advances and deposits of both banks. By considering coefficient of determination (R^2), the value of R^2 is 0.998 incase of NIBL and 0.986 incase of NABIL. The value of R^2 of NIBL is 0.998, which means only 98.8% of loan and advances decision is determined by deposit and rest 0.2% loan and advances depend upon other variables. The value of R^2 of NABIL is 0.986, which means that 98.6% of loan and advances is determined by deposit and only 1.4% loan and advances depend upon other variables.

In view of the probable error of NIBL and NABIL, the value of R of NIBL and NABIL are more than the 6 times of P.E, which indicate there is significant relationship between deposits and loan and advances of both banks.

4.3.3. Co-efficient of Correlation between Loan and advance and Net Profit

Co-efficient of correlation between total assets and net profit is used to measure the degree of relationship between two variable i.e. Loan and advance and net profit of NIBL and NABIL during the study period. Where Loan and advance 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 there the net profit is significantly correlated or not and the variation of net profit to loan and advance through the coefficient of determination. The following table shows the 'r', R^2 , P.Er. and 6 P. Er. between those variables of NIBL and NABIL for the study period.

Table 4.20
Correlation between Loan and advance and Net profit

Name of Banks	Evaluation Criteria			
	R	R^2	P.Er.	6 P.Er.
NIBL	0.961	0.9235	0.0231	0.1384
NABIL	0.977	0.9545	0.0137	0.0823

Source: Through SPSS Data Editor

Table 4.20 shows correlation coefficient between Loan and advance and net profit of NIBL and NABIL. The correlation coefficient between Loan and advance and net profit of NIBL and NABIL are 0.961 and 0.977. It refers that there is highly positive correlation between these two variables. The coefficient of determination of NIBL is 0.9235. which indicate 92.35 percent of net profit is contributed by Loan and advance and least are depend on other variable. Moreover, this relationship is significant because the coefficient of correlation is more than 6 P.Er. Likewise the coefficient of determination R^2 of NABIL is 0.9545, which indicates that 95.45 percent variability in net profit is explained by Loan and advance and least 4.55% is depend on other variable r is greater than 6 P.Er so the relationship between Loan and advance and net profit is significant for NABIL. In conclusion, NABIL has more significant relationship between Loan and advance and net profit than that of NIBL.

4.3.4 Coefficient of Correlation between Total Investment and Net Profit

Coefficient of correlation between total investment and net profit measures the degree of their relationship. 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.Er. during the fiscal year 2005/06 to 2009/10.

Table 4.21
Correlation between Total Investment and Net Profit

Name of Banks	Evaluation Criteria			
	R	R ²	P.Er.	6 P.Er.
NIBL	0.989	0.9781	0.0066	0.0396
NABIL	0.900	0.8100	0.0573	0.3439

Source: Through SPSS Data Editor

Table 4.21 shows correlation coefficient between total investment and net profit of NIBL and NABIL. The correlation coefficient between total investment and net profit of NIBL is 0.989 which implies there is highly positive correlation between total investment and net profit. In addition, coefficient of determination of NIBL is 0.9781. It means 97.81 percent of Profit is contributed by total investment and rest is contribution by other factor. The correlation is significant due to coefficient of correlation is higher than 6P.Error. On the other hand NABIL has positive correlation between total investment and net profit i.e. 0.900. The coefficient of determination of NABIL is 0.8100 it means 81 percent of Profit is contributed by total investment and rest are determined by other factor. This relationship is significant as its correlation coefficient is more than 6 P.Er. Thus it can be concluded that the degree of relationship between total investment and net profit of NIBL and NABIL nearly same. This correlation coefficient indicates that the NIBL has performed a little bit better in order to generate net profit through investment than that of NABIL.

4.3.5) Coefficient of correlation of Total Deposit between NIBL and NABIL

Coefficient of correlation of total deposit between NIBL and NABIL and shows their linear relationship. The following Table shows the coefficient of correlation coefficient of determination, probable error and six times of P.Er. During the fiscal year 2005/06 to 2009/10.

Table 4.22
Correlation between Total Deposit of NIBL and NABIL

Evaluation Criteria			
R	R²	P.Er.	6 P.Er.
0.953	0.9082	0.0277	0.1661

Source: Through SPSS Data Editor

Table 4.22 shows how the total deposit of NIBL and NABIL is positively related. 0.953 of correlation coefficient shows that there is highly positive correlation between these two banks in this regard. This correlation coefficient is also significant because the correlation coefficient is high than 6 P.Er. As the 0.9082 of coefficient of determination, this shows the 90.82 percent of the degree of relationship. The degree of relationship between these two banks is also high.

4.3.6) Coefficient of correlation of Total Investment between NIBL and NABIL

The coefficient of correlation of total investment between selected commercial banks is shown as follow:

Table 4.23
Correlation between Total Investment of NIBL and NABIL

Evaluation Criteria			
R	R²	P.Er.	6 P.Er.
0.994	0.988	0.0036	0.0216

Source: Through SPSS Data Editor

Table 4.23 reveals that there is highly positive correlation between NIBL and NABIL in case of total investment. It implies that the total investment of NIBL and NABIL move in the same direction. Here $R > 6 \text{ P.Er.}$ Therefore, correlation coefficient between two banks is significant. This can be said that NIBL and NABIL increase its total investment as in same direction. The coefficient of determination is 0.988, which shows there is 98.8 percent of the degree of relationship.

4.3.7) Coefficient of Correlation of Loan & Advances between NIBL and NABIL

The coefficient of correlation of loan & advances between NIBL and NABIL has been given below.

Table 4.24
Correlation between Loan & Advances of NIBL and NABIL

Evaluation Criteria			
R	R ²	P.Er.	6 P.Er.
0.993	0.986	0.0042	0.0252

Source: Through SPSS Data Editor

Table 4.24 shows that there is high degree positive correlation between the loan & advances of NIBL and NABIL. The correlation coefficient between two banks is 0.993. It means loan & advances of these two banks moves in the same direction in high proportion. This correlation coefficient is significant in order to show the relationship between loan & advances of these two banks because correlation coefficient is greater than 6 P.Er. The coefficient of determination is 0.986, which shows the 98.6 percent of the degree of relationship.

4.3.8) Coefficient of Correlation of Net Profit between NIBL and NABIL

The coefficient of net profit between the selected commercial banks shows the relationship between the banks.

Table 4.25
Correlation between Net Profit of NIBL and NABIL

Evaluation Criteria			
R	R ²	P.Er.	6 P.Er.
0.962	0.925	0.0225	0.135

Source: Through SPSS Data Editor

Table 4.25 shows that there is high degree positive correlation between profits of NIBL and NABIL, which is indicated by correlation coefficient of 0.962, This relationship is significant because its correlation coefficient is more than 6 P.Er. The coefficient of determination is 0.925 which shows the 92.5 percent of the degree of relationship.

4.4 Trend Analysis

Trend analysis plays an important role in the analysis and interpretation of financial statement. Trend in general terms, signifies a tendency. It helps in forecasting and planning future operation. Trend analysis is a statistical tool, which shows the previous trend of the financial performance and forecasts the future financial results of the firms.

Trend Analysis of Total Deposit:

Deposits are the important part in banking sector hence its trend for next seven years will be forecasted for future analysis. This is calculated by the least square method. Here the effort has been made to calculate the trend values of Total deposit of Nepal Investment Bank Limited and Nabil bank for further six year

$$Y = a + bx$$

Where,

Y= dependent variable, a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

$$Y = a + b x \dots\dots\dots (I)$$

Where $x = X - \text{Middle year}$

$$Y_c = 34932.232 + 8454.453 * X \text{ NIBL}$$

$$Y_c = 31731.188 + 6747.643 * X \text{ NABIL}$$

Table 4.26

Trend Analysis of Total Deposit of NIBL and NABIL		
Year(x)	NIBL	NABIL
2005/06	18023.15	18235.9
2006/07	26477.69	24983.5
2007/08	34932.23	31731.2
2008/09	43386.78	38478.8
2009/10	51841.32	45226.5
2010/11	60295.86	51974.1
2011/12	68750.4	58721.8
2012/13	77204.95	65469.4
2013/14	85659.49	72217
2014/15	94114.03	78964.7
2015/16	102568.6	85712.3

Source: Annul Report of Concern Bank

Appendix -1

Figure 4.18

Trend Line of Total Deposit of NIBL and NABIL

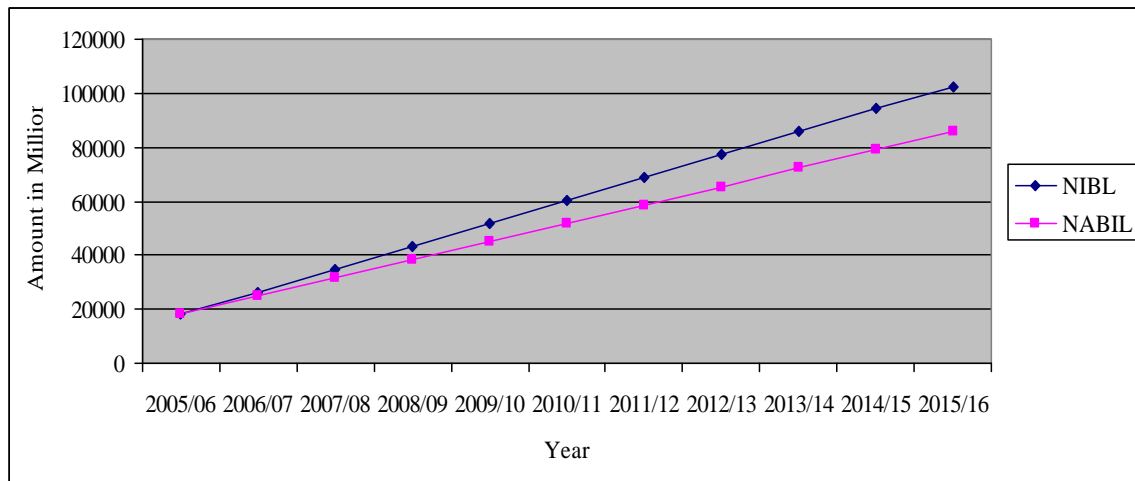


Table 4.26 and figure 4.18 shows that total deposit of NIBL and NABIL. Both Banks is in increasing trend. The rate of increment of total deposit for NIBL seems to be higher than that of NABIL. The increasing trend of total deposit of NIBL is more aggressive and high rather than

NABIL. It indicates NIBL has little more prospect of collecting Total deposit. The trend analysis has projected deposit amount in fiscal year FY 2009/10 to FY 2015/16. From the above trend analysis it is clear that NIBL has higher position in collecting deposit than NABIL.

Trend Analysis of Loan & advances

Here, the trend values of loan & advances Between NIBL and NABIL have been calculated for further Six year. The following Table shows the actual and trend values of NIBL and NABIL.

Let trend line be

$$Y = a + b x \dots\dots\dots (I)$$

Where $x = X - \text{Middle year}$

Here,

$$Y_c = 27124.344 + 7333.838 X \text{ NIBL}$$

$$Y_c = 21938.434 + 5073.681 X \text{ NABIL}$$

Table 4.27

Trend of Total Loan and Advance of NIBL and NABIL		
Year(x)	NIBL	NABIL
2005/06	12456.67	11791.1
2006/07	19790.51	16864.8
2007/08	27124.34	21938.4
2008/09	34458.18	27012.1
2009/10	41792.02	32085.8
2010/11	49125.86	37159.5
2011/12	56459.7	42233.2
2012/13	63793.53	47306.8
2013/14	71127.37	52380.5
2014/15	78461.21	57454.2
2015/16	85795.05	62527.9

Source: Annul Report of Concern Bank

Appendix - 2

Figure 4.19

Trend line of Total Loan and Advance of NIBL and NABIL

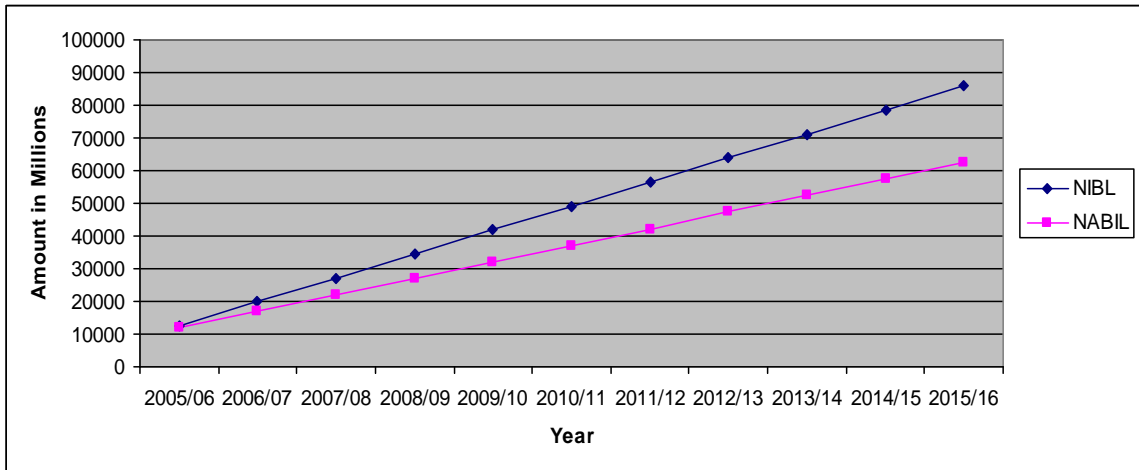


Table 4.27 and figure 4.19 depict that loan & advances of NIBL and NABIL. Both Banks has in increasing trend. The increasing trend of NIBL is aggressive than NIBL. The actual value of loan & advances for NABIL is little higher than in relation to NABIL. The trend projected for further seven year FY 2009/10 to FY 2015/16 From the above analysis, it is clear that both NIBL and NABIL is mobilizing its collected deposits and other funds in the form of loan & advances. Above table and figure shows the NIBL has highly mobilizing loan & advances than the NABIL.

Trend Analysis of Total Asset

Under this topic, an attempt has been made to analyze trend analysis total asset of NIBL and NABIL for further six years

Y= dependent variable, a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

$$Y = a + b x \dots\dots\dots (I)$$

Where x = X - Middle year

Here,

$$Y_c = 39621.976 + 9736.888 X \text{ NIBL}$$

$$Y_c = 36546.752 + 7625.455 X \text{ NABIL}$$

Table 4.28

Trend of Total Asset Between NIBL and NABIL		
Year(x)	NIBL	NABIL
2005/06	20148.02	21295.8
2006/07	29884.91	28921.3
2007/08	39621.8	36546.8
2008/09	49358.68	44172.2
2009/10	59095.57	51797.7
2010/11	68832.46	59423.1
2011/12	78569.35	67048.6
2012/13	88306.24	74674
2013/14	98043.12	82299.5
2014/15	107780	89924.9
2015/16	117516.9	97550.4

Source: Annul Report of Concern Bank

Appendix - 3

Figure 4.20

Trend Line of Total Asset between NIBL and NABIL

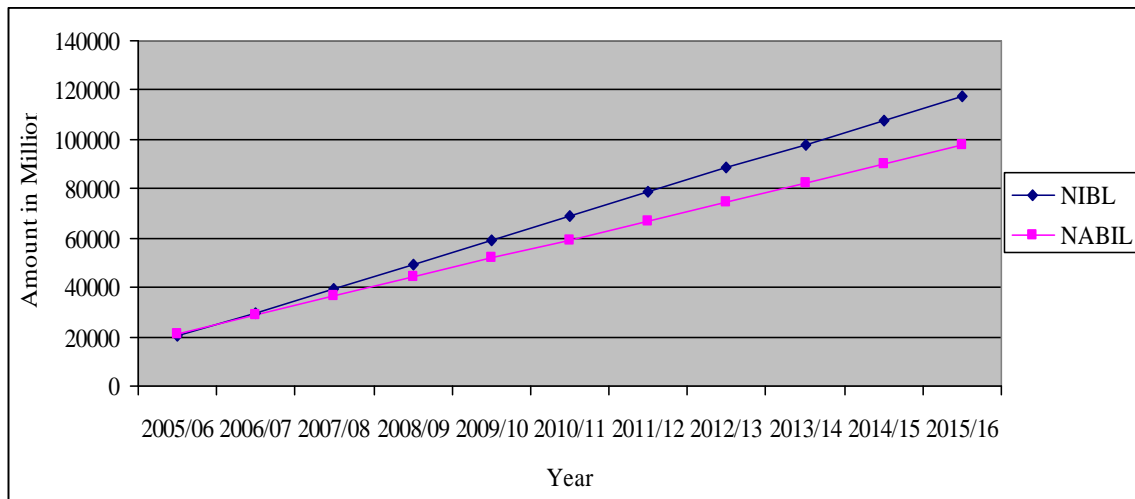


Table 4.28 and figure 4.20 shows the trend of total asset between NIBL and NABIL. Both Bank NIBL and NABIL shows increasing trend of total asset. NIBL has little high and upward trend of increasing, but NABIL has moderately increasing trend of asset. The trend of total asset

projected to FY 2015/16. The forecasted trend projected that the NIBL has greater increment rate in total asset than the increment rate of NABIL. The figure indicates NIBL has little highly mobilized the total asset rather than NABIL.

Trend Analysis of Net Profit

Here, the trend values of net profit of NIBL and NABIL have been calculated for five years FY 2005/06 to FY 2009/10 and forecasting for the next six year till FY 2015/16.

$Y = a + b x \dots\dots\dots (I)$

Where $x = X - \text{Middle year}$

Where,

Y= dependent variable, a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

$Y_c = 743.10 + 223.006 X \text{ NIBL}$

$Y_c = 845.168 + 136.477 X \text{ NABIL}$

Table 4.29

Trend Analysis of Net Profit Between NIBL and NABIL		
Year(x)	NIBL	NABIL
2005/06	297.088	572.214
2006/07	520.094	708.691
2007/08	743.1	845.168
2008/09	966.106	981.645
2009/10	1189.112	1118.12
2010/11	1412.118	1254.6
2011/12	1635.124	1391.08
2012/13	1858.13	1527.55
2013/14	2081.136	1664.03
2014/15	2304.142	1800.51
2015/16	2527.148	1936.98

Source: Annul Report of Concern Bank

Figure 4.21

Trend line of Net Profit between NIBL and NABIL

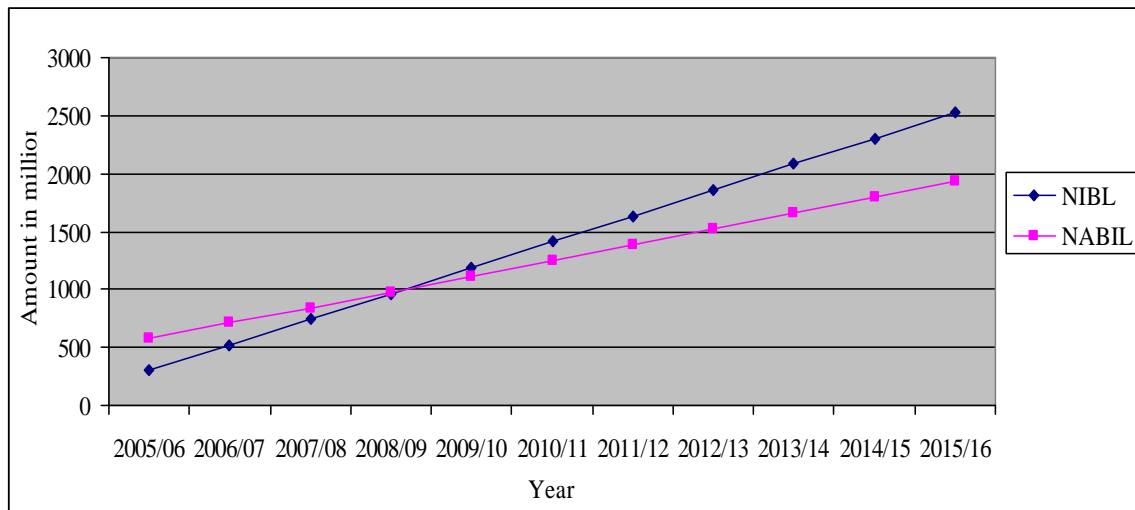


Table 4.29 and figure 4.21 reveals the trend of net profit of NIBL and NABIL. Net profit of NIBL and NABIL shows increasing trend. The trend of increasing value of net profit of NIBL is aggressive than NABIL. The net profit of NIBL and NABIL has been increasing every year by Rs.223.006 million and Rs. 136.445 million respectively. The trend of Net profit projected to FY 2015/16 i.e. further six year. Above statistics shows that both the banks have inconsistent net profit throughout the study period. In conclusion, NIBL is doing better in order to generate net profit during the projected study period in conclusion the prospect of profit generating capacity of NIBL is high than the NABIL because in the beginning NABIL higher increment rate but later NIBL exceed. Above figure represent trend line of Net profit of NIBL and NABIL.

4.5 Major Findings of the Study

From the analysis of the data collected from various sources following findings have been made.

-) Both banks have good liquidity position. Liquidity position of NABIL is greater than NIBL. So, NABIL is sound in meeting short-term obligation than NIBL. S. D. and C.V. of NABIL is less than NIBL. It can be said that current ratio of NABIL is more consistent than NIBL. However they have not met the standard ratio.
-) The mean ratio of cash and bank balance to total deposits of NIBL is higher than NABIL. It means the liquidity position of NIBL is higher than NABIL. The average cash and bank balance to current assets ratio of NIBL is higher than NABIL. It shows that NABIL has

taken more risk to meet the daily requirement of its customer's deposit than NIBL. NABIL has invested more money in risk free assets than that of NIBL. NIBL has emphasizes on more loans and advances and other investment than investment in govt. securities.

-) In average NIBL has mobilized 76.286% of its collected deposit in loan and advances that is higher than that of NABIL i.e.69.666%. NIBL has good condition and NABIL is moderate condition according to NRB requirement. The mean ratio of the total investment to total deposit of NABIL has higher ratio. Loan and advances to total assets ratio of NIBL is in increasing trend whereas NABIL is in fluctuating trend. NIBL is better mobilizing of fund as loan and advances and it seems quite successful in generating higher ratio.
-) NABIL has higher investment in govt. securities out of its total assets ratio than NIBL. NABIL has invested more money in risk free assets from total assets. NABIL has higher return on loan and advances in each year and mean too. So it seems successful by generating higher ratio. It can be concluded that NABIL has better utilized the loan and advance for the profit generation in comparison with NIBL.
-) NABIL seems successful in managing and utilizing the available assets in order to generate revenue since its ROA ratio is higher than that of NIBL i.e. 2.37%>1.83% of total assets in an average. NABIL has also higher ratio in each year. However it noted that NIBL is doing well in the last year whereas NABIL is not doing well in the latest year as it has decreasing trend of ratios. Lower C.V. of NIBL shows that it has constancies in the ratios.
-) NABIL seems successful in managing and utilizing the shareholder capital in order to generate revenue since its ROE ratio is higher than that of NIBL i.e. 31.988% > 22.78% of total equity in an average. NABIL has also higher ratio in each year. However it noted that NIBL is doing well in the latest year as it has increased its ROE in the latest year drastically whereas NABIL is not doing well in the latest year as it has decreasing trend of ratios.
-) The mean ratio of Interest Earned to Operating Income of NIBL and NABIL are 1.414 and 1.189 times respectively. NIBL has higher ratio, it indicates the high contribution in operating income made by lending and investing activities (core banking activity)..High

contribution in operating income made by lending and investing activities is not good for long run but in short run it is not so bad. Thus, from short-term view, NIBL is in good condition but from long-term view, NABIL is in good condition. In overall, NABIL has managed sound interest earned to operating income ratio.

-) The average interest earned to total working fund ratio of NIBL and NABIL are 6.232 and 5.06 respectively. Both banks have increasing trend of interest earned to total asset. The average ratio of total Interest Paid to Total Working Fund of NIBL and NABIL are 2.99 and 2.414. Both bank NIBL and NABIL have also increasing of interest paid to asset ratio.
-) From mean point of view, credit risk of non-performing loan to total loan and advances ratio of NIBL and NABIL are 1.354% and 1.11% respectively during the study period. These Ratios indicate the more efficient operating of credit management of both banks according to NRB directives because according to NRB directives NPL ratio must be less than 5%. However, in comparison, NABIL has efficient operating of credit management than that of NIBL from the mean point of view and individual ratios of each year.
-) The average liquidity risk ratio of NIBL and NABIL are 12.752 and 5.934 respectively. The mean ratio of liquidity risk of NIBL is higher than NABIL. It means NIBL has sound liquid fund to make immediate payment to the depositors. But its cause to reduces in profit. In case of asset risk ratio, NIBL has the higher risk than NABIL. However both banks have decreasing trend of credit risk. The average ratio of NIBL is greater than that of NABIL i.e. $1.034 > 0.758\%$. But present year NIBL has decreasing its asset risk ratio.
-) The positive correlation coefficient between total deposit and investment of NIBL has 0.938 and NABIL has 0.978. The relationship is significant. Similarly Correlation between deposit and loan and advances of NIBL and NABIL highly positive. The correlation between loan and advance and net profit of NIBL and NABIL has positive. The relationship of both banks has significant of these variables because the coefficient of correlation is more than 6 P.Er. So relationship of NIBL and NABIL are significant.
-) The degree of relationship between total investment and net profit of NIBL is 0.989 and NABIL has 0.900. This correlation between these two variables of NIBL is higher than NABIL. Total deposit of NIBL and NABIL is positively correlated. This correlation

coefficient is also significant. This shows the 90.82 percent of the degree of relationship. The degrees of relationship between these two banks are significant.

-) Positive correlation between NIBL and NABIL in case of total investment. It implies that the total investment of NIBL and NABIL move in same direction. The relation is significant. This can be said that both NIBL and NABIL increase its total investment as same direction very closely. The coefficient of determination is 0.988, which shows the 98.80 percent of the degree of relationship.
-) The correlation between the loan & advances of NIBL and NABIL is positive. The correlation coefficient between two banks is 0.993. Loan & advances of these two banks moves in the same direction in high proportion. This correlation is significant because correlation coefficient is greater than 6 P.Er. The coefficient of determination is 0.986 which shows the 98.60 percent of the degree of relationship.
-) The positive correlation between profits of NIBL and NABIL, which is indicated by correlation of 0.962. This relationship is significant because its correlation coefficient is more than 6 P.Er. The coefficient of determination is 0.925 which shows the 92.50 percent of the degree of relationship.
-) The trends of total deposit of NIBL and NABIL have increasing trend. The rate of increment of total deposit for NIBL seems to be higher than that of NABIL. Which indicate NIBL has better position in collecting deposit than NABIL. Similarly the trend line of loan & advances for both banks is upward slopping. It refers that both the banks are increasing in disbursement of loan & advances. The trend line of loan and advances for NIBL seems high growing than NABIL. Its forecasted for further six year.
-) The trend line of total asset for NIBL and NABIL are upward slopping where as NIBL has aggressive upward slopping of total asset trend line. The forecasted trend projected that the NIBL has greater increment rate in total asset than the increment rate of NABIL.
-) The trend line of Net profit for NIBL and NABIL are upward slopping But NIBL has aggressively and NABIL has smoothly. The net profit of NIBL and NABIL has been increasing every year by Rs.223 and Rs. 136.445 million respectively. NIBL is doing better in order to generate net profit during the projected study period in conclusion the prospect of profit generating capacity of NIBL is high than the NABIL because in the beginning NABIL higher increment rate but later NIBL exceed.

CHAPTER -V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

As financial institutions are becoming main sources of mobilizing the financial resources, the large amount of commercial banks' funds are concentrated on total loan portfolio. Therefore, success and failure of the bank largely depend on total credit risk. Credit risk involves inability or unwillingness of a customer or counterparty to meet commitments in relation to lending, trading, hedging, settlement and other financial transactions. The main objective of the study is to analyze the comparative study on credit management of Nepal Investment Bank Limited and Nabil Bank Limited. The specific objectives of the study are to examine the credit risk position, to examine the impact of deposit in liquidity, to analyze the lending efficiency of the NIBL and NABIL, to examine the trend of deposit, loan and advances and net profit of NIBL and NABIL. The significance of the study enlightens the credit risk management of respective commercial bank. This signifies the credit risk management whether their fund was better utilized or not. The main limitation of the study are based on the secondary source data, only focus on credit risk and only five year data analysis of only two banks NIBL and NABIL. To make this study more effective, related literatures have been reviewed. The review of literature provides the foundation of knowledge in order to undertake this research more precisely. This section includes conceptual review and review of related studies. In conceptual review includes concept of banking, concept of credit and its types, principle and appraisal of credit as well as credit policy and management. In the review of related studies includes credit related unified NRB directives, review of books, articles and journals and review of previous thesis.

Research methodology has been described in third chapter, which is a way to solve the research problems with the help of various tools and techniques. This chapter includes the various financial as well as statistical tools to analyze the data in order to come to the decisions. This chapter includes the research design, population and sample data collection procedure, data period covered and methods of analysis. This study is mainly conducted on the basis of secondary data collected from annual reports, official report, economic journal, financial statement etc. and authorized web site of concern bank and Nepal stock exchange. The five years

financial statement has been examined for the purpose of the study. The presentation and analysis of data has been made comparative analytical and their interpretation has done in chapter four by applying the wide varieties of research methodology. It includes the various financial and statistical tools. In financial tools, ratio analysis is done which consists liquidity ratio, assets management ratio, profitability ratio, risk ratio. Various statistical tools such as arithmetic mean, standard deviation, coefficient of correlation, trend analysis have been applied to fulfill the objective of this study. The both banks have sound liquidity position. The investment on government treasury bills to current assets of NABIL is higher than NIBL. The assets management of both bank found good. NIBL has mobilized its collected deposit in loan and advances higher than NABIL. Both banks have increasing trend of interest earned to total asset. The relation between deposit, investment, lending, asset and net profit are positive. The trends of deposit, loan and advance, total asset and profit of NIBL and NABIL have increasing trend.

5.2 Conclusion

This research is conducted with the major objective of highlighting credit risk of NIBL and NABIL. The observation and conclusion is derived by analyzing data related to credit risk. Here conclusions have been made of NIBL and NABIL by analyzing the financial tools and statistical tools. Following conclusion has been drawn from the study.

NIBL and NABIL have sound liquidity position. The liquidity position of NABIL is greater than NIBL on the basis of current ratio. So, NABIL is sound in meeting short-term obligation than NIBL. Mean ratio of cash and bank balance to total deposits of NIBL is higher than NABIL. The average study of cash and bank balance to current assets ratio of NIBL is higher than NABIL. Mean ratio of investment on government treasury bills to current assets of NABIL is higher than NIBL. It means NABIL has invested more money in risk free assets.

In the regards of assets management aspect, NIBL has mobilized its collected deposit in loan and advances that is higher than that of NABIL. Both banks meet the NRB requirement. NABIL has more utilized its total deposit as investment. NIBL is better mobilizing of fund as loan and advances and it seems quite successful in generating higher ratio than NABIL. The investment in

govt. securities out of its total assets NABIL has higher ratio than NIBL. NABIL has invested more money in risk free assets out of its total assets. NABIL has higher return on loan and advances. NABIL seems successful in managing and utilizing the available assets. ROE of NABIL is also higher than NIBL. NIBL is doing well in the latest year.

The average interest earned to total working fund ratio of NIBL is higher than NABIL. Both banks have increasing trend of interest earned to total asset. The mean ratio of interest earned to operating income of NIBL has higher which indicates the high contribution in operating income made by investing activities. The average interest paid to total working fund of NIBL is higher than NABIL which indicates less conscious about borrowing cheaper fund. Non-performing loan to total loan and advances ratio of NIBL is higher than NABIL. These Ratios indicate the more efficient operating of credit management of both banks because both banks have less than 5 % NRB directive relating to NPL. The liquidity risk ratio of NIBL is higher than NABIL. It means NIBL has sound liquid fund to make immediate payment to the depositors. NIBL has the higher asset risk than NABIL. However both banks have decreasing trend of credit risk.

The correlation coefficients between total deposit and investment of NIBL and NABIL have positive. Similarly Correlation between deposit and loan and advances of NIBL and NABIL has highly positive. The correlation between loan and advance to net profit and total investment and net profit of NIBL and NABIL banks have highly positive correlated. The relationships of both banks have significant. Total deposit of NIBL and NABIL is positively correlated. This correlation is also significant because the correlation coefficient is high than 6 P.Er. Similarly there is highly positive correlation between NIBL and NABIL in case of total investment. It implies that the total investment of NIBL and NABIL move in same direction and positive correlation between the loan & advances of both banks NIBL and NABIL. The correlation between two banks is highly positive. The correlation between net profits of NIBL and NABIL is highly positive. This relationship is significant.

The trends of total deposit of NIBL and NABIL have increasing trend. The trend of deposit of NIBL seems to be higher than that NABIL. The trend line of loan & advances for both banks is upward slopping. The trend line of loan and advances for NIBL seems high growing than

NABIL. The trend line of total asset for NIBL and NABIL are upward slopping where as NIBL has aggressive upward slopping of total asset trend line. Similarly, the trend line of Net profit for NIBL and NABIL are also upward slopping but NIBL has aggressively and NABIL has smoothly. NIBL is doing better in order to generate net profit during the projected study period.

5.3 Recommendations

On the basis of entire research study, observation, analysis and finding of the study, the following recommendations can be made as suggestions to make the credit management of NIBL and NABIL effective and efficient way. This would help to draw some outline and make reforms in the respective banks.

-) Generally, banks have to maintain appropriate liquid assets. The current ratio of NIBL and NABIL is considerable. This can be regarded as good liquidity position. 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.
-) Government securities are risk less investment alternatives because they are free of default risk as well as liquidity risk and can be easily sold in the market. Here NABIL has found more invest in than NIBL. So NIBL recommends to invest more in government securities. NIBL and NABIL recommended to invest more funds in Government securities instead of keeping them idle and investing in risky sector.
-) NIBL and NABIL should minimize their existing level of excess liquidity by investing in more profitable sectors. Idle assets of theirs in form of excess cash or equivalents should be diverted in various investment opportunities available in the market.
-) It has been found that loan and advances to total deposit ratio of NABIL is lower than that of NIBL. It means NABIL has not properly used their existing fund as loan. So NABIL is recommended to follow liberal lending policy and to invest more deposit in loan and advances. But NABIL has higher total investment to total deposit than NIBL so it is recommended to NIBL focus on its investment.
-) NABIL seems successful in managing and utilizing the higher return on loan and advances, available assets and shareholder capital than that of NIBL. So it is recommended to emphasis in these things and tries to maximize in its return.

-) The Credit risk, liquidity risk and ratio asset risk ratio of NIBL is higher than NABIL. So its recommended to reduce in this type of risk. Both NIBL and NABIL must be more conscious in this part. Making credit policy more transparent, standard and less risky should increase the quality of the credit.
-) NIBL and NABIL need to bring in newer schemes to mobilize their higher amount of deposits in extending credit.
-) Both the banks are recommended to formulate and implement the sound and effective credit management to increase volume of proper investment and lending and decrease in bad debts that helps to meet required level of profitability as well as social responsibility.
-) Last political instability directly affected the economic sector such as hotel and tourism, manufacturing and trading sector. So banks should give priority to these sectors as well as banks should create new investing sector to mobilize deposit.
-) Keeping all this in consideration, the both banks seems equal performance. Further more NIBL recommended investing in government securities and focusing on reducing in its risk. Both banks recommended to improve its weaknesses by adopting the innovative approach to marketing. NIBL and NABIL should be customer oriented and enlarge strengthen and activate its marketing as effective tool to attract and retain the customers.

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Appendix - 1

A) Trend Analysis of Total Deposit of Nepal Investment Bank Limited:

Year(x)	Total deposit(Y)	X = x-2007/08	X ²	XY
2005/06	18927.31	-2	4	-37855
2006/07	24488.85	-1	1	-24489
2007/08	34452	0	0	0
2008/09	46698	1	1	46698
2009/10	50095	2	4	100190
Tot n= 5	Y = 174661.16	X = 0	X ² =10	XY = 84544.5

Source: Annul report of Nepal Investment Bank Limited

Let trend line be

$$Y = a + b x \dots\dots\dots (I)$$

Where x = X - Middle year

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

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

NIB

$$a = 34932.232$$

$$b = 8454.453$$

Where as

$$Y_c = 34932.232 + 8454.453 * X \text{ of NIB}$$

B) Trend Analysis of Total Deposit Nabil Bank Limited

Year(x)	Total deposit(Y)	X = x-2007/08	X²	XY
2005/06	19101.07	-2	4	-38202
2006/07	24491.09	-1	1	-24491
2007/08	31304.82	0	0	0
2008/09	37348.26	1	1	37348.3
2009/10	46410.7	2	4	92821.4
Tot n= 5	Y = 158655.94	X = 0	X ² =10	XY= 67476.4

Source: Annul report of Nabil Bank Limited

Let trend line be

$$Y = a + b x \dots\dots\dots (I)$$

Where x = X - Middle year

$$a = \frac{SY}{N}$$

$$b = \frac{SXY}{SX^2}$$

NABIL

$$a = 31731.188$$

$$b = 67476.4$$

Where as

$$Y = 31731.188 + 6747.643 *X \text{ of NABIL}$$

Appendix - 2

A) Trend Analysis of Loan and Advance of Nepal Investment Bank Limited:

Year(x)	Loan and advances(Y)	X = x-2007/08	X ²	XY
2005/06	13178.15	-2	4	-26356
2006/07	17769.1	-1	1	-17769
2007/08	27529	0	0	0
2008/09	36827.16	1	1	36827.2
2009/10	40318.31	2	4	80636.6
Tot n= 5	Y = 135621.72	X = 0	X ² =10	XY = 73338.4

Source: Annul report of Nepal Investment Bank Limited

Let trend line be

$$Y = a + b x \dots\dots\dots (I)$$

Where x = X - Middle year

$$a = \frac{SY}{N}$$

$$b = \frac{SXY}{SX^2}$$

NIB

$$a = 27124.344$$

$$b = 7333.838$$

Where as

$$Y = 27124.344 + 7333.838 * X \text{ of NIB}$$

B.) Trend Analysis of Loan and Advance of Nabil Bank Limited

Year(x)	Loan and advances(Y)	X = x-2007/08	X ²	XY
2005/06	12922.54	-2	4	-25845
2006/07	15545.78	-1	1	-15546
2007/08	21365.05	0	0	0
2008/09	27589.93	1	1	27589.9
2009/10	32268.87	2	4	64537.7
Tot n= 5	Y = 109692.17	X = 0	X ² =10	XY= 50736.8

Source: Annul report of Nabil Bank Limited

Let trend line be

$$Y = a + b x \dots\dots\dots (I)$$

Here,

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

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

NABIL

$$a = 21938.434$$

$$b = 5073.681$$

$$Y_c = 21938.434 + 5073.681 * X \text{ of NABIL}$$

Appendix - 3

A.) Trend Analysis of Total Investment of Nepal Investment Bank Limited:

Year(x)	Total Investment (Y)	X = x-2007/08	X ²	XY
2005/06	21330.14	-2	4	-42660
2006/07	27590.84	-1	1	-27591
2007/08	38873	0	0	0
2008/09	53010	1	1	53010
2009/10	57305	2	4	114610
Tot n= 5	Y = 198108.98	X = 0	X ² =10	XY= 97368.9

Source: Annul report of Nepal Investment Bank Limited:

Let trend line be

$$Y = a + b x \dots\dots\dots (I)$$

Here,

$$a = \frac{SY}{N}$$

$$b = \frac{SXY}{SX^2}$$

NIB

$$a = 39621.796$$

$$b = 9736.888$$

Where as

$$Y = 39621.796 + 9736.888 *X \text{ of NIB}$$

B.) Trend Analysis of total Investment of Nabil Bank Limited

Year(x)	Total Investment (Y)	X = x-2007/08	X ²	XY
2005/06	22329.97	-2	4	-44660
2006/07	27253.39	-1	1	-27253
2007/08	37132.76	0	0	0
2008/09	43867.4	1	1	43867.4
2009/10	52150.24	2	4	104300
Tot n= 5	Y =182733.76	X = 0	X ² =10	XY= 76254.6

Source: Annul report of Nabil Bank Limited

Let trend line be

$$Y = a + b x \dots\dots\dots (I)$$

Here,

$$a = \frac{SY}{N}$$

$$b = \frac{SXY}{SX^2}$$

NABIL

$$a = 36546.752$$

$$b = 7625.455$$

Where as

$$Y = 36546.752 + 7625.455 *X \text{ of NABIL}$$

Appendix - 4

A) Trend Analysis of Total Profit of Nepal Investment Bank limited

Year(x)	Net profit (Y)	X = x-2007/08	X ²	XY
2005/06	350.53	-2	4	-701.06
2006/07	501.4	-1	1	-501.4
2007/08	697	0	0	0
2008/09	900.62	1	1	900.62
2009/10	1265.95	2	4	2531.9
Tot n= 5	Y = 3715.5	X = 0	X ² =10	XY = 2230.06

Source: Annul report of Nepal Investment Bank Limited

Let trend line be

$$Y = a + b x \dots\dots\dots (I)$$

Where x = X - Middle year

$$a = \frac{SY}{N}$$

$$b = \frac{SXY}{SX^2}$$

NIB

$$a = 743.10$$

$$b = 223.006$$

Where as

$$y = 743.10 + 223.006 * X \text{ of NIB}$$

B). Trend Analysis of Total Profit of Nabil Bank Limited

Year(x)	Net Profit (Y)	X = x-2007/08	X ²	XY
2005/06	635.26	-2	4	-1270.5
2006/07	673.96	-1	1	-673.96
2007/08	746.47	0	0	0
2008/09	1031.05	1	1	1031.05
2009/10	1139.1	2	4	2278.2
Tot n= 5	Y = 4225.84	X = 0	X ² =10	XY = 1364.77

Source: Annul report of Nabil Bank Limited

Let trend line be

$$Y = a + b x \dots\dots\dots (I)$$

Where x = X - Middle year

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

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

NABIL

$$a = 845.168$$

$$b = 136.477$$

Where as

$$y = 845.168 + 136.477 * X \text{ NABIL}$$