A COMPARATIVE STUDY ON CREDIT MANAGEMENT OF JOINT VENTURE BANKS IN NEPAL

(With Special Reference to Nabil Bank Limited and Himalayan Bank Limited)

By
MINA TIMILSINA
Shaheed Smriti Multiple Campus
2nd Year Exam Symbol No.: 2390031
TU Registration No.: 7-2-240-76-2004

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RECOMMENDATION

This is to certify that the thesis

Submitted by
Mina Timilsina

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has been prepared as approved by this Department in the prescribed format of the Faculty of Management. This thesis is forwarded for examination.

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Surendra Natha Regmi	**Surendra Natha Regmi**	**(Campus Chief)**
(Thesis Supervisor)	**(Chairman of Research Committee)**	

Date:

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We have conducted the viva –voce of the thesis presented

By:

Mina Timilsina

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Master of Business Studies (MBS)

Viva-Voce Committee

Head, Research Department ……

Member (Thesis Supervisor) ……

Member (External Expert) ……

Date:

DECLARATION

I hereby declare that the work reported in this thesis entitled "**A Comparative Study on Credit Management of Joint Venture Banks in Nepal (With Special Reference to Nabil Bank Limited and Himalayan Bank Limited)**" submitted to Office of the Dean, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the degree of Master of Business Studies (MBS) under the supervision of **Asso. Prof. Surendra Natah Regami of Shaheed Smriti Multiple Campus.**

Mina Timilsina
Shaheed smriti multiple Campus
Campus Roll No.: 56
T.U. Regd. No.: 7-2-240-76-2004
2nd Year Exam Symbol No.: 2390031

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ABBREVIATIONS

$\overline{X}$	:	Arithmetic Mean
AD	:	Anno Domini
ADB	:	Agricultural Development Bank
AGM	:	Annual General Meeting
APEC	:	Asia Pacific Economic Cooperation
ATM	:	Automatic Teller machine
BOK	:	Bank of Kathmandu
BS	:	Bikram Sambat
CD	:	Credit-Deposit
CEO	:	Chief Executive Officer
CIB	:	Credit Information Bureau
CIC	:	Credit Information Center
CRISP	:	Customer Focused, Result Oriented, Innovative, Synergetic and Professional
CV	:	Co-efficient of variation
d.f.	:	Degree of Freedom
EBL	:	Everest Bank Limited
EPS	:	Earning Per Share
F/Y	:	Fiscal Year
HBL	:	Himalayan Bank Limited
i.e.	:	That is
KBL	:	Kumari Bank Limited
L/C	:	Letter of Credit
MBS	:	Master of Business Studies
NABIL	:	Nabil Bank Limited
NBBL	:	Nepal Bangladesh Bank Limited
NBL	:	Nepal Bank Limited
NCCBL	:	Nepal Credit and Commerce Bank Limited
NEPSE	:	Nepal Stock Exchange Limited
NFCL	:	National Finance Company Limited
NIBL	:	Nepal Investment Bank Limited

NICBL	:	Nepal Industrial & Commercial Bank Limited
NIDC	:	Nepal Industrial Development Corporation
NPA	:	Non-Performing Assets
NPL	:	Non-Performing Loan
NRB	:	Nepal Rastra Bank
P.E.	:	Probable Error
r	:	Correlation Coefficient
RBB	:	Rastriya Banijya Bank
ROE	:	Return on Equity
Rs.	:	Rupees
S.D.	:	Standard Deviation
S.N.	:	Symbol Number
SCBNL	:	Standard Chartered Bank Nepal Limited
SD	:	Standard Deviation
SEBO	:	Security Board
SEC	:	Security Exchange Center
SMS	:	Short Message Service
T.U.	:	Tribhuvan University
UFCL	:	United Finance Company Limited

CHAPTER - I
INTRODUCTION

1.1 Background of the Study

The source of finance is the most essential element for the establishment and operation of any profit and not profits institutions. Profit oriented institutions usually obtain these sources through ownership capital, public capital through the issued shares, and through the financial institutions such as banks, in the form of credit, overdrafts and other related services *(Vaidya; 1999: 4).*

Nepal is a developing country. Developing countries face a lot of problems for their economic development. Financial market is very important for the economic growth of the country *(Economic Survey, 2009/10: 2).* The pace of development of the country largely depends upon the economic activities. Economic activities are guided by finance, financial institutions provide societies, insurance companies, and stock exchange helps in the economic development of the country *(Economic Survey; 2009/10: 2).*

Banks are major institutions in financing. Bank involves in a process of collecting chattered money and to help its mobilization in different sectors according to the need of customers *(Shekhar and Shekhar, 1999: 3).* Bank helps to develop saving habit of people, which in turns help to make other people to invest for their business. Banking loan helps to invest in industrial sector, commercial sector, production sector, trade & commerce. Bank also helps to develop international business by initiating as a mediator on export & import. This way banks help to strengthen the national economy *(Economic Survey; 2009/10: 3).*

Banking is one of the most heavily regulated businesses in the world *(Vaidya; 1999: 5).* Banks are among the most important financial institutions in the economy. They are the principal source of credit (loan-able funds) for millions of individuals and families and for many units of government. Moreover, bank often act as a major source of credit to small local business ranging from grocery stores to automobile dealers for their stock. Banks are among the most important sources of short term working capital for business

and have become increasingly active in recent years in making long-term business loans for new plant and equipment *(Shekhar and Shekhar; 1999: 6).*

Banks are those financial institutions that offer the widest range of financial services especially credit, savings payment services and perform the widest range of financial functions of any business firm in the economy. The most important function are; lending and investing money (the credit function), making payments on behalf of customers foe their purchase of goods and services (the payment function), managing financial assets and real property for customers in investing and raising funds (through the brokerage, investment banking and saving functions) *(Vaidya; 1999: 5).*

Lending is the most important function of a commercial bank. For lending procedure, bank has to make some banking practices such as transferring property in bank's name. The transfer is temporarily made for a loan price & interest. Lending money is nowadays becoming main resources of revenue to the bank and also involves high risk too. Bank will not provide loan unless it has sufficient sources to the borrower that will be needed in case of future recovery.

Today no banker can survive for long run without proper standing of economy and no pace ahead without proper banking system. Moreover, the ability of banks to gather and analyze financial information has given rise to another view of why banks exist in modern society. Most borrowers and depositors prefer to keep their financial records confidential, shielded especially from competitors. Banks are able to fulfill this need by offering high liquidity in the deposits they sell. More people believe that banks play only narrow role in the country-taking deposits and making loans. The modern bank has to adopt new roles in order to remain competitive and responsive to public needs *(NRB, Smarika; 2004/05: 41).*

Banks are expected to support their local communities with an adequate supply of credit for all legitimate business and customer needs to price that credit reasonably in line with competitively determined interest rates. Bank loan support the growth of new business and jobs within the banks trade territory and promote economic vitality. Banks made a wide variety of loans to a wide variety of customers for many different purposes from purchasing automobiles, and buying new furniture, taking dream vacation or purchasing college education, to constructing home and office buildings. Loans may be

divided as: real estate loans, financial institutions loans, agricultural loans, commercial and industrial loans, loans to individuals, miscellaneous loans, lease financing receivables etc *(NRB, Smarika; 2004/05: 40).*

Going through loan granting provision, bank will through safety of funds, purpose of loans, security for loans, profitability spread of loan portfolio etc. besides this, the character of person receiving credit, the capacity of borrower to utilize the fund, the percentage of borrower stake in the business are the basic elements which measures the quality of borrower and ultimately the quantity of the loan.

In this way bank plays an important part in the development of trade, commerce and industry. Today no bankers can survive for long run without proper standing of economy and economy cannot pace ahead without proper banking system built.

Credit is regarded as the most income generating assets especially in commercial banks. Credit is regarded as the heart of the commercial banks in the sense that; it occupies large volume of transactions; it covers the main part of the investment; the most of the investment activities based on credit; it is the mail factor for crating profitability; it is the main source of creating profitability; it determines the profitability. It affects the overall economy of the country. In today's context, it also effects on national economy to some extent. If the bank provides credit to retailer, it will make the customer status. Similarly, it provides to trader and industry, the government will get tax from them and help to increase national economy. It is the security against depositors. It is proved from very beginning that credit is the shareholder's wealth maximization derivative. However, other factors can also affect profitability and wealth maximization but the most effective factor is regarded as credit. It is most challenging job because it is backbone in commercial banks. Thus, effective management of credit should seriously be considered.

Management is the system, which helps to complete the every job effectively. Credit management is also the system, which helps to manage credit effectively. In other words, credit management refers management of credit exposures arising from loans, corporate bonds and credit derivatives. Credit exposures are the main source of investment in commercial banks and return on such investment is supposed to be main source of income.

Credit management strongly recommends analyzing and managing the credit risks. Credit risk is defined as the possibility that a borrower will fail to meet its obligations in accordance with the agreed terms and conditions credit risk is not restricted to lending activities only but includes off balance sheet and inter-bank explores. The goal of the credit risk management is to maximize a bank's risk adjusted rate of return by maintaining the credit risk exposure within acceptable parameters. For most banks, loan are the largest and most obvious sources of credit risk, however, other sources of credit risk exist throughout the activities of a bank, including in the banking book, and in the trading book, and both increasingly facing credit risk in various financial instruments other than land, including acceptances, interbank transactions and guarantees and the settlement of transactions.

The credit policy of a firm provides the framework to determine whether or not to extend credit and how much credit to extend. The credit policy decision of a bank has two broad dimensions; credit standards and credit analysis. A firm has to establish and use standards in making credit decision, develop appropriate sources of credit and methods of credit analysis."

1.2 Statement of the Problem

Commercial banks in Nepal have been facing various challenges and problems. Some of them arouse due to the economic condition of the country, some of them arouse due to dual meaning policy of government and many of them arising due to default borrowers. After liberalization of economy, banking sector has various opportunities.

However, the financial institutions are increasing regular. Financial institutions should maintain maximum liquidity. Hence, the banks and financial institutions are competing among themselves to advance credit to limited opportunity sectors. Banks and financial institutions are investing in home loan, hire purchase loan for safety purpose. Commercial banks in Nepal have been facing various challenges and problems especially in lending management and liquidity position. Nowadays, banks have increasing number of deposits in fixed and saving accounts but have decreasing trend in lending behaviors. So, this has caused major problems in commercial banks. Nowadays, due to competition among banks, the interest rate charge for loan is in decreasing trend. Due to unhealthy competition among banks, the recovery of the bank

credit is going towards negative trends. Non-performing credits of the banks are increasing year by year. Therefore, it is necessary to analyze the 'credit management' or credit disbursement recovery provision for loss and write off of credit. As the sample of commercial banks, Himalayan Bank Limited and Nabil Bank Limited have been selected.

Research problems may be stated in the form of following questions:-

i. What level of liquidity is maintained by the sample banks?
ii. What is the volume of contribution made by sample banks in credit and advances?
iii. What is the deposit collection and utilization trend of sample banks?
iv. What is the relationship of deposits, loan & advances and net profits of sample banks?

1.3 Objective of the Study

It is no doubt that the role of commercial banks is significant in development of the country. Banks help in development of the country by providing credit to the necessary sectors. Therefore, the main objective of this study is to find out credit management position of Himalayan Bank Limited and Nabil Bank Limited.

The specifics objectives of the study are as follows:

i. To see the volume of contribution made by sample banks in credit & advances.
ii. To see the deposit collection and utilization trend of sample banks.
iii. To study the relationship of deposit, loan & advances and net profit of sample banks.
iv. To provide suitable suggestions based on the findings of this study.

1.4 Significance of the Study

Banks have become an essential part of economic life in every field. The development of agriculture and industry are not possible without banks. Modern trade also cannot be thought of without commercial banks.

Therefore, the statement of Wicksell seems to be perfectly appropriate when he says that bank is the heart and central point of modern exchange economy. The significance of banks becomes clear looking at the following points.

1. Banking and Capital Formation:

Capital formation is the basic factor for economic development. Capital formation means creation of physical assets like machines and buildings which increase productive capacity of a country. For capital formation savings are required which are largely mobilised by commercial banks.

2. Banking and Investment:

The pattern of investment and its quantum that are carried on depend to a large extent on the banking system. An entrepreneur may wish to introduce innovations and this affects economic development positively. Bank credit enables entrepreneurs to innovate and invest, and thus promote economic activity.

3. Banking and Industry:

Banks are helping industries by providing them credit for establishing new units and updating and expanding the old units.

4. Banking and Agriculture:

Banks are helping farmers to develop agriculture for providing them long term finance for buying tractors and installing tube-wells.

5. Banking and Trade:

Banks are helping trade by providing short-term and long-term finance

1.5 Limitations of the Study

The following are the major limitations of the study:

i. The study is mainly based on secondary data collected from the annual reports of the sample banks. Therefore, the limitations of those data are also the inherent limitations of the study
ii. Since the study takes only two commercial banks from among 31 banks which do not represent the total commercial banks operating in the country. Therefore, the conclusion of the study is limited only to the banks understudy.
iii. The study is not comperhensive due to lack of time and cost.
iv. The study is mainly based on over the six years period from 2005/06 to 2010/11.

1.6 Organization of the Study

The whole study is divided into six different chapters. They are:

Chapter I: is the introduction chapter. It includes background of the study, the profile of the study, statement of the problems, objectives of the study, significance of the study, and limitations of the study and chapter plan of the study.

Chapter II: deals with review of literatures, which includes conceptual/ theoretical review and review of related studies.

Chapter III: is research methodology which includes research design, population and sample, source of data, data collection techniques and data analysis tools.

Chapter IV: deals with the various analysis and interpretations of data like analysis of deposits, loan & advances and profile of Himalayan Bank Limited and Nabil Bank Limited, financial and statistical analysis and analysis of primary data. It also shows major finding of the study.

Chapter V: includes summary and conclusion of the study. It also deals with recommendations suggested.

The list of biography and annexes are given at the last for references.

CHAPTER - II
REVIEW OF LITERATURE

2.1 Conceptual Review

2.1.1 Concept of Credit

"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 date on demand. Credit is the amount of money lent by the creditor (bank) to the borrower (customers) either on the basis of security. Sum of the money lent by a bank is the credit" *(Chopra; 1989:35).*

"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 prepare credit portfolio, otherwise it will not only add bad debts but also affect profitability adversely" *(Varshney and Swaroop; 1994:6).*

"Credit administration involves the creation and management of risk assets. The process of lending takes into consideration about the people and system required for the evaluation and approval of loan requests, negotiation of terms, documentation, disbursement, administration of outstanding loans and workouts, knowledge of the process and awareness of its strength and weakness are important in setting objectives and goals for lending activities and for allocating available funds to various lending functions such as commercial, installment and mortgage portfolio" *(Johnson; 1940:132).*

"It is very important to be reminded that most of the bank failures in the world are due to shrinkage in the value of loan and advances. Hence, risk of non-payment of loan is known as credit risk or default risk" *(Dahal; 2002:114).*

"In economics, the term credit refers to promise by one party to pay another party for money or goods on demand at some future date *(Jhingan; 1997:171).*

"Credit is the vital and the most important activity in the bank, next only to deposit mobilization. It is the activity that generates the main income stream for the bank. The activity should therefore be pursued with the utmost professionalism conversation and circumspection. Bank should develop and implement policies and procedures to ensure that the credit portfolio is adequately diversified given the bank's target markets and overall credit strategy. In particular, such mix as well as set exposure limits on single counters parties and groups of connected parties, particular industries or economic sectors, geographic regions and specific products. Banks should ensure that their own internal exposure limits imply set by the banking supervisors. Credit policies establish the framework for lending and guide the credit granting activities of the bank" *(Croose; 1963:89).*

The main purpose of commercial bank is to maximize the shareholder's wealth by accepting deposits and granting loans in the society. In order to give maximum return to shareholders, the bank is required to invest most of its fund in loan and advances, risky assets. Consequently, a clear and sound loan credit policy is a must for the safety depositors fund and adequate return to shareholders. Credit policy can be defined as the decision made in advance about the management of credit.

2.1.2 Types of Credit

The basic types of credit that the bank flows are in the form of:

i) Overdraft

It is an agreement by which bank allows the customer to draw over and above the current account balance. Interest on overdraft is charged on debt balance on daily basis.

ii) Cash Credit

The credit is not given directly in form of cash but deposit account is being opened in name of creditor and amount credited to that account. In this way, every bank loan creates deposit.

iii) Term Credit

It refers to money lend in lump sum to the borrowers. It is principal form of medium term debt financing having maturities of 1 to 8 years. A bank credit with maturities exceeding 1 year is called term credits. The firm agrees to pay interest based on the bank's prime rate and to repay principal in the regular installments special patterns of principal payments over time can be negotiated to meet the firm's special needs.

iv) Working Capital Credit

It is granted to the customers to meet their working capital gap for supporting production process. A natural process develops where is fund moving through the cycle are generated to repay a working capital.

v) Hire Purchasing Financing

Hire purchase loan refers to specifically periodic repayment of principal and interest over the maturity of loan.

vi) Housing Financing

Financial institution adopts this policy 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.

vii) Project Credit

It is granted the customers as per project viability. Project credit is short-term credits made to developers for the purpose of completing proposed projects.

viii) Consortium Credit

No single financial institution grant loan to the project due to single borrower limit or other reasons and two or more such institutions may consent to grant credit facility to the project of which is baptized as consortium loan.

ix) Credit against Fixed Deposits

Fix deposit is specified for fixed period of time. Depositor can use it as collateral for loan received before the maturity period.

2.1.3 Lending Criteria

While screening a credit application, 5-cs to be a first considered factor which is supported by documents. They are: *(Poudel and Gautam; 2065:435).*

1) Character

Character is the analysis of the applicant at to their ability to meet the obligations put forth by the lending institution. For this analysis, generally the following documents are needed;

i. Memorandum and Articles of Association.
ii. Registration certificate.
iii. Tax registration certificate (renewed).
iv. Resolution to borrow.
v. Authorization person authorizing to deal with the bank.
vi. Reference of other lenders with whom the applicant has dealt in the post or bank A/C statement of the customer.

2) Capacity

It describes customer's ability to pay. It measured by applicants past performance records and followed by physical observation. For this, an interview with applicants, customers, suppliers will further clarify the situation, documents relating to this area;

i. Certified balance sheet and profit loss account for at least past 3 years.
ii. In case of the personal loan they have to summit the profit source of income.
iii. References or other lenders with whom the applicant has dealt in the past or bank A/C.

3) Capital

This indicates applicant's capacity to inject his own money. By capacity analysis, it can be concluded that whether borrower is trying to play lender's money only or is also injecting his own fund to the project. For capital analysis, financial statements like certified balance sheet, profit and loss account is the only tools.

4) Collateral

Collateral is the security proposed by the borrower. Collateral may be of either nature immovable or immovable. Moveable collateral comprises right from stock, inventories to playing vehicles. In case of immovable it may be land with or without building or fixture, plant machineries attached to it.

5) Condition

Once the funding company is satisfied with the character, capacity, capital and collateral then a credit agreement (sanction letter) is issued on favors of the borrower starting conditions of the credit to which borrower's acceptances id accepted.

2.1.4 Principle of Credit Policy

Good credit policy is essential to carry out the business of lending more effectively. Some principle of credit policies are as follows *(Mishkin; 1998:116-119).*

1) Safety Fund

Bank should look the fact that is there any unproductive or speculative venture or dishonest behavior of the borrower.

2) Liquidity

Liquidity refers to pay on hands on cash when it needed without having to sell long-term assets at loss in unfavorable market. A banker has to ensure that money will come in as on demand or as per agreed terms of repayment.

3) Security

It acts as cushion to grant advances and credits. Adequate values of collaterals ensure the recovery of credit correctly at the right time. Accepted security should be readily marketable, handily and free from encumbrance.

4) Purpose of Loan

Generally, credit request would be accepted for productive sector only. Bank should be rejected credit request for speculation, social functions, pleasures trips, ceremonies and repayment of prior credit as they are unproductive.

5) Profitability

Profitability denotes the value created by the use of resource is more than the total of the input resources. Bank should provide to such project that can provide optimum amount of return. For such purpose, bank should take a little bit risk by providing credit to ventures project.

6) Diversification of Loans

Portfolio of credit advances is to be spread not only among many borrowers of same industry. It across the industries in order to minimize the risk of lending keeping "Do not put your all eggs in the same basket" in mind.

7) National Interest and Suitability

In lending and granting advances, interest of nation should not be distorted (if undermined). Priority and deprived sector of economy and other alarming sector should be given proper emphasis while extending advances.

2.1.5 Objectives of Credit Policy

The credit policy should be carefully established properly communicated to the lending officers and implemented effectively by the lending officers. The basic objective of credit policy is to maintain effective credit management and control over it. Moreover, it is specified as follows;

i. To have a Good Assets

Loans are the risky assets though a bank invests the most of its resources in granting loans and advances. The increasing of non-performing loan causes the non-existence of banks. It is the very quality of assets that led bankruptcy of many banks in South-East Asia. The objective of sound loan policy is to protect depositor's interest and maximize returns to the shareholder by striking a balance between liquidity and profitability.

ii. To contribute to Economic Development

A sound credit policy is required to ensure that the loans are given to the productive sector which contributes to capital formulation and employment generation.

iii. To give guidance to lending officials

A borrower should be assured that there would be no discrimination whether he deals with one officer or another. A sound credit policy is imperative to achieve a uniform standard procedure throughout the organization.

iv. To establish a standard for Control

Every policy requires periodic follow-up to ensure its proper implementation. A sound credit policy helps to determine the variance between actual performance and practices and to take corrective actions. A sound policy is always flexible and works as a guideline. If the variation between the practice and policy is observed, proper education to lending officer or amendment of the policy will become inevitable *(Saunders and Cornett; 2004:61-62).*

2.1.6 Characteristics of Credit Policy

Every policy has its own characteristics. The credit policy has the following characteristics;

i. Approved by Top Management

The credit policy is always prepared by the top management of an institution and is approved by the board of directors. It may be revised time to time.

ii. Practical and Manageable

The credit policy prepared by the bank is not for theoretical rather it is for practical and manageable to apply.

iii. Flexibility

Rigid credit policy is not practical. It has to be flexible according to the demand of customer.

iv. Compliance

Credit policy is compliance with NRB policy as well as economical, political condition of the country *(Shrestha; 1993:42).*

2.1.7 Factors Affecting Credit Policy

Generally, the following factors are to be considered to make effective loan management. It is also called the factors of credit policy. It helps to get effective credit worthiness.

i. Industry Environment

It determines the nature of the industry structure, its attractiveness and the company's position within the industry, structural weakness of a company, which is disadvantaged, theaters first way out and security value.

ii. Financial Condition

It determines the borrower's capacity to repay through cash flow as the "First way-out". The strength of "second way-out" i.e.; through collateral liquidation is also assessed. Further the possibility to fall back on income of sister concerns in case of financial crunch of the company condition theaters repayment capacity.

iii. Management Quality

It determines the integrity, competence and nature of alliances of borrower's management team. Weakness in replacements needs to be evaluated.

iv. Technical Strength

It determines the strength and quality of the technical support required for sustainable operation of the company in terms of manpower and technology used. Appropriate technical competencies of the manpower, the viability of the technology uses, availability of after sales service, cost of maintenance and replacement need to be evaluated.

iv. Security Realization

It determines the control over various securities obtained by bank to secure the loan provided excitability of the security documents and present value of the properties mortgaged with the bank. Weakness in security threatens the bank's second way out.

2.2 Review of Related Studies

2.2.1 Review of NRB Directives

In this section, the directives provided by bank in relation to efficiently manage the credit have been reviewed;

- **Classification of Loan and Advances**

As per the directives issued by NRB, all loans and advances shall be classified into the following four categories:-

i) Pass loan

Loans and advances whose principal amount are not past due and past due for a period up to 3 months shall be included in this category. These loans are classified as performing loan.

ii) Sub-standard

All loans and advances that are past due for a period up to six months should be included in this category. Sub-standard loan is classified as non-performing loan.

iii) Doubtful

All loan and advances that are due for a period of six months to one year should be included in this category. Doubtful loan is also from the category of non-performing loan.

iv) Loss

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 included in this category.

Loan and advances falling in this category of sub-standard, doubtful and loss are classified and defined as non-performing loan. It is appropriate in the view of the banks management there is not restriction in classifying the loan and advances from low risk category to high-risk category. For instance, loans falling under sub-standard may be classified into doubtful or loss and loans falling under doubtful may be classified into loss category. The term loan and advances also includes bills purchased and discounted.

- **Additional Arrangement in Respect of Pass Loan**

Loan and advances fully secured by gold, silver, fixed deposit receipts, credit cards and government securities shall be include under "Pass" category. Loans against fixed deposit receipts of other banks shall also qualify for inclusion under pass loan. However, where collateral of fixed deposit receipt or government securities of NRB bonds is placed as extra security, such loan has to be classified on the basis of clauses 1 to 7. While renewing working capital loan having maturity period up to one year can be classified as pass loan. If the interest of working capital nature loans and advances is not regular, such loan and advances should be classified on the basis of interest outstanding period.

- **Additional Arrangement in Respect of Loss Loan**

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

i. Security is not sufficient,
ii. The borrower has been declared bankrupt,
iii. The borrower is absconding or cannot be found,
iv. Purchased or discounted bills are not realized within 90 days from the due date and non fund based letter of credit and guarantees etc are not realized within 90 days from the date conversion into fund based are not realized within 90 days,
v. The credit has not been used for the purpose originally intended,
vi. Owing to non-recovery, initiation as to auctioning of the collateral has passed six months and if the recovery process is under litigation,
vii. Loan provided to the borrowers included in the blacklisted of Credit Information Centre (CIC),
viii. Project or business is not operative conditions, project or business is not in operation,
ix. Credit card loan is not written off within 90 days from past due date.

- **Additional Arrangement in Respects 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.

- **Prohibition to Recover Principal and Interest by Overdrawing the Current Account and Exceeding the Overdraft Limit**

Principal and interest on loans and advances shall not be recovered by overdrawing the borrower's current account or where overdraft facility has been extended, by overdrawing such limit. However, this arrangement shall not be constructed as prohibitive for recovering the principal and interest by debiting the customer's account. Where a system in the banks exists as to recovery of principal and interest by debiting the customers' account and recovery is made as such resulting in overdraft, which is not settled within one month, such overdrawn principal amount shall also be liable to

be include under the outstanding loan and such loan shall be downgraded by one step from its current classification. In respects if recognition of interest, the same shall be as per the clause relating to income recognition mentioned in directive no 4.

- **Letter of Credit and Guarantees**

If letter of credit and guarantees and other contingent liabilities converted into fund based liabilities and have to be paid in such condition such loan shall be classified as pass loan within 90 days from the date of conversion into fund based. After 90 days such loan shall be classified as loss loan.

- **Rescheduling and Restructuring of the loan**

If the bank is confident on the following bases of written plan of action submitted by borrower, it may rescheduling or restructuring the loan and advances. Clear basis of rescheduling or restructuring should be attached with loan files;

- If there is proof of adequate documents and collateral security relating to loan.
- If the bank is confident in recovery of restructured of rescheduled loans and advances.

In addition to written plans of action for rescheduling or restructuring of loan, payment of at least 25 percent of total accrued interest up to the date of rescheduling or restructuring should have been called.

- **Loan Loss Provisioning**

The loan loss provisioning, on the basis of the outstanding loans and advances and bills purchases classified as per this directives, shall be provided as follow;

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

2.2.2 Review of Articles

Present section deals about concept or findings of earlier scholars on the concerned field of the study. It helps to develop the study as link in a chain of research that is developing and emerging the knowledge about the related field.

The effort has been made in this present section to examine and review some related articles published in different economic journals, bulletins, magazines and newspapers.

Shrestha (2003), in his article "*Impacts and Implementation of NRB's Directions on Commercial Banks*", he writes, due to slowdown in the world economy and deteriorating law and order situation of the country, many sectors of the economy are already sick. When any sector of economy catches cold, bank start sneezing. From this perspective, the banking industry as a whole is not robust. In case of investors having lower income, portfolio management may be limited to small saving income. But on the other hand, portfolio management means to invest funds in various schemes of mutual funds like deposits, shares and debentures for the investors with surplus income. Therefore portfolio management becomes very important both for an individual's as well as institutional investors. Large investors would like to select the best mix of investment assets.

Lamichhane (2000), in his article " *Forty-six years of NRB*", he writes, the investor or whether banks, financial institutions, individuals, private or government sector, most not took the proposal by making decision without having adequate judgment because sometimes they perform out of norms, related studies, policies and techniques. A project appraisal will best viable only if it has accessed through conscious analysis as well as through investment decisions to make its macro and micro level viability effective.

Ghimire (1999), in his article titled "*Credit sector reform and NRB*" has tried to highlight the effects of change or amendment in NRB directives regarding loan classification and loan loss provisioning. "Although the circumstances leading to financial problems or crisis in many Nepali banks differ in many respects, what is common area most of the banks is the increased size of non-performing assets (NPAs). To resolve the problem of the losses or likely losses of this nature facing the industry

NRB has, as the central bank, amended several old directives and issued many new circulars in the recent years".

As opined by him, since majority of the loans of most of the commercial banks of the country at present falls under substandard, doubtful and even loss categories, loan loss provisioning now compared to previous arrangement would be dramatically higher. The new classification and provisioning norms are very lent able as they help to strengthen banks financially. He added that we also must remember that the old system remained in force from 1991 to 2001, which was probably the most volatile decade of the business operation of the country. He has indicated that loan loss provisioning as a percentage of total credit of April 12, 2001 is 5.2% but as April 13, 2003, it has jumped to 18.39. If only private bank are considered, it is 2.12% of April 2001whereas it is 6.30% as of April 13, 2003. The total increment in LPP is Rs. 11,328.11 million and the total increment in credit is only Rs. 7,976.70. He has also stated that tightening provisioning requirements on NPL is essential to ensure that banks remain liquid even during economic downturns.

In the conclusion he has mentioned that in the recent years NRB has worked for management and reform of the credit of the financial institution more seriously and NRB has adopted reforms aimed not just at dealing with problem banks but also at strengthening banking supervision to reduce the likelihood of future crisis. "All prudential directives of NRB in connection of credit sector reform have been made revised on after April 2001. To adapt to such changes there can be some difficulties and for a better and harmonized reform NRB should continue to be supportive, proactive and also participative to take options of bankers for a change in regulation/policy taking place in the future."

Chhetri (1998), in the titled of "*Non-performing Assets: A need for Rationalization*", has attempted to provide connation of the term NPA and its potential source, implication of NPA in financial sector in the South East Asian region. He had also given possible measures to contain NPA. "Loans and advances of financial institutions are meant to be serviced either part of principle of the interest of the amount borrowed in stipulated time as agreed by the parties at the time of loan settlement. Since the date becomes past dues, the loan becomes non-performing assets. The book of the account

with lending institution should be effectively operative by means of real transaction effected on the part of the debtor in order to remain loan performing".

As stated by the writer, the definition of NPA differs from country to country. In some of the developing countries of Asia Pacific Economic Cooperation (APEC) forum, a loan is classified as non-performing only after it has been arrear for at least 6 months. Similarly, it is after three months, in India. Loan thus defaulted are classified into different categories having their differing implication on the asset management of financial institution. He also stated that NPAs are classified according to international practice into 3 categories namely Substandard, Doubtful and Loss depending upon the temporal position of loan default. "Thus the degree of NPA assets depends solely on the length of time the asset has been in the form of none obliged by the loaner. The more time it has elapsed the worse condition of asset is being perceived and such assets are treated accordingly. "As per Chhetri's view, failure of business for which loan was used, defective and below standard credit appraisal system credit program sponsored by Government, slowdown in economy/recession, diversion of fund is some the factors leading to accumulated of NPAs.

He said that there is serious implication of NPAs, on financial institution. He further added that the liability of credit institution dies, not limit to the amount declared as NPA but extend to extra amount that required for provisioning depends upon the level of NPAs and their quality. As per his view, rising level of NPAs create a psyche of worse environment especially in the financial institution like waiving interest, rescheduling the loan, writing off the loan, appointing private recovery agent, taking help of tribunals and law of land etc. NPAs can be reduced.

Finally, he concluded that financial institutions are beset with the burden of mounting level of NPAs in developing countries. "Such assets debar income flow of the financial institution while claiming additional resources in the form of provisioning thereby hindering gainful investment. Rising level of NPAs cannot be taken as stimulus but the vigilance demanded to solve the problem like this, eventually will generate vigor to gear up the banking and financial activities in more active way contributing to energizing growth."

Subedi (2002), in New Business Age, in the titled of "*Growth in Major Commercial Banks*" has compared between the first six month of the fiscal year 2002-03 and 2003-04, which shows that there has been noticeable increase in credit outflow by the commercial banks except of Nepal Bank Ltd. (NBL) and Rastriya Banijya Bank (RBB) (the government owned banks). There has been increase in credit deposit (CD) ratios of all commercial banks except of NBL and RBB in which case it has gone down by 10.41% and 5.99% respectively. It may be because their concentration was only on recovery of the huge Non Performing Assets (NPA). However, Subedi pointed out that no matter what the size of NPA is and the circumstances are, each bank has to collect the deposit in order to create a lending and to invest in the new ventures. Except RBB all banks have increment in deposit collection.

A decrease in CD ratio (the percentage of the deposit mobilization over the credit) signifies the presence of high liquidity and comparatively lower fund mobilization and vice versa. High liquidity and idle funds will result in lower profits. HBL has the highest growth of 18.47%in CD ratio over the last year. Similarly, NABIL, Everest Bank Ltd. (EBL) and Nepal SBI Bank Ltd (SBI) have recorded growth rates of 6.28%, 11.83%, and 7.45% respectively in their CD ratio. However, this ratio of commercial banks has declined, largely due to factors external to the banks.

As per the NRB directives, all commercial banks have to maintain loan loss provision according to the size of overdue loans. Nepal Credit and commerce bank (NCCB) were able to decrease its loan loss provision by 27.63% as compared to the previous year indicating a good recovery of interest as well as principle. In case of Nepal Investment Bank (NIBL), growth in loan loss provision (which in fact decreased by 6.73%) was much less than the growth of the total credit (which in fact decreased by 6.73%) was much less than the growth of the total credit (which increased by 53%). Similarly, NBL and HBL were able to maintain a healthy composition of loan loss provision (decreased by 9.49% & 0%) and credit (increased by 3.70% and 26078%), again signifying good results from their loan recovery efforts. In case of remaining banks, the situation is not satisfactory as the growth of loan loss provision is higher than the growth of credit.

A bank's stability depends on the reserve it maintains. NABIL's reserve growth is very good i.e. 14% retained earnings and 67.86% on other reserves. Similarly, all other banks have except NCCB and BOK made noticeable increment in it. The major yardstick to

measure the status of the bank (which is the prime concern of shareholders) is the profitability of the banks.

The spread between what the banks has earned and expensed. In this regard, KBL has made the significant growth of 18.25% in profit as compared to the previous year. Similarly Standard Chartered Bank (SCBNL), NABIL, HBL, NIB, NICB and NCCB have the growth percentage of 7.72%, 6.33%, 29.83%, 61.8%, 62.76%, 29.76%, 37.89% and 4.03% respectively.

Government of Nepal has promulgated ordinance to replace several existing laws related to the banks and financial institution like Commercial Bank Act 2031, Finance Act etc. related to financial institutions. The major highlights of the ordinance are universal banking that makes all the banks and financial institutions governed by a single act making the legal process much efficient and with less confusion and it have protected the rights and welfare of the depositors and investors.

However this ordinance has lots of unclear issues, which has created confusion to the existing banks and financial institutions. The ordinance has classified the financial institutions into categories replacing the present terms as commercial, development of finance companies. The act has classified the category, as "Ka" category Ka category mention itself as a bank; the rest of the category should name itself only as a financial institution. The ordinance has created confusion to the existing development banks and finance companies as what category they belong to? The positive aspect of this ordinance is that the financial institutions which fall under the "Kha" category will also be allowed to carry out several financial activities that were previously allowed to only commercial banks, such as opening current accounts, issuing drafts and traveler's cheques, dealing in foreign exchange and issuing letter of credits. Even the financial institutions, which falls under the category "Ga" are permitted to handle current account, saving account and to some extent, foreign currency transactions. Due to these changes, the customer will benefit due to the competition among these banks and financial institutions.

Khatri (2005), in New Business Age in the title of "One Umbrella Act's Pros & Cons", has analyzed the ordinance pros and cons, in general speaking termed as Umbrella Act. He has expressed his disagreement in the ordinance regarding the qualification of the

Board of Director's composition. The qualification set is out of the total number of directors, two thirds have to be graduates in specified disciplines-management, commerce, economics, accounting, finance, law, banking and statistics. Another requirement is six years' work experience either in banking or public limited companies or in a gazette level government posts. He argues why a science graduate or someone with engineering background cannot be the director, it is not justifiable to question on the capacities of the people with these background as the in the past some successful General Manager and Directors in Nepal Industrial Development Corporation (NIDC) were engineers. He further writes that activities like project financing and asset valuation require engineers and similarly that there cannot be any reason for the position of director in banks to be graduates in some specific fields only. CEO of the "Ka" category qualification required is Master Degree in the chosen few subject and the term would be four year. The act however does not mention the renewal of the CEOs term. The Board or AGM of the institution should be decided the CEO's tenure.

Similarly, he points out argument in the requirement of six years' work experience. The performance of the public limited companies is so poor that the efficiency of the staff is questionable. In such situation how can one hire someone with the experience in public limited companies? As per the act, it is mandatory to appoint a professional director in the Board chosen from the list of professional experts entitled by NRB. Such director will not have voting right; it is questionable that can be contribute significantly towards the development of a bank or financial institution without the voting right?

For the existing banks and other financial institution a two-year period has been granted to apply for the license. Entirely new Memorandum of Association and Articles of Association have to be prepared and a special general meeting of shareholder has to be called. If any institution fails to obtain the license on the said period, there license will be seized. However, there is no clear information on whether the institutions can prepare Memorandum of Articles in their own format or are there any prescribed format available or will be made available by the central bank-Nepal Rastra Bank for this purpose.

This ordinance has given the full authority to NRB for monitoring, inspection, supervision etc. NRB is vested with the power to fix interest rates in lending and deposits and the act also states that NRB can also delegate this authority to the

individual banks themselves. However, such delegated authority can be taken bank. This makes banking more risky; it indicate that NRB is interest to take control in fixation of interest rates as when required.

Satyal (2005), in his article, **"***Entrepreneur-Friendly Credit Policy*", has reviewed the present credit policy with main focus of the credit decision being based on the collateral. He argues that only collateral should not be considered as the basis of credit decision.

Access to finance is vital element for entrepreneurship development in the country. Without it, one cannot think of starting business of any sort. It's mainly due to his reason; most of the students after competing there single mindedly look for employment opportunity. No other options, no matter how attractive it would be enter into their mind. It has created huge pressure in the labor market. In the absence of entrepreneurial activities in the country, employment opportunity will be very limited and even qualified and competent people do not get job. The established notion of the Nepalese Banker's that money lent to the wealthy people based pm collateral is safe. But is not actually a safe assumption in the face of greater difficulty in loan recovery from these people. Also, this particular segment of market is already over-banked. With the worsening business performance of the Nepalese corporate sector mostly to the poor management compounded by other factors like sluggish economic conditions and political instability, banks must now explore newer market segment for their sustained growth and success. Under this backdrop, Nepalese commercial banks must change their policy and must understand that event the people living in the low and middle level of economic pyramid can potentially be lucrative market.

Bhandari (2007), in his article, **"***Etiology and strategy of loan Repayment*", has concluded that lending agencies should adopt several strategies for achieving their target of credit payment. However, before enforcing coercive action against entrepreneur and the enterprise, the banks and the lending agencies should follow a series of liberal strategies for recovering theirs loans.

2.2.3 Review of Thesis

Gautam (2002), entitled with "*Lending Practices and Procedures of Nepal Bangladesh Bank Limited*" with following objectives;

i. To determine impact of deposit in liquidity and its effect on lending practices.
ii. To know the volume of contribution made by the NBBL in lending.
iii. To evaluate the branch banking and its performance.
iv. To examine lending efficiency and its contribution in profit.

From the study, he has concluded the following findings;

i. The bank has more focus on secured loan that means it has provide more loan to government enterprises than private sector.
ii. The bank has limited its operation in urban area.
iii. The bank has focused more on long term lending than that of short term lending and more loan provide to service sector than productive sector.
iv. The ROE and EPS is satisfactory of NBBL.
v. The loan portfolio of bank is not good that means they are not concerned when portfolio made not well managed.

Joshi (2003), conducted a study on "*Financial Analysis of NIBL*" with the main objective of:

i. To analyze the deposit trend of NIBL.
ii. To examine the condition of loan loss provision of NIBL and its impact on profitability.
iii. To analyze the financial performance of bank.
iv. To provide suitable suggestions based on the finding of this study.

The major findings of the study are:

i. The deposit has been increasing gradually during the study period. However the rate of increase was comparatively low in the year 1997/98 than in the year 2000/01.

ii. The total investment of the bank has been increasing over the years, which is mainly due to bank strategy of safe lending.
iii. The loan loss provision has been increasing due to increasing trend in loan and advances.
iv. The bank provides more risky lending. They give less focus on secured loan like housing loan, mortgage loan etc. and bank has followed all the required rules for providing services to its customers mainly on loan process.
v. The financial performance of NIBL is only satisfactory.

Shrestha (2004), on the topic "*A Study on Non-Performing Loans and Loan Loss Provisioning of Commercial banks*" with the following objective;

i. To find out the proportion of non-performing loan in the selected commercial banks.
ii. To find out the factors lending to accumulation of non-performing loan in the commercial banks.
iii. To study and analyze the guidelines and provisions pertaining to loan classification and loan loss provisioning.
iv. To find out the relationship between loan and loss provision in the selected commercial banks.
v. To study the impact of loan loss provision on the profitability of the commercial banks.

The major findings of the study are:

i. NBL has significantly higher proportion of the non-performing loan in the total loans portfolio than NABIL and SCBNL and this ratio also shows increasing trend, which exhibits the critical condition of the bank.
ii. The ratio of returns on loans and advance ratio revealed that NBL seems to be failure to earn return on loans and advances.
iii. The SCBNL has higher proportion if the investment on risk free assets than others due to its risk averse attitude of management and its loan and advances to total assets ratio is lower than other commercial banks.
iv. SCBNL has maintained adequate level of provision against non-performing loan whereas NABIL was founded to be comparatively lower.

v. The loans and advances to total deposit ratio of NBL, NABIL and SCBNL during the study period was found to be 57.63%, 56.35% and 35.94% respectively indicating SCBNL has the higher consistent and variability as comparison to other two banks. NABIL has moderate level of consistent and variability.

Kasaju (2008), conducted a study on "*Lending Practices: A Study on NABIL, SCBNL and HBL*" with objective of,

i. To determine the liquidity position, e impact of deposit in liquidity and its effect on lending practices.
ii. To measure the banks' lending strength.
iii. To analyze the portfolio behavior of lending and measuring the ratio and volume loans and advances made in agriculture, priority and productive sector.
iv. To measure the lending performances in quality, efficiency and its contribution in total income.

The study was conducted on the basis of secondary data. The research findings of the study are;

i. The measurement of liquidity has revealed that the mean current ratio of all three banks is not widely varied. All of them are capable in discharging their current liability by current assets.
ii. The measurement of lending strength in relative terms has revealed that the total liquidity to total assets of SCBNL has the highest ratio.
iii. SCBNL's tendency to invest in government securities has resulted with the lowest ratio of loans and advances to total assets ratio whereas NABIL has highest due to steady and high volume of loans and advances throughout the years.
iv. The loan and advances and investment to deposits ratio has shown that NABIL has deployed the highest proportion of its total deposits in earning activities. This is indicative of that in fund mobilizing activities NABIL is significantly better.
v. The lending in commercial purpose is highest in case of NABIL and least in case of SCBNL. SCBNL has highest contribution in service sector lending. It has contributed 25.47% of its total credit in general use and social purpose.
vi. The performance of SCBNL is significantly better than other two banks in case of profitability. EPS is highest in case of SCBNL.

Wagle (2009)**,** on "*A study on credit management of Finance companies in Nepal*" aims following objectives;

i. To analyze the lending portfolio of National Finance Company Ltd. and Union Finance Company Ltd.
ii. To determine the impact of deposit in liquidity and its effect on lending practices of National Finance Company Ltd. and Union Finance Company Ltd.
iii. To evaluate the credit management of National Finance Company Ltd. and Union Finance Company Ltd.
iv. To Provide suggestion recommendations on the basis of major finding of the study.

The major findings of the study are as follows;

i. UFCL invested more option of cash and bank balance of current assets on government securities than NFCL.
ii. The average of cash and bank balance to current ratio of NFCL is higher than UFCL.
iii. The ratio of loan and advances to total deposit ratio of NFCL is slightly greater than of UFCL.
iv. Loan and advances to total assets ratio of NFCL is in fluctuating trend however NFCL seems successful in managing and utilizing the available resources.
v. UFCL seems to weak in increasing total investment in comparison to NFCL.
vi. The trend of return on loan and advances ratio of NFCL is highly increasing trend than that of UFCL.

Maharjan (2010), conducted a study on "*Managing Core Risk in Banking: Credit Risk Management*" with the main objective of:

i. To analyze the credit risk level in the banks.
ii. To test credit loss provision kept by the bank in relation to total credit.
iii. To evaluate the better policy and procedural guidelines that the bank should follow to lessen the credit risk.
iv. To collect the opinion for effective credit management

From the study, she has concluded the following findings,

i. The credit risk in BOK bank is higher than in NIC, as a result the BOK has to keep credit loss provision higher than NIC in respect to total credit.
ii. NIC bank has regularly written of the credit and interest suspense, while such event is irregular in BOK.
iii. BOK has been more dependent in single borrower than NIC. The average maximum exposure to single borrower to total credit of BOK is 2.81% and that of NIC is 2.33%.
iv. The pace of decrease in doubtful credit will be highest than others in forthcoming fiscal years in BOK, while such pace of decrease will be highest in credit loss of NIC.
v. The preponderance of non-performing credit in total credit amount is in decreasing trend in both the banks.

The review of above relevant literature has contributed to enhance fundamental understanding and knowledge, which is required to make this study meaningful and purposive. There has been lots of article published related to investment policy, loan and advances of commercial banks. There are various researches conducted on investment analysis and policy of commercial banks, impact and implementation of NRB guidelines in commercial banks but there are a few research conducted on credit practices of commercial banks. However, no one has done on "A comparative study on credit management of commercial banks in Nepal". Therefore, the researcher attempts to study in this area with a comparative study of credit management of selected commercial banks will be the first study between the banks in the subject matter.

2.3 Research Gap

The purpose of this research is to development some expertise in one's area, to see what new contribution can be made and to receive some ideas, knowledge and suggestions in relation to credit management of selected commercial banks (i.e.; Nabil Bank Ltd. and Himalayan Bank Ltd.). Thus, the previous studies cannot be ignored because they provide the foundation to the present study. In other words, there has to be continuity in research. This continuity in research is ensured by linking the present study with the past research studies. Here, it is clear that the new research cannot be found on that

exact topic, i.e.; a comparative study on credit management of commercial banks in Nepal. Therefore, to fulfill this gap, this research is selected. To complete this research work, many books, journals, articles and various published and unpublished dissertation are followed as guideline to make the research easier and smooth. In this regard, here we are going to analyze the different procedure of credit management, which is considered only on Nabil Bank Limited and Himalayan Bank Ltd. Nepal. Our main research problem is to analyze whether these two commercial banks have right level of credit efficiency as well as are able to manage its credit effectively or not. To achieve this main objective, various financial and statistical tools are used. Similarly, trend analysis of investment and profit are reviewed to make this research complete. Therefore, this study is useful to the concern bank as well as different persons, such as shareholders, investors, policy makers, stockbrokers, state of government etc.

CHAPTER – III
RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. It is study of various steps that is generally adopted by a researcher, studying his research problem among with the logic behind them. "Research is the process of systematic and in-depth collection, presentation and interpretation or relevant detail or data".

In other word, research methodology is a systemize way to solve the research problem. The prime objective of this study is compare, evaluate and assess the credit performance of selected commercial bank i.e. NABIL and HBL. This chapter contains the methods that make convenience for comparison of the performance made so far by these banks by analyzing the strength and weakness of the financial performance of these two sample banks.

"Research methodology refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objectives in view" *(Kothari; 1994:19).* A Research methodology helps us to find out accuracy, validity and suitability. The justification on the present study cannot be obtained without help of proper research methodology. For the purpose of achieving the objectives of study, the applied methodology will be used. The research methodology used in the present study is briefly mentioned below.

3.2 Research Design

A research design is the arrangement of condition for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. For the analysis of credit management of selected joint venture banks, analytical as well as descriptive designs applied to achieve the objective of the research.

Thus, a research design is a plan for the collection and analysis of data. It presents a series of guideposts for the researcher to progress in the right direction in order to

achieve the goal. The design may be a specific presentation of the various steps in the problems, formulation of hypothesis, conceptual clarity, methodology, survey of literature and documentation, bibliography, data collection, testing of the hypothesis, interpretation, presentation and report writing.

3.3 Sources of Data

The researcher used two types of data collection techniques. One is primary data collection and other is secondary data collection. This study is mainly based on secondary data. Secondary data are those collected by the researcher on the concerned topic, which are not original in nature or are originally collected for some other purpose. The main sources of secondary data were: statistical publication of Nepal Rastra Bank, websites, annual reports of NABIL and HBL, different journals, business magazines, published and unpublished related documents and reports for Library of Shanker Dev Campus, Central Library of T.U., Library of Nepal Rastra Bank and Nepal Stock Exchange, previous studies and reports and related thesis etc.

3.4 Populations and Sampling

The sampling allows the researches more time to make an intensive study of a research problem. The thirty-one commercial banks shall constitute the population of data and among them two banks are selected. Among the various commercial banks in the banking industry, Himalayan Bank Limited and Nabil Bank Limited is selected for the study.

3.5 Profile of Sample Banks

3.5.1 Himalayan Bank Limited (HBL)

Himalayan Bank Limited (HBL) was incorporated in 1992 by few distinguished business personalities of Nepal in partnership with Employees Provident Fund and Habib Bank Limited, one of the largest commercial bank of Pakistan. Banking operation commenced from January 1993. It is the first commercial bank of Nepal whose maximum shares are held by the Nepalese private sector. Besides commercial banking services, the bank also offers industrial and merchant banking services.

The bank has thirteen branches in Kathmandu valley and twenty-three other branches outside Kathmandu valley. It has card centre at Kathmandu valley as well. The bank also operates counter premises of Royal Palace. The bank will be aggressively opening new branches at the different parts of the kingdom to serve its customers better.

Himalayan Bank Limited has always been committed to providing a quality service to its valued customers, with a personal touch. All customers are treated with utmost courtesy as valued clients. The bank, wherever possible, offers tailor made facilities to its clients, based on the unique needs and requirements of different clients. To further extend the reliable and efficient services to its valued customers, Himalayan Bank Limited has adopted the latest banking technology. This has not only helped the bank to constantly improve its service level but has also prepared the bank for future adaptation to new technology. The bank already offers unique services such as SMS banking and Internet Banking to customers, Card Business with JBL (Japan) and will be introducing more services like these in the near future.

Table 1.1

Capital Structure of Himalayan Bank Limited

Capital as at 2011	Amount in Rs. '000'
Authorized Capital	3,000,000
Issued Capital	2,000,000
Paid up capital	2,000,000

3.5.2 Nabil Bank Limited (NABIL)

Nabil Bank Limited (NABIL), the first foreign joint venture commercial bank of Nepal, started operations in July 1984. Nabil Bank Limited was incorporated with the objectives of extending international standard modern banking services to various sectors of the society. Pursuing its objectives, the bank provides a full range of commercial banking services through its 37 points of representation around and across the kingdom and over 170 reputed correspondent banks across the globe. The bank has 22 branches in Kathmandu valley and 26 branches outside the Kathmandu valley in Nepal and looking for opening new branches aggressively in different part of country to serve its customer better.

NABIL as a pioneer in introducing many innovation products and marketing concepts in the domestic banking sector represents a milestone in the banking history of Nepal as it started an era of modern banking with customer satisfaction measured as a focal objective while doing business.

Highly qualified and experienced team of NABIL bank manages day-to-day operations and risk management. Bank is fully equipped with modern technology, which includes ATMs, credit cards, state-of-art, world-renowned software from Infosys Technologies System, Bangalore, India, Internet banking system and Tele-banking system. Nabil Bank Limited is providing full-fledged commercial banking services to its clients.

From its inception period in 1984 as the first joint venture bank, to commence operations in the kingdom of Nepal, the bank have been a lender in terms of bringing the very best international standard banking practices, products and services to the kingdom. Today, mission of the bank is to be the "Bank of 1st Choice" to all of its stakeholders and customers. For the customers, it want to be the first choice in meeting all financial requirements, for shareholders, it want to be the investment of choice, for regulators, it want to be an example of model bank, it want to be an outstanding corporate citizen in all the communities, it work in finally, it want to be the first choice as an employer with whom to build a career. To achieve this mission, it has a core set values by which we live. The values are C.R.I.S.P. i.e. Customers Focused, Result Oriented, Innovative, Synergistic and Professional. They are committed to live our values every day in everything we do, for it is, these values that make us uniquely NABIL bank.

NABIL bank is a full services bank providing an entire range of products and services, starting with deposit accounts in local and foreign currency, Visa and Master-Card denominated in rupees and dollars, Visa Electron Debit Cards, Personal Lending Products for Auto, Home and Personal loans, Trade Finance Products, Treasury Services and Corporate Financing, Min aim is to be able to meet customer's entire gamut of financial requirements that is why it prides in being " Your Bank at Your Service".

Table 1.2

Capital Structure of Nabil Bank Limited

Capital as at 2011	Amount in Rs. '000'
Authorized Capital	2,100,000
Issued Capital	2,029,469
Paid up capital	2,029,469

3.6 Methods of Data Analysis

Mainly financial methods are applied for the purpose of this study. Appropriate statistical tools are also used. Among them correlation analysis regarded as major one is used for this research.

To make the study more specific and reliable, the researcher uses two types of tool for analysis:

i) Financial Tools and ii) Statistical Tools.

3.6.1 Financial Tools

For the sake of analysis, various financial tools were used. The basic tools used were ratio analysis. Besides it, total deposit, total investment and total income analysis have been used.

Ratio Analysis

Ratio analysis is a powerful and the most widely used tool of financial analysis. A ratio defined as "The indicated quotient of two mathematical expression" and as the relationship between two or more things *(Webster's New Collection Dictionary; 1975: 958).*

A ratio is a figure or a percentage representing the comparison of one-dollar amount with some other dollar amount as a base *(Roy; 1974: 97).* Ratio analysis is a widely used tool of financial analysis. 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. In financial analysis a

ratio is used as an index or yardstick for evaluating the financial position and performance of a firm. Ratio helps to summarize the large quantities of financial data and to make qualitative judgment about the firm's financial performance *(Pandey; 1979: 97).*

A large number of ratios can be generated from the components of profit and loss account and balance sheet. They are sound reasons for selecting different kinds of ratios for different types of situations. For this study, ratios are categorized into the following major headings:

A. Liquidity Ratio

Liquidity refers to the ability of a firm to meet its short-term or current obligations. So liquidity ratios are used to measure the ability of a firm to meet its short-term obligations and from them the present cash solvency as well as ability to remain solvent in the event of adversities of the same can be examined *(Van Horne; 1999: 693).*

Inadequate liquidity can lead to unexpected cash short falls that must be covered at inordinate costs, thus reducing profitability. In the worst case, 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 *(Scott; 1992: 140).*

To find out the ability of bank to meet their short-term obligations, which are likely to mature in the short period, these ratios are calculated. The following ratios are developed under the liquidity ratios to identify the liquidity position.

i. Current Ratio

Current ratio indicates the ability of bank to meet its current obligation. It measures the relationship between current assets and current liabilities. 2:1 ratio is the standard ratio, which is expressed as:

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

Current assets are those assets which can be converted into cash within a year and so it includes cash and bank balance, investment in treasury bills, bills purchased and discounted, customer acceptances liabilities, prepaid expenses, bills for collection, likewise current liabilities denotes current account deposits, saving account deposits, margin deposits, bills payable, call deposits, bank overdraft, interbank reconciliation account, provisions, customer's acceptance liabilities etc.

ii. Cash & Bank Balance to Total Deposit Ratio

Cash & bank balance are the most liquid current assets. This ratio measures the percentage of most liquid fund with the bank to make immediate payment to the depositors. Both higher and lower ratios are not desirable. The reason is that if bank maintains higher ratio of cash, it has to pay interest on deposits and some earnings may be lost. In contrast, if a bank maintains low ratio of cash, may fail to make payment for the demands of depositors. So, sufficient and appropriate cash reserve should be maintained properly. 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. It can be calculated by dividing 'cash & bank balance' by deposits. This ratio can be calculated using the following formula.

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

iii. Cash & Bank Balance to Current Deposit Ratio

Cash & bank balance are the most liquid current assets. This ratio measures the percentage of most liquid fund with the current deposit. Higher ratio indicates the bank's sound ability to meet the daily cash requirement of their customer's deposit. If bank maintain low ratio, bank may not able to make the payment of against cheque. So bank has to maintain cash & bank balance to current ratio properly. This ratio is computed to disclose the soundness of company to pay total calls made of current deposits. It can be expressed as:

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

iv. Cash & Bank Balance to Interest Sensitive Deposit Ratio

Saving deposit is deposited by public in a bank with an objective of increasing their wealth, interest rate plays important role in the flow 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 & bank balance to interest sensitive deposits measure the bank ability to meet its sudden outflow of interest sensitive deposits due to the change in interest rate.

$$\text{Cash \& Bank Balance to Interest Sensitive Deposit Ratio} = \frac{\text{Cash \& Bank Balance}}{\text{Saving Deposit}}$$

B. Activity/Efficiency Ratio

It is also known as turnover or efficiency ratio or assets management ratio; measures how efficiently the firm employs the assets. Turnover means; how many numbers of times the assets flow through a firm's operations and into sales *(Kulkarni; 1994: 138).* 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 examined under this heading.

i. Loan & Advances to Total Deposit Ratio

Commercial banks utilize the outsider's fund for profit generation purpose. Loan & advances to total deposit ratio shows whether the banks are successful to utilize the outsiders funds (i.e. total deposits) for the profit generating purpose as loan & 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.

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

Loan and advances includes short-term loan and advances, overdrafts, cash credit, local and foreign bills purchased and discounted.

ii. Loan & Advances to Total Assets Ratio

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

It is calculated as:

$$Loan\ \&\ Advances\ to\ Total\ Assets\ Ratio\ = \frac{\text{Loan \& Advances}}{\text{Total Assets}}$$

iii. Total Investment to Total Deposit Ratio

A commercial bank may mobilize its deposit by investing its fund in different securities issued by government and other financial and non-financial companies. Effort has been made to measure the extent to which the banks are successful in mobilizing the total deposit on investment. A high ratio is the indicator of high success to mobilize the banking fund as investment and vice-versa.

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

C. Leverage ratio

The use of finance is refers by financial leverage. When a firm borrows money, it promises to make series of fixed payments, which create financial leverage *(Brealy and Myers; 1991: 677).* These ratios are also called solvency ratio or capital structure ratio. These ratios indicate mix of funds provided by owners and lenders. As a general rule, there should be an appropriate mix of debt and owner's equity in financing the firm's assets. To judge the long-term financial position of the firm, leverage ratios are calculated. This ratio highlights the long-term financial health, debt servicing capacity and strength and weaknesses of the firm. Following ratios are included under leverage ratios.

i. Debt to Equity Ratio

Debt to equity ratio measures the relative proportion of outsiders and owner's funds employed in the total capitalization. Here, debt includes the amount of fixed deposits and credits of the bank and equity includes paid up capital, reserve and surplus and undistributed profit. The formula used to determine the ratio is:

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

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. It is computed as:

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

D. Profitability Ratios

Profit is the difference between revenues and expenses over a period of time. A company should earn profit to survive and to grow over a long period of time. So profits are essential, but profit earning is not the ultimate aim of company and it should never be earned at the cost of employees, customer and society.

Profitability ratios are the indicators of degree of managerial success in achieving firm's overall goals *(Pradhan; 1996: 41).* It shows the overall efficiency of the business concern. The following ratios are calculated under the profitability ratios:

i. Interest Income to Interest Expenses Ratio

Interest income to interest expenses ratio measure the gap between interest rates offered and interest rate charged. NRB has restricted the gap between the interest taken in loan, advances and interest offered in deposits. The credit creation power of commercial banks has high impact on this ratio.

$$\text{Interest Income to Interest Expenses Ratio} = \frac{\text{Interest Income}}{\text{Interest Expenses}}$$

ii. Return on Loan & Advances Ratio

This ratio measures the earning capacity of the commercial banks through its fund mobilization as loan & advances. Higher ratio indicates greater success to mobilize fund as loan & advances and vice versa. Mostly, loan & advances include cash, credit, overdraft, bills purchased and discounted.

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

iii. Net Profit/Loss to Total Assets Ratio

The ratio is useful to measure how well management uses all the assets in the business to generate an operating surplus. Higher ratio indicates the higher efficiency in utilization of total assets and vice-versa. The ratio is low due to low profit. In other words, it is low utilization of bank assets and over use of higher interest bearing amount of debt and vice-versa. In this study, net profit/loss to total assets ratio is examined to measure the profitability of all the financial resources in bank-assets and is calculated by applying the following formula:

$$\text{Net Profit/Loss to Total Assets Ratio} = \frac{\text{Net Profit}}{\text{Total Assets}}$$

iv. Interest Income to Total Loan & Advances Ratio

It tells the income as interest from total loan & advances. It is useful to know the fact that whether the loan has given good return or not. We can increase interest income by taking good issuing and recovery credit policy. High return shows the soundness of credit policy. It is calculated by using the following formula:

$$\text{Interest Income to Total Loan \& Advances Ratio} = \frac{\text{Interest Income}}{\text{Total loan \& Advances}}$$

v. Earnings per Share (EPS)

EPS is one of the most widely quoted statistics when there is a discussion of a company's performance or share value. It is the profit after tax figure that is divided by the number of common shares to calculate the value of earnings per share. This figure tells us what profit the common shareholders for every share held have earned. A company can decide whether to increase or reduce the number of shares on issue. This decision will automatically affect the earnings per share. The profits available to the ordinary shareholders are represented by net profit after taxes and preference dividend. Symbolic expression of EPS is given below.

$$\text{EPS} = \frac{\text{Net Profit After Tax}}{\text{Number of Common Stock Outstanding}}$$

E. Lending Efficiency Ratio

The efficiency of a firm depends to a large extent on the efficiency with which its assets are managed and utilized. This ratio is concerned with measuring the efficiency of bank. This ratio also shows the utility of available fund. The following are the various type of lending efficiency ratios:

i. Loan Loss Provision to Total Loan & Advances Ratio

Loan loss provision to total loan & 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 provisions decrease in profit result to decrease in dividends but it's 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 bank's prosperity resulting increasing profits for long term. The low ratio indicates the good quality of assets in total volume of loan & advances. High ratio indicates more risky assets in total volume of loan & advances.

$$\text{Loan Loss Provision to Total Loan \& Advances} = \frac{\text{Loan Loss Provision}}{\text{Total Loan Advances}}$$

3.6.2 Statistical Tools

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

i. Arithmetic Mean ($\overline{X}$)

Averages are statistical constants, which enable us to comprehend in a single effort of the whole *(Gupta, 2000: 357).* It represents the entire data by a single value. It provides the gist and gives the bird's eye view of the huge mass of unwieldy numerical data. It is calculated as:

$$\overline{X} = \frac{\Sigma X}{N}$$

Where,

$\overline{X}$ = Arithmetic mean

N = Number of observations

$\sum x$ = Sum of observations

ii. Standard Deviation (S.D.)

The standard deviation is the square root of mean squared deviations from the arithmetic mean and is denoted by S.D. or σ *(Shrestha; 1991: 43).* It is used as absolute measure of dispersion or variability. It is calculated as:

$$\sigma = \sqrt{\frac{\sum (x - \overline{x})^2}{N}}$$

Where,

σ = Standard deviation

iii. Coefficient of Variation (C.V.)

The co-efficient of variation (C.V.) is the relative measure based on the standard deviation and is defined as the ratio of the standard deviation to the mean expressed in percentage *(Shrestha; 1991: 45).* It is independent of units. Hence, it is a suitable measure for comparing variability of two series with same or different units. A series with smaller C.V. is said to be less variable or more consistent or more homogeneous or more uniform or more stable than the others and vice versa. It is calculated as:

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

Where,

σ = Standard Deviation

$\bar{x}$ = Mean

iv. Correlation Coefficient (r)

Correlation coefficient is the important tool to analyze the degree of relationship between two or more variables. It is used to describe the degree to which one variable in the linearly related to other variables. It refers the closeness of the relationship between two or more variables. In other words, it is an analysis of covariance between two or more variables.

It is the statistical measure of the relationship, if any, between series of numbers representing data of any kind, from returns to test scores. If two series move in the same direction, they are positively correlated; if the series move in opposite direction, they are negatively correlated.

The degree of correlation is measured by the correlation coefficient, which ranges from "+1" for perfectly correlated series to "-1" for perfectly negatively corrected series. Symbolically, correlation coefficient can be expressed as follows:

$$\text{Correlation Coefficient (r)} = \frac{n\sum xy - \sum x \sum y}{\sqrt{\left[\left\{n\sum x^2 - \left(\sum x\right)^2\right\}\left\{n\sum y^2 - \left(\sum y\right)^2\right\}\right]}}$$

Here, the researcher has been calculating the correlation coefficient between total deposits and total loan & advances as well as total loan & advances and net profit of Himalayan Bank Limited and Nabil Bank Limited to know the relationship of these variables. This relationship result helps the management for policy formulation in the coming days.

v. Probable Error (P. E.)

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:

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

Where,

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.

vi) Test of Hypothesis

The test of hypothesis is a process of testing of significance regarding the parameter of the population on the basis of the sample drawn from the population. The computed value of the statistics may differ from the hypothetical value of the parameter due to sampling fluctuations. Hence the difference are small, we consider that it has arisen due to sampling fluctuations. Hence the difference is considered to be insignificant and the hypothesis is accepted. If difference is large we consider that it has not arisen due to sampling fluctuation but it is due to some other reasons. Hence the difference is

considered to be significant and the hypothesis is rejected. The processes of test of hypothesis are as follows;

- Set up a hypothesis
- Set up a suitable significance level.
- Setting test criteria.
- Doing computation.
- Making decisions.

To test the significance of different ratios between NABIL and HBL, the researcher uses small sample‘t’ test. ‘t’ values were calculated and compared with table value of ‘t’ with (n1+n2-2) degree of freedom. The following hypothesis is tested in this study;

- H_0: There is no significance difference in loan and advance to total assets ratio between NABIL and HBL.

H_1: There is significance difference in loan and advance to total assets ratio between NABIL and HBL.

- H_0: There is no significance difference in interest income to total loan and advance ratio between NABIL and HBL.

H_1: There is significance difference in interest income to total loan and advance ratio between NABIL and HBL.

- H_0: There is no significance difference in loan loss provision to total loan and advance ratio between NABIL and HBL.

H_1: There is significance difference in loan loss provision to total loan and advance ratio between NABIL and HBL.

The formula for‘t’ test for two independent samples:

t_{cal} =

Where

S^2 =

S^2 is an unbiased estimate of and it follows 't' distribution with (n1+n2-2) degree of freedom (d.f.).

(X- $\overline{X}$ **)** and **(Y-** **=** Deviation of Variables

X and Y = Arithmetic Means Variables

$(X-\overline{X})^2$ and (Y- = Variance of Variables

Decision: If 't' values is greater than tabulated value the null hypothesis is rejected and if 't' value is less than tabulated value the null hypothesis is accepted.

3.7 Limitations of the Study

3. 7.1 Limitations of Ratio Analysis

Ratio analysis is suffered from some inherent limitations that are direct inherited from financial statements. Some of the most common weakness of ratio analysis is as follows:

i. Financial statement records past transactions. They are, thus an index of what happened in the past. They do not show the current position of the business. Evidently ratio analysis is also primarily concerned with analyzing the past, which may or may not be relevant today. It is thus a sort of 'POST-MORTEM' analysis rather than a guide for decision-making.
ii. In the context of persistent price level changes, intra firm trends analysis losses much of its operational significance.
iii. The differences in the definitions of items in the balance sheet and the income statement make the interpretation of ratios difficult.
iv. Sometimes ratio analysis may suffer from what is known as fallacy of misplaced concreteness *(Singh; 1993:101).*

Although, various limitations of ratio analysis and doubt may arise about the valid measure of the financial performance but they are used widely to measure the financial performance of the firm.

3.7.2 Limitation of the Methodology

To carry out the research work, various financial and statistical tools are used. Similarly, descriptive as well as analytical analysis of credit management has been carried out however these tools and techniques have some limitations.

or research purpose, the six-year data are used in analyzing the financial and statistical tools, which may mislead the research work, as it is not sufficient to make projections for future regarding the performance of the bank. As far as the financial tools concerned, only ratio and trend analysis has been carried out to know the performance of the bank however there are various financial tools to measure the financial performance of the bank. With regard to statistical tools, the researcher carried out different statistical tools to make the result more concise but it may not be the valid measurement. Similarly, the instrument used for primary data analysis is not a valid measurement. Although, there were certain limitations during the research work, it is not so crucial that it can weaken the basic findings of the study.

CHAPTER - IV

DATA PRESENTATION AND ANALYSIS

In this chapter, the data are collected from various sources have been presented and analyzed to measure the various dimensions of problems of the study and major findings of the study are presented systematically.

4.1 Measuring Liquidity Position of the Bank

A commercial bank must maintain satisfactory liquidity position to satisfy the credit needs of community, to meet demands for deposits withdrawal, pay maturity obligation in time, convert non-cash assets into cash to satisfy immediate needs without loss of the bank, and without consequent impact on long run profitability of the bank. To measure the liquidity position of bank, following measures of liquidity ratios have been calculated:

4.1.1 Current Ratio

Current ratio indicates the ability of bank to meet its current obligation. It measures the relationship between current assets and current liabilities.

Table 4.1

Current Assets and Current Liabilities of NABIL & HBL

NABIL BANK				**HBL**		
Fiscal Year	**Current Assets**	**Current Liabilities**	**Ratios (%)**	**Current Assets**	**Current Liabilities**	**Ratios (%)**
2005/06	15287684	20068292	76.18	17365192	27307464	63.59
2006/07	17509138	24817791	70.55	20465362	30866629	66.30
2007/08	25988555	33989619	76.46	21464193	32310844	66.43
2008/09	31017734	39934257	77.67	29012476	34967114	82.97
2009/10	36787113	47345780	77.69	32155957	38016833	84.58
2010/11	42923159	52415515	81.89	35265680	41299125	85.39
Average			76.74		Average	74.88
S.D.			3.66		S.D	9.51
C.V.			4.77		C.V	12.70

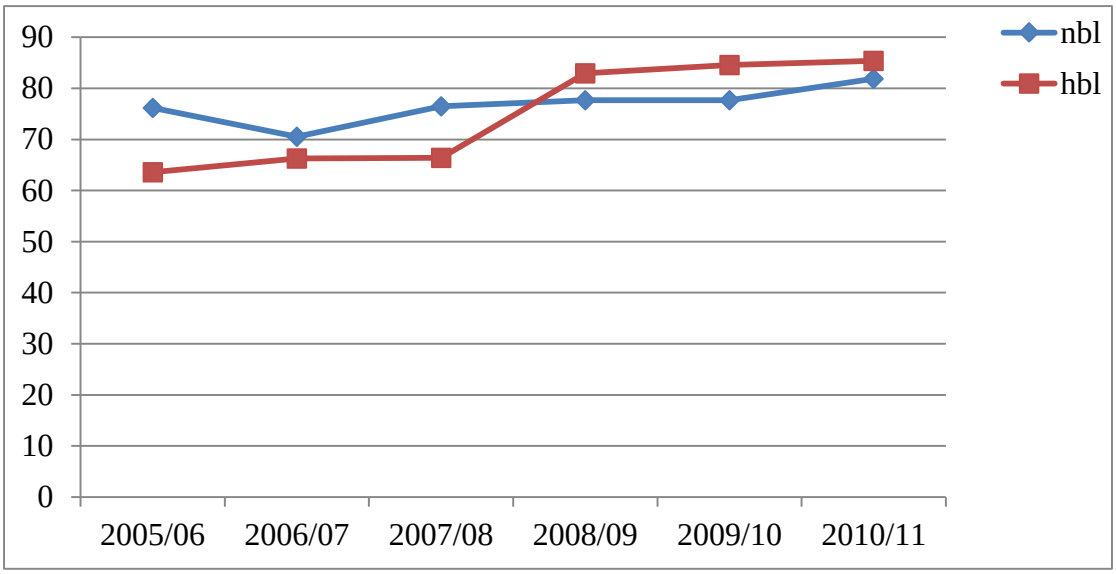
Source: Annual Report of NABIL Bank & HBL Till 2011

Table 4.1 shows the current assets to current liabilities ratio, i.e. current ratio of NABIL from the fiscal year 2005/06 to 2010/11 of six years study period. The ratios are 76.18%, 70.18%, 76.46%, 77.67%, 77.69 and 81.89 in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/2010 and 2010/11 respectively. Likewise, average ratio of six years study period is 76.74%. As well, standard deviation is 3.66 and coefficient of variation is 4.77%.

This Table further shows the current ratio of HBL during the six years of study period from fiscal year 2005/06 to 2010/11. The ratios are 63.59%, 66.30%, 66.43% ,82.97, 84.587%, and 85.39% in the fiscal 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the average ratio of six years study period is 74.88%. Likewise, standard deviation is 9.51 and coefficient of variation is 12.70 %. Current assets and current liabilities of NABIL & HBL can also be presented by bar diagram as follows :

Figure 4.1

Current Assets and Current Liabilities of NABIL & HBL



Comparison

Table 4.1 shows the current ratios of NABIL and HBL. From the table what we can see is current assets and current liabilities of HBL are greater than NABIL for first two fiscal years and after that year it goes just vice versa. Current ratio of NABIL gets fluctuate. It goes on decreasing to second year and it increases thereafter. However

current ratio of HBL gets increase up to six year study period. During the study period, NABIL kept a higher mean ratio of current assets to current liabiliies ratio than HBL. But, the ratios of NABIL have less variation and more consistency that of HBL because of low standard deviation and less coefficient of variation.Though the optimal standard of current ratio should be 2:1, the conventional measure of liabilities is not applicable in banking sector. Banking business holds big portion of deposits as a core deposit and this deposit remainsall the time throughout the years. This core deposit forms the fixed liability on the bank though it is current in nature. So the ratio maintained by commercial banks at the level of around 1:1 can be regarded as good and sufficient to meet the normal contingencies. Hence, the above current ratio analysis of the banks over the six years period indicates that the banks have satisfactory liquidity position.

4.1.2 Cash and Bank Balance to Total Deposit Ratio

This ratio shows the ability of banks in immediate funds to cover their deposits. Higher ratio shows higher liquidity position and ability to cover the deposits and vice versa. It can be presented as shown in table 4.2:

Table 4.2

Cash and Bank Balance to Total Deposit Ratio of NABIL & HBL (Rs. in 000)

NABIL				**HBL**		
Fiscal Year	**Cash & Bank Balance**	**Total Deposit**	**Ratios (%)**	**Cash & Bank Balance**	**Total Deposit**	**Ratio**
2005/06	630239	19347399	3.26	1717352	26490852	6.48
2006/07	1399826	23342285	6.00	1757341	30048418	5.85
2007/08	2671141	31915047	8.37	1448143	31842279	4.55
2008/09	3372512	37348256	9.03	3048527	34681345	8.79
2009/10	1400096	46410700	3.02	3866489	37611202	10.28
2010/11	2436549	49696113	4.90	1964651	40920627	4.80
Average			5.76	Average		6.79
S.D.			2.31	S.D		2.09
C.V.			40.10	C.V		30.78

Source: Annual Report of NABIL Bank & HBL Till 2011

Table 4.2 depicts the cash & bank balance to total deposit ratio of NABIL over the six years period from 2005/06 to 2010/11. The ratios are 3.26%, 6.0%, 8.37%, 9.03%, 3.02 and 4.90% in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 5.76% during the six years study period. Likewise, standard deviation is 2.31 and coefficient of variation is 40.10%.

Cash & bank balance and total deposit of NABIL can be shown by following diagram:

This table depicts the cash & bank balance to total deposit ratio of HBL over the six years period from 2005/06 to 2010/11. The ratios are 6.48%, 5.85%, 4.55%, 8.79%. 10.28 and 4.89% in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/2010 and 2010/11 respectively. Similarly, the mean ratio remains at 6.79% during the six years study period. Likewise, the standard deviation is 2.09 and coefficient of variation is 30.78%. Cash & bank balance and total deposit of NABIL & HBL can be shown by following diagram:

Figure 4.2

Cash and Bank Balance and Total Deposit of NABIL & HBL

Comparison

The cash & bank balance to total deposit ratio of NABIL is in increasing trend till to the fiscal year 2008/09 and then it decrease on the last fiscal year 2010/11. However, the cash & bank balance to total deposit ratio of HBL is in decreasing trend till to 2007/08 and after that it started increasing up to current fiscal year 2009/10. Mean ratio of cash and bank balance of HBL is higher than that of NABIL. But, the ratios of NABIL have more variation and less consistency than HBL.

Though the ratios are not consistent, cash & bank balance position of NABIL as well as HBL with respect to deposit is better to serve the customers deposit withdraw demands. Commercial banks have to maintain their cash & bank balance in term of total deposit as directed by NRB time to time. Otherwise they are imposed penalty. A high ratio of invest in to short-term marketable securities, treasury bills etc. insuring enough liquidity, which will help the bank to improve in profitability.

4.1.3 Cash and Bank Balance to Current Deposit Ratio

This ratio shows the percentage of most liquid fund over current deposit of the bank. Higher ratio indicates the bank's sound ability to meet the daily cash requirement of their customer's deposit. Low ratio is also dangerous. If bank maintain low ratio, bank may not able to make the payment against cheques.

Table 4.3

Cash and Bank Balance to Current Deposit Ratio of NABIL & HBL

(Rs. in '000')

NABIL				**HBL**		
Fiscal Year	**Cash & Bank Balance**	**Current Deposit**	**Ratios (%)**	**Cash & Bank Balance**	**Current Deposits**	**Ratio**
2005/06	630239	2910590	21.65	1717352	5028151	34.15
2006/07	1399826	3395240	41.23	1757341	5589580	31.44
2007/08	2671141	5284368	50.55	1448143	4784216	30.27
2008/09	3372512	5480533	61.54	3048527	3218225	94.72
2009/10	1400096	7904619	17.71	3866489	3745624	103.23
2010/11	2436549	5456895	44.65	1964651	3694249	53.18
Average			39.56		Average	57.83
S.D.			15.44		S.D	30.17
C.V.			39.03		C.V	52.17

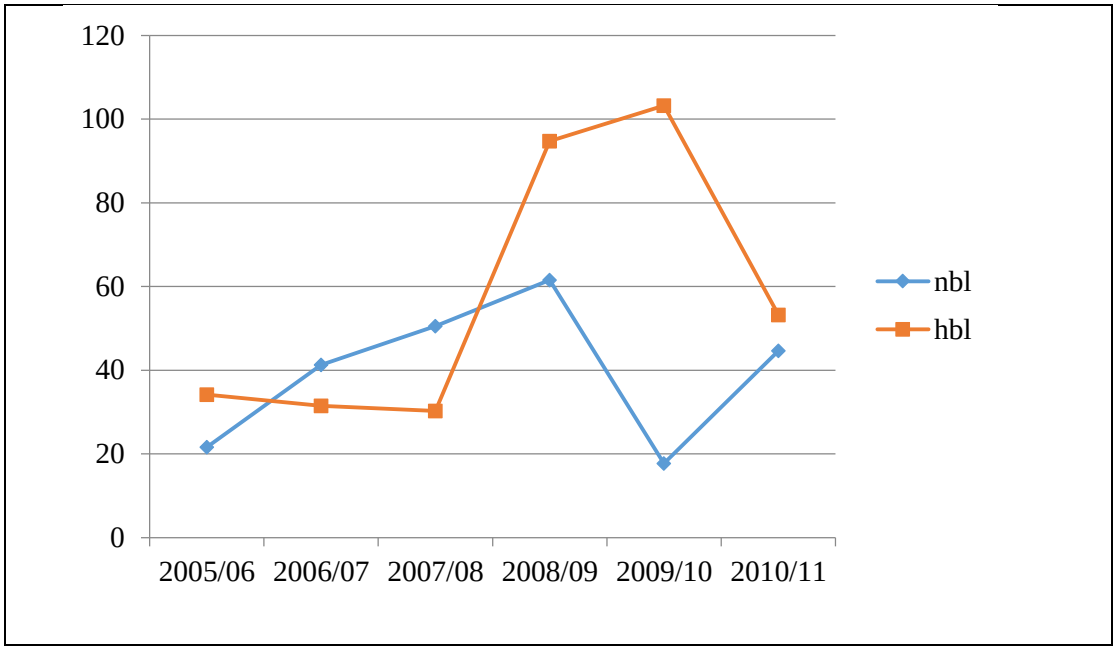
Source: Annual Report of NABIL Bank & HBL Till 2011

Table 4.3 depicts the cash & bank balance to current deposit ratio of NABIL over the six years period from 2005/06 to 2010/11. The ratios are 21.65%,41.23%, 50.55%, 61.54%, 17.71 and 44.65% in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, mean ratio remains at 39.55% during the six years study period. Likewise, standard deviation is 15.44 and coefficient of variation is 39.03%.

This Table further represents the cash & bank balance to current deposit ratio of HBL over the six years period from 2005/06 to 2010/11. The ratios are 34.15%, 31.44%, 30.27%, 94.72%, 103.23% and 53.18 in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, mean ratio remains at 57.83% during the six years study period. Likewise, standard deviation is 30.17 and coefficient of variation is 52.17%. Cash & bank balance and current deposit of NABIL & HBL can be shown by following diagram:

Figure 4.3

Cash and Bank Balance and Current Deposit of NABIL BANK & HBL



Comparison

Cash & bank balance to current deposit ratio of NABIL is in increasing trend till 2008/09 and slightly decreases in fiscal year 2010/11. But, the ratio of HBL is in decreasing trend up to fiscal year 2007/08 and after that it increases up to current fiscal year 2000/10 with aggressive high, this is due to aggressive balance with Rastra Bank. Mean ratio of HBL is highest than that of NABIL over the study period. Likewise, the ratios of HBL have more variation but less consistency than NABIL.

It can be said that HBL has high liquid assets in terms of cash & bank balance to current deposit ratio than NABIL but it does not mean that NABIL has mobilized its more funds in profitable sectors than HBL. It actually means that NABIL can tightly meet its daily requirements to make the payments on customer deposit withdrawals than HBL.

4.1.4 Cash and Bank Balance to Interest Sensitive Deposits Ratio

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

Table 4.4

Cash and Bank Balance to Interest Sensitive Deposits Ratio of NABIL & HBL

(Rs. in '000')

Fiscal Year	NBIL			HBL		
	Cash & Bank Balance	Saving Deposit	Ratios (%)	Cash & Bank Balance	Saving Deposit	Ratio
2005/06	630239	8770760	7.19	1717352	14582855	11.78
2006/07	1399826	10187354	13.74	1757341	15784770	11.13
2007/08	2671141	12159966	21.97	1448143	17972441	8.06
2008/09	3372512	14620407	23.07	3048527	20061048	15.20
2009/10	1400096	13783585	10.16	3866489	16294680	23.72
2010/11	2436549	44239219	5.51	1964651	15994564	12.28
Average			13.60		Average	13.69
S.D.			6.81		S.D	4.95
C.V.			50.07		C.V	36.16

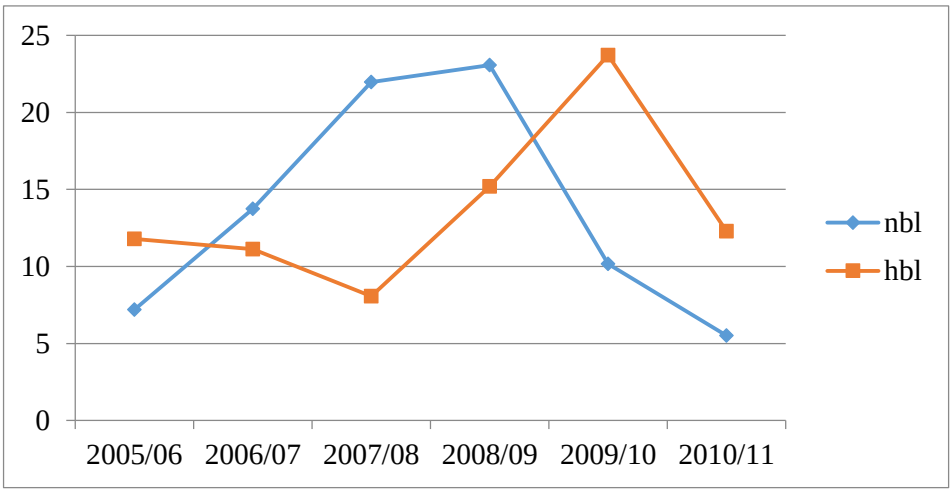
Source: Annual Report of NABIL BANK & HBL Till 2011

Table 4.4 depicts the cash & bank balance to saving deposit ratio of NABIL over the six years period from 2005/06 to 2010/11. The ratios are 7.19%, 13.47%, 21.97%, 23.07%, 10.16% and 5.51 in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11respectively. Similarly, mean ratio remains at 13.60% during the six years study period. Likewise, standard deviation is 6.81 and coefficient of variation is 50.07%.

This Table further represents the cash & bank balance to saving deposit ratio of HBL over the six years period from 2005/06 to 2010/11. The ratios are 11.78%, 11.13%, 8.06%, 15.02%. 23.72% and 2010/11 in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, mean ratio remains at 13.69% during the six years study period. Likewise, standard deviation is 4.95 and coefficient of variation is 36.16%. Cash & bank balance and saving deposit of NABIL & HBL can be shown by following diagram:

Figure 4.4

Cash and Bank Balance and Interest Sensitive Deposits of NABIL & HBL



Comparison

Cash & bank balance to saving deposit ratio of NABIL is in increasing trend up to the fiscal year 2008/09, than gradually decreases in last fiscal year 2010/11. The ratio of HBL is in a decreasing trend up to fiscal year 2007/08 and after that it started is in increasing trend till 2010/11. But, NABIL has less mean ratio than HBL. Similarly, ratios of NABIL have less variation and more consistency than HBL.

From the analysis of overall liquidity ratios of NABIL and HBL, we can say that HBL has high degree of liquid assets, i.e. high liquidity position than NABIL. High liquidity position is not so better because of interest expenses and it caused inverse impact in overall performance.

4.2 Activity/Efficiency Ratio

It is also known as turnover or efficiency ratio or assets management ratio; measures how efficiently the firm employs the assets. Turnover means; how many numbers of times the assets flow through a firm's operations and into sales *(Kulkarni; 1994: 138).* 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 examined under

4.2.1 Loan & Advances to Total Deposit Ratio

This ratio measures to the extent that bank is successful to manage its total deposit on loan & advances for the purpose of income generation or not. A high ratio indicates better on of collected deposit and mobilization of collected deposit and vice-versa. But it should be noted that too high ratio might not be better from liquidity point of view.

Table 4.5

Loan & Advances to Total Deposit Rato of NABIL BANK & HBL(Rs. in '000')

NABIL				**HBL**		
Fiscal Year	**Loan & Advances**	**Total Deposit**	**Ratios (%)**	**Loan & Advances**	**Total Deposit**	**Ratio (%)**
2005/06	12922543	19347399	66.79	14642560	26490852	55.27
2006/07	15545779	23342285	66.60	16997997	30048418	56.57
2007/08	21365053	31915047	66.94	19497520	31842789	61.23
2008/09	27589933	37348256	73.87	24793155	34681345	71.49
2009/10	32268873	47345780	68.16	27980628	37611202	74.39
2011/11	38034098	49696113	76.53	31566977	40920627	77.14
Average			69.82		Average	66.01
S.D.			3.92		S.D	8.67
C.V.			5.61		C.V	13.13

Source: Annual Report of NABL BANK & HBL Till 2011

At first, table 4.5 depicts the loan & advance to total deposit ratio of NABIL over the six years period from 2005/06 to 2010/11. The ratios are 66.79%, 66.60%, 66.94%, 73.87% , 68.16% and 76.53 in the fiscal 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, mean ratio remains at 69.82% during the six years study period. Likewise, standard deviation is 3.92 and coefficient of variation is 5.61%.

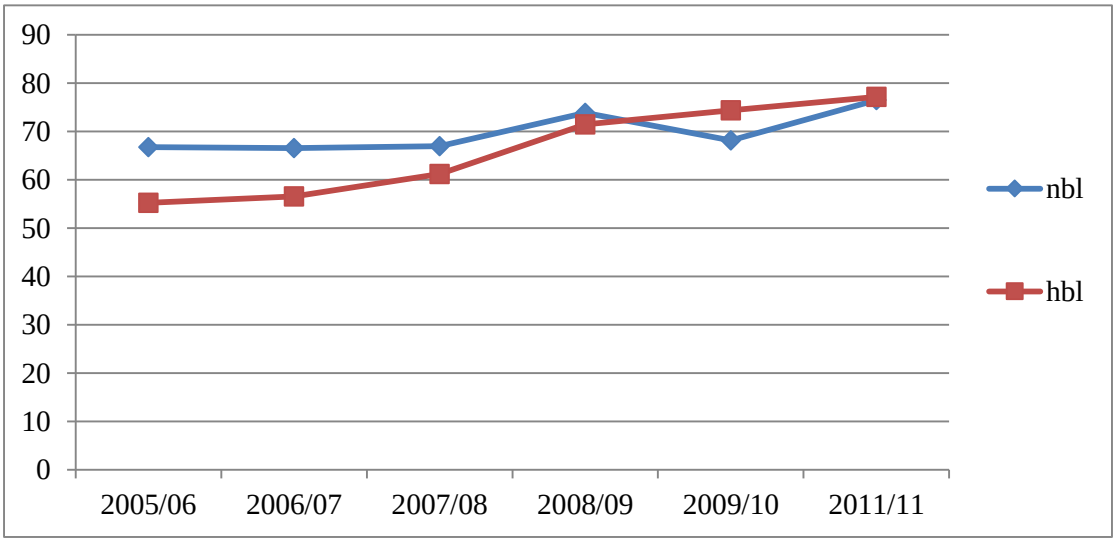
Secondly, table 4.5 depicts the loan & advance to total deposit ratio of HBL over the six years period from 2005/06 to 2010/11. The ratios are 55.27%, 56.57%, 61.23%, 71.49% , 74.39% and 77.14% in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 63.97% during

the six years study period. Likewise, the standard deviation is 8.67 and coefficient of variation is 13.13%.

Loan & advance and total deposit of NABIL & HBL can be shown by following diagram:

Figure 4.5

Loan & Advances and Total Deposit of NABIL & HBL



Comparison

Loan & advances to total deposit ratio of NABIL is in fluctuating trend. The ratio of NABIL is in a decreasing trend till the fiscal year 2007/08 than it increases on next fiscal year i.e. 2008/09 and again it decreases in the fiscal year 2009/10 then increases , whereas the ratio of HBL is in increasing trend in the six year study period. Similarly, NABIL has higher mean ratio than that of HBL during the study period. Likewise, the ratios of HBL have more variation and less consistency than NABIL.

From the analysis, we can say that NABIL is in good form according to deposit mobilization point of view than HBL. It means that NABIL is investing more of its collected fund in high return, with low risk sector than HBL. NABIL has low risk in one unit of return as compare to HBL. As well, lending ratios are very low than collection ratios over the study period. From this point of view, loan & advance to total deposit ratios of the banks are not so better but satisfactory.

4.2.2 Loan & Advances to Total Assets Ratio

Loan & advances of any commercial bank represent the major portion in the volume of total working fund. This ratio measures the volume of loan & advances in the structure of total assets. High degree of this ratio indicates good performance of the bank in mobilizing its funds by way of lending function. However, in its reverse side, low degree of this ratio is repressed enactive of low liquidity ratio.

Granting of loans & advances always carries a certain degree of risk. Thus, this asset of banking business is regarded as risky assets. This ratio measures the management attitude toward risky assets. The low ratio is indicative of low productivity and high degree of safety in liquidity and vice-versa. The interaction between risk and return determines this ratio. This ratio also shows the credit risk taken by the bank towards mobilizing its funds into different types of assets. This ratio reflects the extent to which the banks are successful in mobilizing their total assets on loan & advances for the purpose of income generation.

Table 4.6

Loan & Advances to Total Assets Ratio of NABIL BANK & HBL

(Rs. in '000')

NABIL BANK				**HBL**		
Fiscal Year	**Loan & Advances**	**Total Assets**	**Ratios (%)**	**Loan & Advances**	**Total Assets**	**Ratio (%)**
2005/06	12922543	22329971	57.87	14642560	29460390	49.70
2006/07	15545779	27253393	57.04	16997997	33519141	50.71
2007/08	21365053	37132759	57.54	19497520	36857624	52.89
2008/09	27589933	43867397	62.89	24933155	40046686	62.26
2009/10	32268873	52150237	61.88	27980628	42717124	65.50
2010/11	38034098	58141437	65.42	31566977	46736203	67.54
Average			60.44		Average	58.18
S.D.			3.15		S.D	7.23
C.V.			5.21		C.V	12.39

Source: Annual Report of NABL BANK & HBL Till 2011

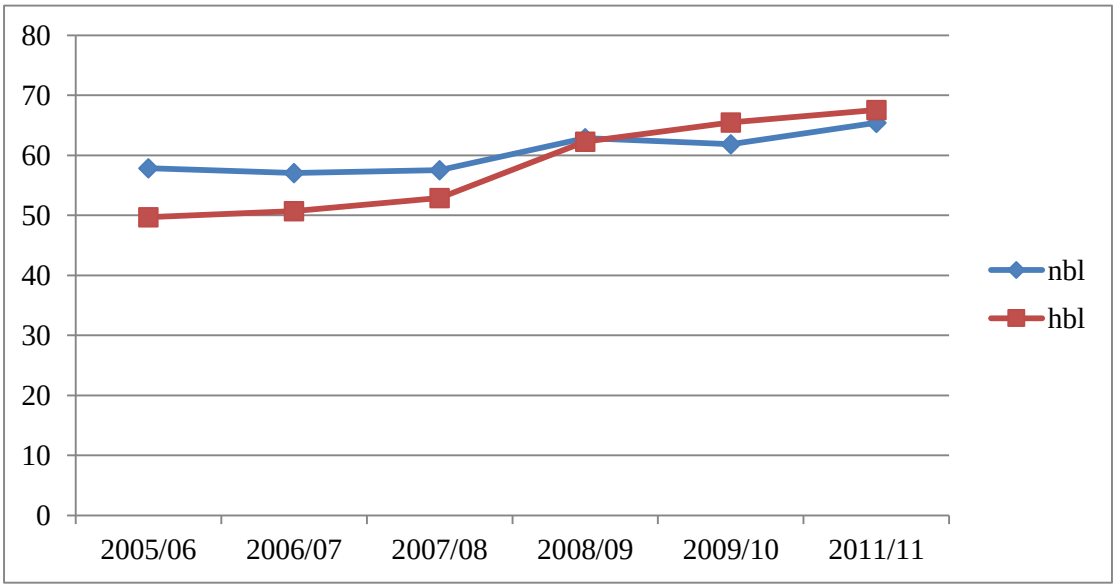
Table 4.6 depicts the loan & advances to total assets ratio of NABIL over the six years period from 2005/06 to 2010/11. The ratios are 57.87%, 57.04%, 57.54%, 62.89%, 61.88% and 65.42 in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 60.44% during the six years study period. Likewise, the standard deviation is 3.15 and coefficient of variation is 5.21 %.

Again, Table 4.6 depicts the loan & advances to total assets ratio of HBL over the six years period from 2005/06 to 2010/11. The ratios are 49.70%, 50.71%, 52.89%, 62.26% , 65.50% and 67.54 in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 58.18% during the six years study period. Likewise, the standard deviation is 7.23 and coefficient of variation is 12.39%.

Loans & advances and total assets of NABIL & HBL can be shown by following diagram

Figure 4.6

Loan & Advances and Total Assets of NABIL & HBL



Comparison

Loan & advances to total assets ratio of NABIL is decreases in second fiscal year i.e. 2006/07 and it is in increasing trend till 2008/09 and again it decreases slightly for

fiscal year 2009/10. The ratio of HBL is in increasing trend till fiscal year 2009/10. Similarly, NABIL has higher mean ratio than that of HBL. Likewise, the ratios of HBL have more variation and less consistency than NABIL.

From the analysis, we can say that NABIL has sound lending policy so that it is able to mobilize its resources as loan & advances than HBL. As well, HBL is risk taker bank than NABIL. But assets management in terms of loan & advances of both banks are not so better because of below the fifty percent of total assets but however NABIL has crossed half portion of total asset for all the fiscal year of study period of six years.

4.2.3 Total Investment to Total Deposit Ratio

A commercial bank may mobilize its deposit by investing in different securities issued by government and other financial and non-financial organizations. This ratio measures the extent to which banks are able to mobilize their deposits on investment in various securities. In the process of management of bank assets, various factors such as excess availability of fund, liquidity requirement, central banks norms etc. are to be considered in general.

Table 4.7

Total Investment to Total Deposit Ratio of NABIL BANK & HBL

(Rs. in '000')

NABIL BANK				**HBL**		
Fiscal Year	**Total Investment**	**Total Deposit**	**Ratios (%)**	**Total Investment**	**Total Deposit**	**Ratio (%)**
2005/06	6178533	19347399	31.93	10889031	26490852	41.10
2006/07	8945311	23342285	38.32	11822985	30048418	39.35
2007/08	9939771	31915047	31.14	13340177	31842789	41.89
2008/09	10826379	37348256	29.00	8710691	34681345	25.12
2009/10	13600916	47345780	28.73	8444910	37611202	22.45
2010/11	13081206	49696113	26.32	8769938	40920627	21.43
Average			30.91	Average		31.89
S.D.			3.77	S.D		8.99
C.V.			12.20	C.V		28.19

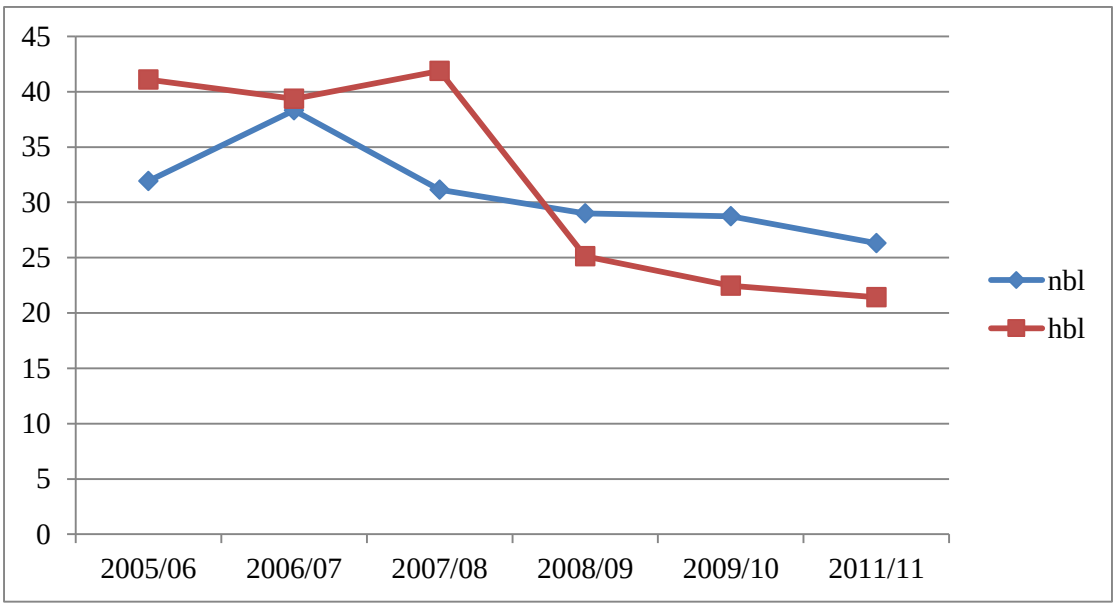
Source: Annual Report of NABIL BANK & HBL Till 2011

Firstly, table 4.7 depicts the total investment to total deposit ratio of NABIL over the six years period from 2005/06 to 2010/11. The ratios are 31.93%, 38.32%, 31.14%, 29.00%, 28.73% and26.32 in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 30.91% during the six years study period. Likewise, the standard deviation is 3.77 and coefficient of variation is 12.20%.

Secondly, Table 4.7 depicts the total investment to total deposit ratio of HBL over the six years period from 2005/06 to 2010/11. The ratios are 41.10%, 39.35%, 41.89%, 25.12%, 22.45% and 21.43 in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 31.89% during the six years study period. Likewise, the standard deviation is 8.99 and coefficient of variation is 28.19%. Total investment and total deposit of NABIL & HBL can be shown by following diagram:

Figure 4.7

Total Investment and Total Deposit of NABIL & HBL



Comparison

Total investment to total deposit ratio of NABIL is increasing in second year i.e. 2006/07 and decreases thereafter over the six year period. The ratio of HBL is in fluctuating trend, the ratio is decreasing in fiscal year 2006/07 and increases in fiscal year 2007/08 and again it started decreasing over the six year study period. Similarly,

HBL has highest mean ratio than that of NABIL. Likewise, the ratios of HBL have more variation and less consistency than NABIL.

During the study period, movements of ratios are first increasing, then decreasing and again increasing. It may be due to slack in the different sectors of economy due to which bank is unable to mobilize its fund in loan & advances and share/debenture of other companies properly.

4.3 Leverage Ratio

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

4.3.1 Debt to Equity Ratio

Debt to equity ratio measures the relative proportion of outsiders and owner's funds employed in the total capitalization. Here, debt includes all the credits (long-term and short-term) of the bank where equity includes paid up capital, reserve & surplus and undistributed profit or dividend. Veryhigh ratio is bad during the long-run period and vice-versa.

Table 4.8

Debt to Equity Ratio of NABIL BANK & HBL

(Rs. in '000')

NABIL BANK				**HBL**		
Fiscal Year	**Total Debt**	**Total Equity**	**Ratios (%)**	**Total Debt**	**Total Equity**	**Ratio (%)**
2005/06	20019892	2310078	866.63	27694215	2223634	1245.45
2006/07	24686925	2566467	961.90	31372641	2638323	1189.11
2007/08	34258187	2874572	1191.77	33399464	2776068	1203.12
2008/09	40375832	3491566	1156.38	36038345	3281977	1098.07
2009/10	44877106	4269490	1051.11	38270500	3628678	1054.67
2010/11	52965989	5175448	1023.4	42403884	4332328	978.8
Average			1041.87		Average	1128.20
S.D.			110.39		S.D	92.83
C.V.			10.60		C.V	8.23

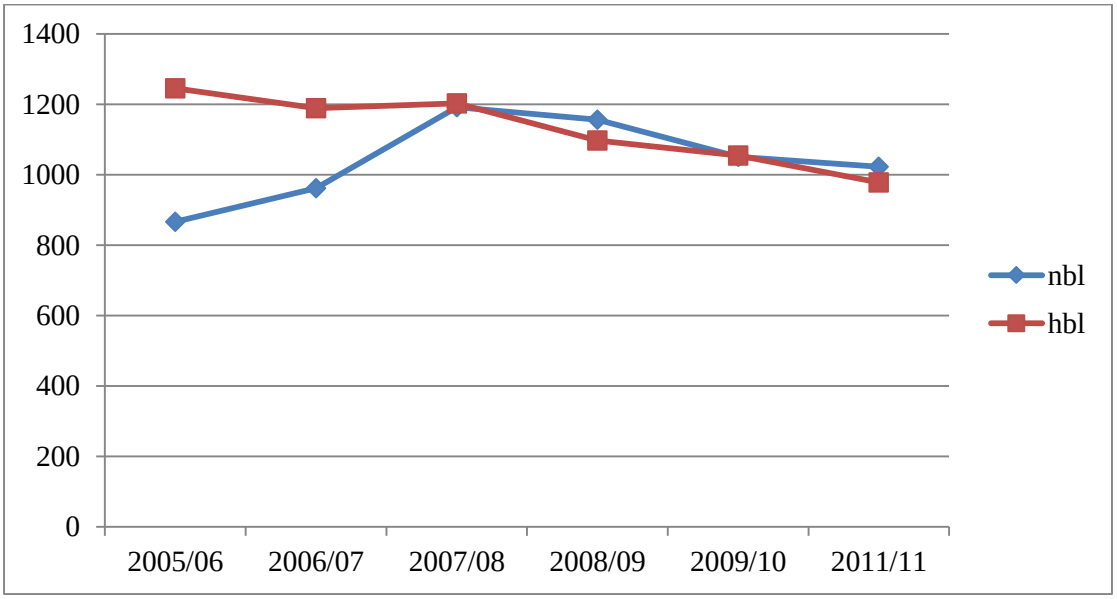
Source: Annual Report of NABIL & HBL till 2011

This table depicts the total debt to total equity ratio of NABIL over the six years period from 2005/06 to 2010/11. The ratios are 866.63%, 961.90%, 1191.77%, 1156.38% ,1051.11 and 1023.4 in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 1041.87% during the six years study period. Likewise, the standard deviation is 110.39 and coefficient of variation is 11.47%.

This Table further represents the total debt to total equity ratio of HBL over the six years period from 2005/06 to 2010/11. The ratios are 1245.45%, 1189.11%, 1203.12%, 1098.07%, 1054.67% and 978.8 in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 1128.20% during the six years study period. Likewise, the standard deviation is 92.83 and coefficient of variation is 8.23%. Total debt and total equity of NABIL & HBL can be shown by following diagram:

Figure 4.8

Debt and Equity of NABIL & HBL



Comparison

Total debt to total equity ratio of NABIL is in increasing trend till 2007/08 and decreases thereafter over the six years of study period. The ratio of HBL is decreasing in 2006/07 and increasing in next fiscal year and decreases thereafter over the six years of study period. Similarly, HBL has the highest mean ratio than that of NABIL during the study period. Likewise, the ratios of HBL have less variation and more consistency than NABIL.

From the analysis, we can say that HBL is more levered firm than NABIL and should bear more risk during the six years of study period. Levered firm must bear more fixed expenses than non-levered. It may results bad impact on overall performance of the bank in the long-term.

4.3.2 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.

Table 4.9

Total Debt to Total Assets Ratio of NABIL BANK & HBL (Rs. in '000')

NABIL BANK				**HBL**		
Fiscal Year	**Total Debt**	**Total Assets**	**Ratio (%)**	**Total Debt**	**Total Assets**	**Ratio (%)**
2005/06	20019892	22329971	89.65	27694215	29460390	94.00
2006/07	24686925	27253393	90.58	31372641	33519141	93.60
2007/08	34258187	37132759	92.26	33399464	36175532	92.33
2008/09	40375832	43867397	92.05	36038345	39320322	91.65
2009/10	44877106	52150237	86.05	38270500	42717124	89.59
2010/11	52965989	58141437	91.09	42403884	46736203	90.73
Average			90.28	Average		91.98
S.D.			2.09	S.D		1.54
C.V.			2.32	C.V		1.67

Source: Annual Report of NABIL BANK & HBL Till 2011

This Table depicts the total debt to total assets ratio of NABIL over the six years period from 2001/21 to 2010/11. The ratios are 89.65%, 90.58%, 92.26%, 92.04%, 86.05% and 91.09 in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2010/11 respectively. Similarly, mean ratio remains at 90.28% during the six years study period. Likewise, standard deviation is 2.09 and coefficient of variation is 2.32%.

Table 4.9 depicts the total debt to total assets ratio of HBL over the six years period from 2005/06 to 2010/11. The ratios are 94.00%, 93.60%, 92.33%, 91.65%, 89.59% and 90.73% in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09. 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 9.98% during the six years study period. Likewise, the standard deviation is 1.54 and coefficient of variation is 1.67%. Total debt and total assets of NABIL & HBL can be shown by following diagram:

Figure 4.9

Total Debt and Total Assets of NABIL &HBL

Comparison

Total debt to total assets ratio of NABIL is in increasing trend till 2007/08 and decreases till2008/2009 then dramatically increase. The ratio of HBL is in continuously decreasing trend over the six year period increase in 2010/2011. Similarly, HBL has the highest mean ratio than that of NABIL. Likewise, the ratios of HBL have less variation and more consistency than NABIL.

According to the above analysis, we can say that HBL used outsider's fund more than owner's fund during the formation of capital structure. Also, NABIL has more variation in the ratios during the study period. It is bad symptoms for the bank.

4.4 Profitability Ratios

Profitability ratios are very helpful to measure the overall operation efficiency of a financial institution. In the context of banks, no bank can survive without profit. Profit is one of the major indicators or efficient operation of a bank. Not only bank, no other firm can survive without profit. The banks acquire profit by providing different services to its customers or by providing loan & advances and making various kinds of investment opportunities. Profitability ratios measure the efficiency of bank.

Profitability ratios allow measuring the ability of the firm to earn an adequate return on sales, total assets, and invested capital. A higher profit ratio shows the higher efficiency of a bank. The following ratios are under the profitability ratio.

4.4.1 Interest Income to Interest Expenses Ratio

Interest income to interest expenses ratio is the gap between interest rates offered and interest rate charged. NRB has restricted the gap between interests taken in loan & advances and interest offered in deposit. The credit creation power of commercial bank has high impact on this ratio.

Table 4.10

Interest Income and Interest Expenses of NABIL BANK & HBL

(Rs. in '000')

NABIL BANK				**HBL**		
Fiscal Year	**Interest Income**	**Interest Expenses**	**Ratios (%)**	**Interest Income**	**Interest Expenses**	**Ratio (%)**
2005/06	1309998	357161	366.78	1626474	648842	250.67
2006/07	1587759	555710	285.72	1775583	767411	231.37
2007/08	1978697	758436	260.89	1963647	823745	238.38
2008/09	2798486	1153280	242.65	2342198	934778	250.56
2009/10	4047725	1960107	206.51	3148605	1553530	202.67
2010/11	5254050	2955431	177.76	4326141	2414807	179.15
Average			256.71		Average	225.47
S.D.			60.45		S.D	26.24
C.V.			23.55		C.V	11.64

Source: Annual Report of NABIL BANK & HBL Till 2011

Table 4.10 depicts the interest income to interest expenses ratio of NABIL over the six years period from 2005/06 to 2010/11. The ratios are 366.78%, 285.72%, 260.89%, 242.65%, 206.51% and in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 256.71% during the six years study period. Likewise, the standard deviation is 60.45 and coefficient of variation is 23.55%.

From Table 4.10 depicts the interest income to interest expenses ratio of HBL over the six years period from 2005/06 to 2009/10. The ratios are 250.67% 231.37%, 238.38%, 250.56%, 202.67% and 179.15 in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 225.47% during the six years study period. Likewise, the standard deviation is 26.24 and coefficient of variation is 11.64%.

Interest income and interest expenses of NABIL & HBL can be shown by following

Figure 4.10

Interest Income and Interest Expenses of NABIL & HBL

Comparison

Interest income to interest expenses ratio of NABIL is in highly decreasing trend for the six year study period. Whereas the ratio of HBL is decreasing in fiscal year 2006/07 and slowly increases in next two year till 2008/09 but highly decreases in the fiscal year 2009/10 & 2010/2011. Similarly, NABIL has the highest mean ratio than that of HBL. Likewise, the ratios of NABIL have more variation and less consistency than HBL.

From the analysis, we can say that NABIL has high degree of gap between interest offered and interest charged than HBL. This shows that NABIL has charged high interest rate to borrowers and offering low interest rate to depositors. The highest cost of deposit mix of NABIL has caused the gap between interest income and interest expenses to be least.

4.4.2 Return on Loan & Advances Ratio

This ratio measures the earning capacity of commercial bank through its fund mobilization as loan & advances.

Table 4.11

Return on Loan &Advances Ratio of NABIL BANK & HBL

NABIL BANK				**HBL**		
Fiscal Year	**Net Profit**	**Loan & Advances**	**Ratios (%)**	**Net Profit**	**Loan & Advances**	**Ratio (%)**
2005/06	635262	12922543	4.92	457458	14642560	3.12
2006/07	673960	15545779	4.34	491823	16997997	2.89
2007/08	746468	21365053	3.49	635869	19497520	3.26
2008/09	1031053	27589933	3.74	752835	24793155	3.04
2009/10	1139099	32268873	3.53	508798	27980628	1.82
2010/11	1337745	38034098	3.52	893115	46736204	1.91
Average			4	Average		2.67
S.D.			0.54	S.D		0.58
C.V.			13.5	C.V		21.72

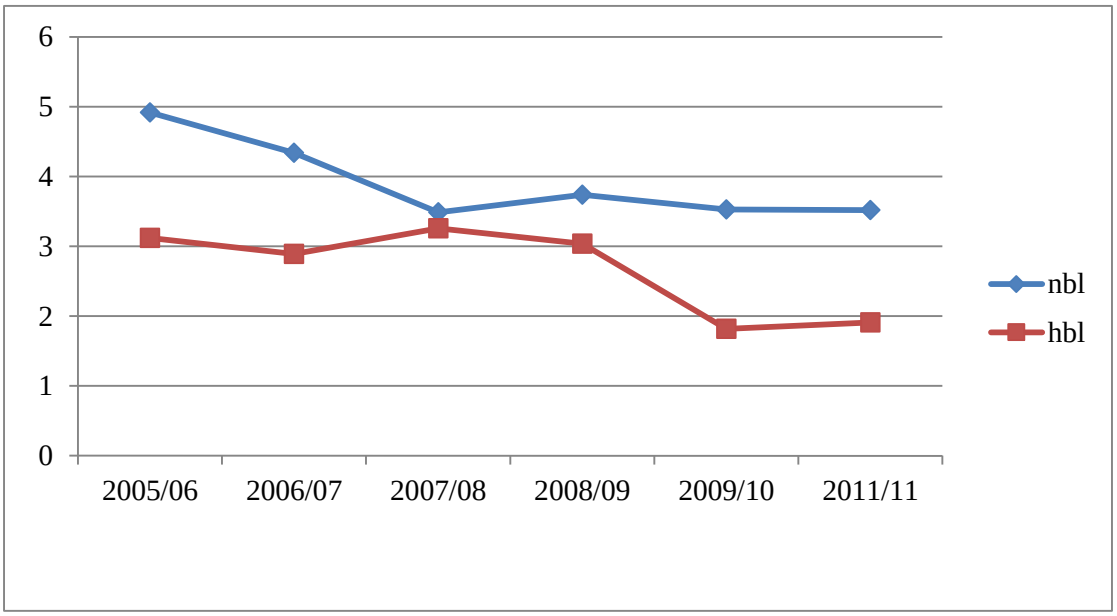
Source: Annual Report of NABIL BANK & HBL Till 2011

Table 4.11 depicts the return on loan & advances ratio of NABIL over the six years period from 2005/06 to 2010/11. The ratios are 4.92%, 4.34%, 3.49%, 3.74%, 3.53% and 3.52% in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 4% during the six years study period. Likewise, the standard deviation is 0.54 and coefficient of variation is 13.5%.

Again, Table 4.11 depicts the return on loan & advances ratio of HBL over the six years period from 2005/06 to 2009/10. The ratios are 3.12%, 2.89%, 3.26%,3.04% , 1.82% and 1.91in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 2.67% during the six years study period. Likewise, the standard deviation is 0.58 and coefficient of variation is 21.72%. Net profit and loan & advances of nabil & HBL can be shown by following.

Figure 4.11

Return on Loan & Advances of NABIL & HBL



Comparison

Return on loan &advances ratio of NABIL is in decreasing trend over the study period except increases in fiscal year 2008/09. Similarly, the ratio of HBL is in decreasing trend over the study period except increases in the fiscal year 2007/08 & 2010/2011. Similarly, NABIL has the higher mean ratio than that of HBL. Similarly, the ratios of NABIL have more variation but more consistency than HBL.

From the analysis, we can say that return on loan & advances ratio of NABIL and HBL is very low and in fluctuating trend also. The highest ratio is 4.92% of NABIL and 3.26% of HBL during the six years of study period. It shows the normal earning capacity of NABIL and HBL in loan & advance. But NABIL has high earning as compared to HBL in average with high risk. That means, lending policy of both banks are not so sound and credits are not granted in profitable sectors but satisfactorily in the present economic situation.

4.4.3 Net Profit/Loss to Total Assets Ratio

The ratio is useful to measure how well management uses all the assets in business to generate an operating surplus. Higher ratio indicates higher efficiency in the utilization of total assets and vice-versa.

Table 4.12

Net Profit/Loss to Total Assets Ratio of NABIL BANK & HBL

(Rs. in '000')

NABIL BANK				**HBL**		
Fiscal Year	**Net Profit**	**Total Assets**	**Ratios (%)**	**Net Profit**	**Total Assets**	**Ratio (%)**
2005/06	635262	22329971	2.84	457458	29460390	1.55
2006/07	673960	27253393	2.47	491823	33519141	1.47
2007/08	746468	37127759	2.01	635869	36175532	1.76
2008/09	1031053	43867397	2.35	752835	39320322	1.91
2009/10	1139099	52150237	2.18	508798	42717124	1.19
2010/11	1337745	58141437	2.30	893115	46736204	1.91
Average			2.36		Average	1.63
S.D.			0.26		S.D	0.26
C.V.			11.02		C.V	15.95

Source: Annual Report of NABIL BANK & HBL Till 2011

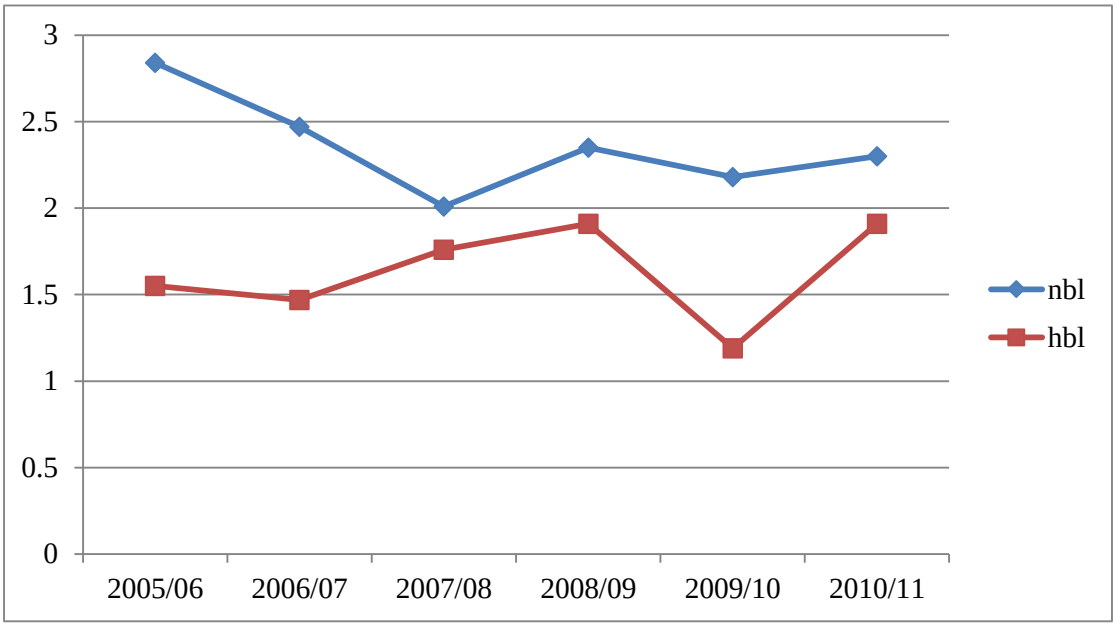
Table 4.12 depicts the return on total assets ratio of NABIL over the six years period from 2005/06 to 2010/11. The ratios are 2.84%, 2.47%, 2.01%, 2.35%, 2.18% and 2.30 in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 2.36% during the six years study period. Likewise, the standard deviation is 0.26 and coefficient of variation is 11.02%.

Then Table 4.24 depicts the return on total assets ratio of HBL over the six years period from 2005/06 to 2010/11. The ratios are 1.55%, 1.47%, 1.76%, 1.91%, 1.19% and 1.91% in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 1.63% during the six years study

period. Likewise, the standard deviation is 0.26 and coefficient of variation is 15.95%. Net profit and total assets of NABIL & HBL can be shown by following diagram:

Figure 4.12

Net Profit and Total Assets of NABIL & HBL



Comparison

Return on total assets ratio of NABIL is in decreasing trend over the year study period except the fiscal year 2008/09. The ratio of HBL is decreasing in the fiscal year 2006/07 and slightly increasing for next two year till 2008/09 and again it decreases in the fiscal year 2009/10 then it dramatically increased. Similarly, NABIL has the higher mean ratio than that of HBL during the study period. Likewise, the ratios of NABIL have more variation and more consistency nature than HBL.

From the analysis, we can say that NABIL has better earning capacity on total assets than HBL. The highest ratio of NABIL is 2.36% where of HBL is 1.63% over the study period. It means that NABIL can earn 2.36% profit of total assets and HBL can earn only 1.63% profit of total assets. NABIL has more variation though it can earn more profit with minimum risk.

4.4.4 Interest Income to Total Loan & Advances Ratio

It tells the income as interest from total loan & advances. It is useful to know the fact that whether the loan has given good return or not. We can increase interest income by taking good issuing and recovery credit policy. High return shows the soundness of credit policy and vice-versa.

Table 4.13

Interest Income to Total Loan & Advances Ratio of NABIL BANK & HBL

(Rs. in '000')

NABIL BANK				**HBL**		
Fiscal Year	**Interest Income**	**Loan & Advances**	**Ratios (%)**	**Interest Income**	**Loan & Advances**	**Ratio (%)**
2005/06	1309998	12922543	10.14	1626474	14642560	11.11
2006/07	1587759	15545779	10.21	1775583	16997997	10.45
2007/08	1978697	21365053	9.26	1963647	19497520	10.07
2008/09	2798486	27589933	10.14	2342198	24793155	9.45
2009/10	4047725	32268873	12.54	3148605	27980628	11.25
2010/11	5254030	38034098	13.81	4326140	31566976	13.7
Average			11.02		Average	11.01
S.D.			1.60		S.D	1.35
C.V.			14.52		C.V	17.80

Source: Annual Report of NABIL BANK & HBL Till 2011

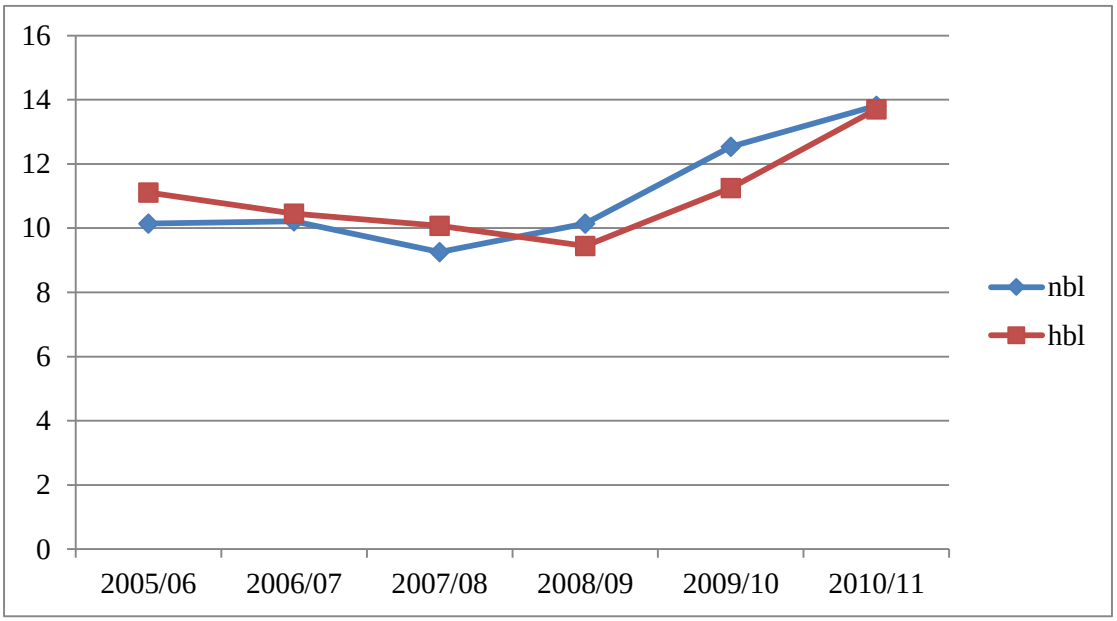
Table 4.13 depicts the interest income to loan & advances ratio of NABIL over the six years period from 2005/06 to 2010/11. The ratios are 10.14%, 10.21%, 9.26%, 10.14% , 12.54% and 13.81% in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 11.02%% during the six years study period. Likewise, the standard deviation is 1.60 and coefficient of variation is 14.52%.

Again, From Table 4.26 interest income to loan & advances ratio of HBL over the six years period from 2005/06 to 2010/11. The ratios are 11.11%, 10.45%, 10.07%, 9.45% , 11.25% and in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and

2010/11 respectively. Similarly, the mean ratio remains at 11.01% during the six years study period. Likewise, the standard deviation is 1.35 and coefficient of variation is 17.80%. Interest income and loan & advances of NABIL & HBL can be shown by following diagram:

Figure 4.13

Interest Income and Loan and Advances of NABIL& HBL



Comparison

Interest income to loan & advances ratio of NABIL is in increasing trend over the study period except the fiscal year 2007/08. Where as the ratio of HBL is in continuously decreasing trend till the fiscal year 2008/09 and it is rises slightly for the year 2010/11. Similarly, NABIL has the higher mean ratio than that of HBL. But, the ratios of NABIL have more variation and less consistency than HBL

From the analysis, we can say that HBL has highest interest income ratio than NABIL. That means HBL is able to grant its credit (loan & advances) in high interest earning area. But it will be risky lending because high interest rate carry high risk and low interest rate carry low risk.

4.4.5 Earning Per Share (EPS)

EPS is one of the most widely quoted statistics when there is a discussion of a company's performance or share value. It is the profit after tax figure that is divided by the number of common shares to calculate the value of earnings per share. This figure tells us what profit the common shareholders for every share held have earned. A company can decide whether to increase or reduce the number of shares on issue. This decision will automatically affect the earnings per share. The profits available to the ordinary shareholders are represented by net profit after taxes and preference dividend. Symbolic expression of EPS is given below.

$$\text{EPS} = \frac{\text{Net Profit After Tax}}{\text{Number of Common Stock Outstanding}}$$

Table 4.14

Earning Per Share of NABIL and HBL

(In Rs.)

Fiscal Years	**Banks**	
	NABIL	**HBL**
2005/06	129.21	59.24
2006/07	137.08	60.66
2007/08	108.31	62.74
2008/09	106.76	61.90
2009/10	78.61	31.80
2010/11	70.67	22.32
Average	105.11	49.78

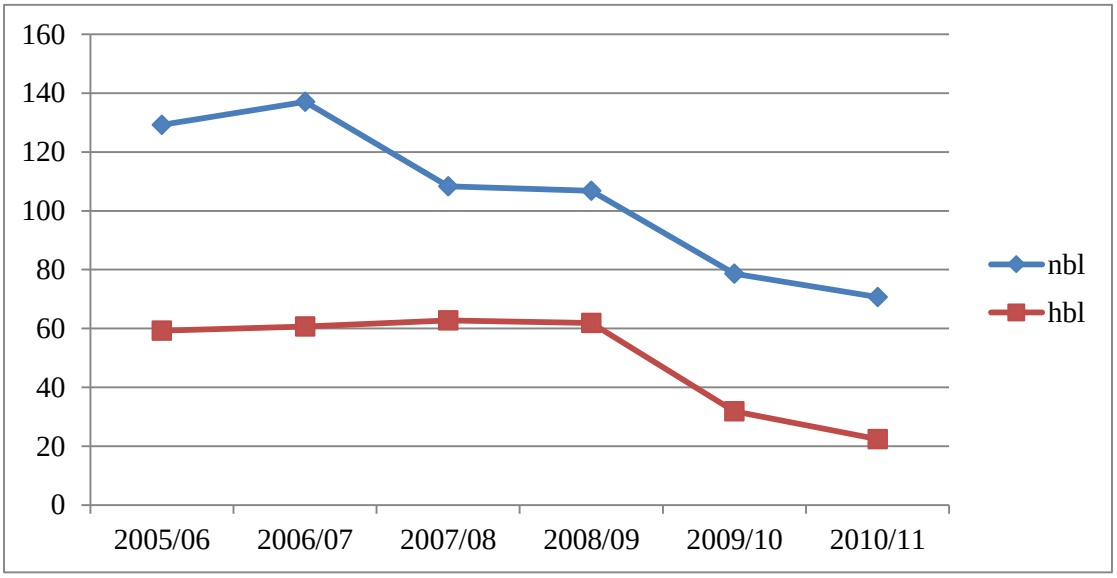
Source: Major Indicators and Annual Report of Respective Banks Till 2011

Table 4.14 depicts the earning per share of NABIL and HBL over the six years period from 2005/06 to 2010/11. The EPS of NABIL are Rs. 129.21, Rs.137.08, Rs. 108.31, Rs. 106.76, 78.61 and Rs. 70.67 in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. The mean EPS of NABIL remains at Rs. 105.11during the six years of study period. Similarly, the EPS of HBL are Rs. 59.24, Rs. 60.66, Rs. 62.74, Rs. 61.90, 31.80 and 22.32 in the fiscal year 2005/06, 2006/07,

2007/08, 2008/09 , 2009/10 and 2010/11 respectively. The mean EPS of HBL is Rs. 49.78 over the six years of study period. Earning per share of NABIL and HBL can be shown by following diagram.

Figure 4.14

Earning Per Share of NABIL and HBL



Comparison

Earning per share of NABIL is in a rapidly decreasing trend over the six years of study period except fiscal year 2006/07 where earning per share of HBL is continuously increasing till 2007/08 and decreases highly thereafter for the study period during six years. Similarly, NABIL has the higher mean of EPS than that of HBL. The mean of EPS of NABIL is 2 times higher than the mean EPS of HBL, it shows that NABIL is able to earn and provide good return to its shareholders than HBL over the study period.

4.5 Lending Efficiency Ratios

Lending efficiency, quality of lending and its effect is measured in this topic. The efficiency of a firm depends to a large extent on the efficiency with which its assets are managed and utilized. This ratio also shows the utility to available fund. The following are the various type of lending efficiency ratios.

4.5.1 Loan Loss Provision to Total Loan & Advances Ratio

Loan loss provision to total loan & advances describes the quality of assets that a bank holding. The amount of loan loss provision in balance sheet refers to general loan loss provision. The provision for loan loss reflects the increasing probability of non-performing loan. The provision of loan means the profit of banks will come down by such amount. Increase in loan loss provisions, decreases in profit result to decreases in dividends but its positive impact is that strengthens financial conditions of the banks by controlling the credit risk and reduced the risks related to deposits. So it can be said that banks suffer it only for short-term while the good financial conditions and safety of loans will make bank's prosperity resulting increasing profits for long-term.

The low ratio indicates the good quality of assets in total volume of loan & advances. High ratio indicates more risky assets in total volume of loan & advances.

Table 4.15

Loan Loss Provision to Loan & Advances Ratio of NABIL & HBL

(Rs. in '000')

NABIL BANK				**HBL**		
Fiscal Year	**Loan Loss Provision**	**Loan & Advances**	**Ratios (%)**	**Loan Loss Provision**	**Loan & Advances**	**Ratio (%)**
2005/06	3770	12922543	0.03	145155	14642560	0.99
2006/07	14206	15545779	0.09	90689	16997997	0.53
2007/08	64055	21365053	0.30	58431	19497520	0.29
2008/09	45722	27589933	0.17	199214	24793155	0.80
2009/10	355829	32268873	1.10	692640	27980628	2.84
2010/11	109470	38034098	0.29	471729	31566976	0.49
Average			0.33		Average	0.99
S.D.			0.36		S.D	0.86
C.V.			109.09		C.V	86.88

Source: Annual Report of NABIL & HBL Till 2011

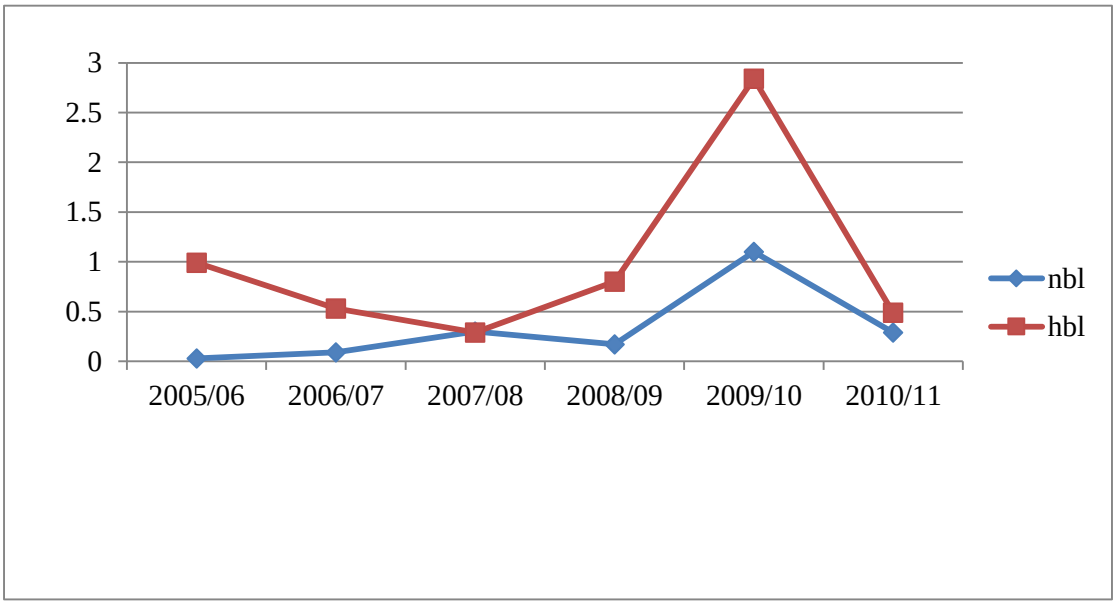
This table depicts the loan loss provision to loan & advances ratio of NABIL over the six years period from 2005/06 to 2010/11. The ratios are 0.03%, 0.09%, 0.30%, 0.17%

, 1.10% and 0.29% in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 0.33% during the six years study period. Likewise, the standard deviation is 0.36 and coefficient of variation is 109.09%.

This Table further represents the loan loss provision to loan & advances ratio of HBL over the six years period from 2005/06 to 2010/11. The ratios are 0.99%, 0.53%, 0.29%, 0.80%, 2.84% and 0.49 in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly, the mean ratio remains at 0.99% during the six years study period. Likewise, the standard deviation is 0.86 and coefficient of variation is 86.88%. Loan loss provision and loan & advances of NABIL & HBL can be shown by following diagram:

Figure 4.15

Loan Loss Provision to Total Loan & Advances of NABIL & HBL



Comparison

Loan loss provision to loan & advances ratio of NABIL is in highly increasing trend till 2007/08 and it decreases for next year and again it is increasing highly in fiscal year 2009/10 then it dropped maximally whereas the ratio of HBL is very high in the first year and after that it is decreases for next two year till 2007/08 and it again in increasing trend for last two fiscal year of study period. Similarly, HBL has higher mean ratio than

that of NABIL over the study period. But the ratios of NABIL have less variation and less consistency than HBL.

From the analysis, we can say that NABIL has very low degree of provision over total lending than HBL. It indicates that NABIL has low volume of non-performing loans during the study period than HBL. The lower loan loss provision ratio indicates the better performance and effective credit policy of NABIL than HBL.

4.6 Coefficient of Correlation Analysis

Under this topic, Karl Pearson's Coefficient of Correlation is used to find out the relationship between two or more variables. Two variables are said to be correlated when the change in the value of one variable is accompanied by the change of another variable. Correlation coefficient lies between -1 and +1. To measure the reliability and test of significance of correlation coefficient Probable Error (P.E) is used.

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

Where,

r = coefficient correlation and

n = no of years

Here, relationship between total deposit and loan & advances as well as net profit and loan & advances of Nabil Bank Limited as well Himalayan Bank Limited is taken.

4.6.1 Coefficient of Correlation between Total Deposits and Total Loan & Advances

Total deposit is independent variable and total loan & advances is dependent variable. The coefficient of correlation measures the degree of relationship between total deposit and total loan & advances. In analysis, total deposit is independent variable and total loan & advances are dependent variable. The main objective of computing 'r' between

these two variables is to justify whether total deposits are significantly used as total loan & advances in a proper way or not.

Table 4.16

Correlation between Total Deposits and Total Loan & Advances of NABIL

Fiscal Year	**X**	**Y**	**X^2**	**Y^2**	**XY**
2005/06	19.34	12.92	374.04	166.93	249.87
2006/07	23.34	15.54	544.76	241.49	362.70
2007/08	31.91	21.36	1018.25	456.25	681.59
2008/09	37.35	27.59	1395.02	761.21	1030.49
2009/10	47.35	32.27	2242.02	1041.35	1527.98
2010/11	49.69	38.03	2469.09	1446.39	1889.71
N = 6	208.89	147.71	8043.18	4113.62	5742.34

Source: Annual Report of NABIL Till 2011

Where,

X = Total deposit of NABIL.
Y = Total loan & advances of NABIL.
N = No. of year from fiscal year 2005/06 to 2010/11.

Here,

$\Sigma X = 208.89$, $\Sigma Y = 147.71$, $\Sigma X^2 = 8043.81$, $\Sigma Y^2 = 4113.62$, $\Sigma XY = 5742.34$,
N = 6
Now, Correlation (r) = or, r = +0.9896

Above calculation shows that there is positive relationship between total deposits and total loan & advances of NABIL. That means, if the total deposit is increased absolutely the total loan & advances is also increased and vice versa. The coefficient of correlation between total deposits and total loan & advances is 0.9896 and probable error is 0.0057 Comparing the value of 'r' and 6 times P.E., we can say that there is positive relationship and significant at all time between total deposits and total loan & advances of NABIL because 'r' is greater than 6 times of P.E., i.e. 0.9896>0.0057

Table 4.17

Correlation between Total Deposits and Total Loan &Advances of HBL

Fiscal Year	**X**	**Y**	**X^2**	**Y^2**	**XY**
2005/06	26.49	14.64	701.72	214.33	387.81
2006/07	30.05	16.99	903.00	288.66	510.55
2007/08	31.84	19.49	1013.79	379.86	620.56
2008/09	34.68	24.79	1202.70	614.54	859.72
2009/10	37.61	27.98	1414.51	782.88	1052.33
2010/11	40.92	31.56	1674.45	936.03	1231.43
N=6	201.59	135.45	6910.17	2279.94	4721.77

Source: Annual Report of HBL Till 2011

Where,

X = Total deposit of HBL.

Y = Total loan & advances of HBL.

N = No. of years from fiscal year 2005/06 to 2010/11

Here,

$\Sigma X = 201.59, \Sigma Y = 135.45, \Sigma X^2 = 6910.17, \Sigma Y^2 = 2279.94, \Sigma XY = 4721.77$

N = 6

Now, Correlation (r) = or, r = +0.9909

Above calculation shows that there is positive relationship between total deposits and total loan & advances of HBL. That means, if the total deposit is increased absolutely the total loan & advances is also increased and vice versa. The coefficient of correlation between total deposits and total loan & advances is 0.9909 and probable error is 0.0050. Comparing the value of 'r' and 6 times of P.E., we can say that there is Significantly positive relationship between total deposits and total loan & advances of HBL because 'r' is higher than 6 times P.E., i.e. 0.9785>0.0050.

If we compare NABIL bank and HBL bank that what we can conclude is, the variable of NABIL is more significant than HBL because correlation coefficient of NABIL is nearer to 1 then HBL.

4.6.2 Coefficient of Correlation between Total Loan & Advances and Net Profits

Total loan & advances is independent variable and net profit is dependent variable. The main objectives of computing 'r' between these two variables are to justify whether total loan & advances are significantly used to earn profit in a proper away or not. The value of 'r' explains whether a percentage change in total loan & advances contribute to change the same percentage of net profit or not.

Table 4.18

Correlation between Loan & Advances and Net Profits of NABIL

Fiscal Year	**X**	**Y**	**X^2**	**Y^2**	**XY**
2005/06	12.92	0.63	166.93	0.40	8.14
2006/07	15.54	0.67	241.49	0.45	10.41
2007/08	21.36	0.75	456.25	0.56	16.02
2008/09	27.59	1.03	761.21	1.06	28.42
2009/10	32.27	1.13	1041.35	1.28	36.42
2010/11	38.03	1.37	1446.28	1.88	52.10
N=6	147.71	5.58	4113.5	5.62	151.56

Source Annual Report of NABIL Till 2011

Where,

X = Total loan & advances of NABIL.
Y = Net profit of NABIL.
N = No. of years from fiscal year 2005/06 to 2010/11.

Here,

$\Sigma X = 147.71$, $\Sigma Y = 5.58$, $\Sigma X^2 = 4113.5$, $\Sigma Y^2 = 5.62$, $\Sigma XY = 151.56$, $N = 6$

Now, Correlation (r) = or, r = +0.9862

Above calculation shows that there is positive relationship between total loan & advances and net profit of NABIL. That means, if the total loan & advances is increased absolutely the net profit is also increased and vice versa. The coefficient of correlation between total loan & advances and net profit is 0.9862 and probable error is 0.0075. Comparing the value of 'r' and 6 times P.E., we can say that there is significantly positive relationship between total loan & advances and net profit of NABIL because 'r' is higher than 6 times P.E., i.e. 0.9936>0.0075.

From the above analysis, we can conclude that NABIL has positive relationship with significant between total loan & advances and net profit. The relationship is significant, i.e. profit is increase as the portion increase in loan & advances in relation to 0.9936 and vice-versa.

Table 4.19

Correlation between Total Loan & Advances and Net Profits of HBL

Fiscal Year	**X**	**Y**	**X^2**	**Y^2**	**XY**
2005/06	14.64	0.46	214.33	0.21	6.73
2006/07	17.00	0.49	289.00	0.24	8.33
2007/08	19.50	0.64	380.25	0.41	12.48
2008/09	24.79	0.75	614.54	0.56	18.59
2009/10	27.98	0.51	782.89	0.26	14.27
2010/11	31.56	0.89	996.03	0.79	28.08
N=6	135.45	3.73	3275.97	2.45	88.28

Source: Annual Report of HBL Till 2011

Where,

X = Total loan & advances of HBL.
Y = Net profit of HBL.
N = No. of years from fiscal year 2005/06 to 2010/11.

Here, $\Sigma X = 135.45$, $\Sigma Y = 3.73$, $\Sigma X^2 = 3275.97$, $\Sigma Y^2 = 2.45$, $\Sigma XY = 88.28$, $N = 6$

Now, Correlation (r) = or, r = +0.7208

Above calculation shows that there is positive relationship between total loan & advances and net profits of HBL. That means, if the total loan & advances is increased absolutely the net profit is also increased and vice versa. The coefficient of correlation between total loan &advances and net profit is 0.7208 and probable error is 0.1323. Comparing the value of 'r' and 6 times P.E., we can say that there is positive relationship and not significant at all time between total loan & advances and net profit of HBL because 'r' is lower than 6 times P.E., i.e. 0.7208<1.1323.

From the above analysis, we can conclude that HBL has positive relationship but not significant at all time between total loans & advances and net profit. The relationship is not significant, i.e. profit is not increase as the portion increase in loan & advances.

4.7 Test of Hypothesis

To test the significance of different ratio between NABIL and HBL, here only uses ‘t’ test:

Table 4.20

Calculated Value of 't' under different Assumption

S.N.	Assumption of Null and Alternative Hypothesis	t-cal	t-tab at 5% l.s. for 10 d.f.	Remarks
1	Ho: There is no significance difference in loan and advances to total assets ratio between NABIL and HBL. H1: There is significance difference in loan and advances to total assets ratio between NABIL and HBL.	0.0253	2.228	Null hypothesis accepted
2	Ho: There is no significance difference in interest income to total loan and advances ratio between NABIL and HBL. H1: There is significance difference in interest income to total loan and advances ratio between NABIL and HBL.	0.0679	2.228	Null hypothesis accepted
3	Ho: There is no significance difference in loan loss provision to total loan and advances ratio between NABIL and HBL. H1: There is significance difference in loan loss provision to total loan and advances ratio between NABIL and HBL.	1.5306	2.228	Null hypothesis accepted

Source: Appendix XXXI, XXXII, XXXIII

From the Above table, we can find out the following results;

The calculated value is less than tabulated value. Calculated value of 't' is 0.9389 and tabulated value of 't' is 2.306. It means 'Ho' is accepted at 5% level of significance for 8 degree of freedom and 'H1' is rejected. Therefore, there is no significance difference in loan and advances to total assets ratio between NABIL and HBL.

The calculated value is less than tabulated value. Calculated value of 't' is 0.0156 and tabulated value of 't' is 2.306. It means 'Ho' is accepted at 5% level of significance for 8 degree of freedom and 'H1' is rejected. Therefore, there is no significance difference in interest income to total loan and advances ratio between NABIL and HBL.

The tabulated value is less than tabulated value. Calculated valued of 't' is 1.5306 and tabulated value of 't' is 2.306. It means 'Ho' is accepted at 5% level of significance for 8 degree of freedom and 'H1' is rejected. Therefore, there is no significance difference in loan loss provision to total loan and advances ratio between NABIL and HBL.

4.8 Major Findings of the Study

Based on the presentation, interpretation and analysis of data, the major findings are summarized as follows:

i. NABIL has more current ratio than that of HBL.
ii. HBL has more cash & bank balance to total deposit ratio as well as cash & bank balance to current deposit ratio
iii. NABIL has more cash and bank balance to interest sensitive deposit ratio
iv. From the analysis of overall liquidity ratios of NABIL and HBL, we can say that HBL has high degree of liquid assets, i.e. high liquidity position than NABIL.
v. NABIL is able to mobilize its resources in lending as loan & advances than HBL.
vi. NABIL is able to invest its resources more in other companies' shares, debentures, bonds as well as government Treasury bill than HBL.
vii. From the analysis of overall efficiency ratio of NABIL and HBL, we can say that NABIL has sound lending policy so that it is able to mobilize its resources more than HBL.

viii. From the analysis of overall leverage ratio of NABIL and HBL, we can say that HBL is more levered firm than NABIL during the six years of study period. Levered firm must bear more fixed expenses than non-levered. It means HBL is using outsider's fund more than owner's fund during the formation of capital structure.

ix. NABIL is able to earn more interest form total credit granting than that of HBL.

x. NABIL has high return on loan & advances ratio as well as return on total assets ratio than that of HBL.

xi. From the analysis of overall profitability ratio of NABIL and HBL, we can say that NABIL can earn more profit from its lending and investment activities than HBL during the six years period.

xii. NABIL has high earning per share than HBL.

xiii. HBL has kept high loan loss provision than NABIL because of high non-performing to total lending ratio.

xiv. NABIL has positive and significant relationship between total deposit collection and total lending. Similarly, HBL has positive but significant relationship between these two variables.

xv. NABIL has positive but significant relationship between total loan & advances and net profits. But HBL has positive and not significant relationship between these two variables.

xvi. Test of Hypothesis shows that there is no significant difference in all ratio using in test i.e. loan and advances to total assets ratio of NABIL and HBL, interest income to total loan and advance ratio of NABIL and HBL and loan loss provision to total loan and advances ratio of NABIL and HBL.

So main findings of this study is that even Nabil Bank Limited (NABIL) has less liquid assets, it is able to maintain daily cash requirement, high lending ratio, low leverage ratio, low non-performing assets level, low loan loss provision ratio, high profit ratio than that of Himalayan Bank Limited (HBL). Therefore, the management of HBL must revise the lending policy and invest in profitable as well as productive sectors rather than only to increase lending ratio.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

In this chapter, summary, conclusion and recommendation are included. The researcher has research credit management of Nabil Bank Limited (NABIL) and Himalayan Bank Limited (HBL) by using financial as well as statistical tools. After completing the basic analysis required for the study, little recommendations have made which would be beneficial for the management of the both banks and concerned persons.

Banks are those financial institutions that offer the widest range of financial services especially credit, savings payment services and perform the widest range of financial functions of any business firm in the economy. The most important function are; lending and investing money (the credit function), making payments on behalf of customers foe their purchase of goods and services (the payment function), managing financial assets and real property for customers in investing and raising funds (through the brokerage, investment banking and saving functions)

Lending is the most important function of a commercial bank. For lending procedure, bank has to make some banking practices such as transferring property in bank's name. The transfer is temporarily made for a loan price & interest. Lending money is nowadays becoming main resources of revenue to the bank and also involves high risk too. Bank will not provide loan unless it has sufficient sources to the borrower that will be needed in case of future recovery.

It is no doubt that the role of commercial banks is significant in development of the country. Banks help in development of the country by providing credit to the necessary sectors. Therefore, the main objective of this study is to find out credit management position of Himalayan Bank Limited and Nabil Bank Limited.

The specifics objectives of the study are as follows:

i. To see the volume of contribution made by sample banks in credit & advances.
ii. To see the deposit collection and utilization trend of sample banks.

iii. To study the relationship of deposit, loan & advances and net profit of sample banks.

iv. To provide suitable suggestions based on the findings of this study.

Credit management is also the system, which helps to manage credit effectively. Credit management strongly recommends analyzing and managing the credit risks. Credit risk is defined as the possibility that a borrower will fail to meet its obligations in accordance with the agreed terms and conditions credit risk is not restricted to lending activities only but includes off balance sheet and inter-bank explores. The goal of the credit risk management is to maximize a bank's risk adjusted rate of return by maintaining the credit risk exposure within acceptable parameters. For most banks, loan are the largest and most obvious sources of credit risk, however, other sources of credit risk exist throughout the activities of a bank, including in the banking book, and in the trading book, and both increasingly facing credit risk in various financial instruments other than land, including acceptances, interbank transactions and guarantees and the settlement of transactions.

The researcher used two types of data collection techniques. One is primary data collection and other is secondary data collection. This study is mainly based on secondary data. Secondary data are those collected by the researcher on the concerned topic, which are not original in nature or are originally collected for some other purpose. The main sources of secondary data were: statistical publication of Nepal Rastra Bank, websites, annual reports of NABIL and HBL, different journals, business magazines, published and unpublished related documents and reports for Library of Shanker Dev Campus, Central Library of T.U., Library of Nepal Rastra Bank and Nepal Stock Exchange, previous studies and reports and related thesis etc.

The sampling allows the researches more time to make an intensive study of a research problem. The thirty-one commercial banks shall constitute the population of data and among them two banks are selected. Among the various commercial banks in the banking industry, Himalayan Bank Limited and Nabil Bank Limited is selected for the study.

Commercial banks in Nepal have been facing various challenges and problems. Some of them arouse due to the economic condition of the country, some of them arouse due

to confused policy of government and many of them arising due to default borrowers. After liberalization of economy, banking sector has various opportunities. The objective of the study of credit management is to analyze the volume of contribution made by the sample banks in credit and advances and as well as to analyze the deposit collection and utilization trend of sample banks. After the research some of limitation have been found as well such as the study is mainly based on secondary data collected from the Annual reports of the sample banks. Therefore, the limitations of those data are also the inherent limitations of the study.

5.2 Conclusion

The study has explored the findings of the results designed for the study. Various financial as well as statistical tools were used as per requirement of nature of data. Primary as well as secondary source of information were used for analysis of data. Based on the data analysis and finding of the result, the conclusion can be drawn as follows:

from the analysis of overall liquidity ratio of NABIL & HBL , we can Say that HBL has highest mean that than NABIL. likewise HBL has more variation and less consistency than NABIL. It can be said that HBL has high liquid assets than NABIL but it does not mean that NABIL has mobilized its more funds in profitable sectors than HBL.

from the analysis of overall efficiency ratio of NABIL & HBL, we can Say that HBL has the highest mean than that of NABIL during the study period . NABIL have less variation and more consistency than HBL. From the analysis, we can say that NABIL has sound lending policy so that it is able to mobilize its resources as loan & advances than HBL.

from the analysis of overall leverage ratio of NABIL & HBL, we can Say that HBL has the highest mean than that of NABIL during the study period. Similarly, the ratios of HBL have less variation but more consistency than NABIL. From the analysis, we can say that HBL is more levered firm than NABIL during the six years of study period.

Levered firm must bear more fixed expenses than non-levered. It may results bad impact on overall performance of the bank in the long-term.

from the analysis of overall profitability ratio of NABIL & HBL, we can Say that NABIL has the highest mean of profitability ratio than that of HBL. Likewise, the ratios of NABIL have more variation but less consistency than HBL. This shows that NABIL has charged high interest rate to borrowers and offering low interest rate to depositors. NABIL is able to earn and provide good return to its shareholders than HBL over the study period.

HBL has highest mean of loan loss provision to loan & advances ratio than that of NABIL over the study period. But the ratios of NABIL have less variation and less consistency than HBL. From the analysis, we can say that NABIL has very low degree of provision over total lending than HBL. It indicates that NABIL has decreasing volume of non-performing loans during the study period than HBL.

vi. Co-efficient of Correlation Analysis

NABIL has positive relationship and significant between total deposits and total loan & advances. HBL has positive relationship and not significant as compare to NABIL between total deposits and total loan & advances.

NABIL has positive relationship and significant as compare to HBL between total loan & advances and net profit. HBL has positive relationship but not significant at all time between total loan & advances and net profit.

vii. Test of Hypothesis

There is no significance difference in credit and advances to total assets ratio between NABIL and HBL. Likewise, There is no significant difference in interest income to total loan advances ratio between NABIL and HBL. Also, there is no significant difference in loan loss provision to total loan and advances between NABIL and HBL.

5.3 Recommendations

Findings of the study may provide important information for those who are concerned directly or indirectly with the credit policy of joint venture commercial banks (with respect to NABIL and HBL). On the basis of analysis and findings of the study, following suggestions and recommendations can be outlined:

The liquidity position of HBL is more positive than NABIL. So the management of HBL should search for new area of investments as well as bank should strictly follow the NRB directives to reduce its surplus cash balance. Following of NRB directives will help to reduce credit risk arising from borrower's defaulter leak of proper credit appraisal, defaulter by black listed borrowers and professional defaulter. Government has established credit inebriation bureau, which will guide commercial banks. So the bank is suggested to follow project-oriented approach and avoid more risky area of lending.

NABIL should adopt the sound credit collection policy. It helps to decrease loan loss provision of the bank. Thus, the credit management of HBL must follow the policy as rapid identification of delinquent loans, immediate contact with borrower and continual follow-up until a loan is recovered to decrease its loan loss provision.

HBL must concentrate on decreasing ratio of return on total assets as well as return on loan & advances and invest in productive as well as profitable areas only, which give high return with low risk.

Most of the customers are unsatisfied with the service charges and interest rates of credit. Therefore, the banks management should be considered on these variables more seriously.

Banks should regularly follow the credit customers to confirm that whether the customers have utilized their credit for the same purpose or not, committed at the time of taking credit from the banks.

Looking a current trend of business, both banks, i.e. NABIL as well as HBL must be very careful on formulating marketing strategies to serve its customers. The marketing strategies should be innovative that would attract and retain the customers. Both the

banks are recommended to develop an innovative approach of bank marketing for its well-being and sustainability in the market.

Banks should strictly band the policy of nepotism and favoritism. On the basis of capability and efficiency, recruitment, placement and promotion should be executed.

The new standards should be designed to make the bank management more accountable for credit policy. Besides, it should investigate what are the reasons of credit efficiency or inefficiency.

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APPENDICES

Appendix-I

Calculation of Current Ratio of NABIL

Fiscal Year	Current Assets	Current Liabilities	X	$(X-\overline{X})^2$
2005/06	15287684	20068292	76.18	0.22
2006/07	17509138	24817791	70.55	26.63
2007/08	25988555	33989619	76.46	0.56
2008/09	31017734	39934257	77.67	3.84
2009/10	36787113	47345780	77.69	3.92
			$\sum X = 378.55$	35.17

Calculation of Mean

$$\left(\overline{X}\right) = \frac{\sum X}{N} = \frac{378.55}{5} = 75.71$$

Calculation of Standard Deviation (σ)

$$\sigma = \sqrt{\frac{\sum (X - \overline{X})^2}{N}} = \sqrt{\frac{35.17}{5}} = 2.65$$

Calculation of Coefficient of Variation (C.V.)

$$\text{C.V.} = \frac{\sigma.}{\overline{X}} \times 100 = \frac{2.65.}{75.71} \times 100 = 3.50\%$$

Appendix-II

Calculation of Current Ratio of HBL

Fiscal Year	Current Assets	Current Liabilities	X	$(X-\overline{X})^2$
2005/06	17365192	27307464	63.59	84.27
2006/07	20465362	30866629	66.30	41.86
2007/08	21464193	32310844	66.43	40.19
2008/09	29012476	34967114	82.97	104.04
2009/10	32155957	38016833	84.58	139.48
			∑X=363.87	409.84

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{363.87}{5}=72.77$$

Calculation of Standard Deviation (σ)

$$\sigma \mathbf{D}=\sqrt{\frac{\sum (X-\overline{X})^2}{N}}=\sqrt{\frac{409.84}{5}}=9.05$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.} = \frac{\sigma.}{\overline{X}}\times 100=\frac{9.05}{72.77}\times 100=12.43$$

Appendix-III

Calculation of Cash and Bank Balance to Total Deposit Ratio of NABIL

Fiscal Year	Cash and Bank Balance	Total Deposit	X	$(X-\overline{X})^2$
2005/06	630239	19347399	3.26	7.18
2006/07	1399826	23342285	6.00	0.01
2007/08	2671141	31915047	8.37	5.90
2008/09	3372512	37348256	9.03	9.55
2009/10	1400096	46410700	3.02	8.53
			∑X=29.68	31.17

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{29.68}{5}=5.94$$

Calculation of Standard Deviation (σ)

$$\sigma \mathbf{D}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{31.17}{5}}=2.49$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.} = \frac{\sigma.}{\overline{X}}\times 100=\frac{2.49}{5.94}\times 100=41.92$$

Appendix-IV

Calculation of Cash and Bank Balance to Total Deposit Ratio of HBL

Fiscal Year	Cash and Bank Balance	Total Deposit	X	$(X-\overline{X})^2$
2005/06	1717352	26490852	6.48	0.50
2006/07	1757341	30048418	5.85	1.79
2007/08	1448143	31842279	4.55	6.97
2008/09	3048527	34681345	8.79	2.56
2009/10	3866489	37611202	10.28	9.55
			∑X=35.95	21.37

Calculation of Mean

$$\left(\overline{X}\right) = \frac{\sum X}{N} = \frac{35.95}{5} = 7.19$$

Calculation of Standard Deviation (σ)

$$\sigma \mathbf{D} = \sqrt{\frac{\sum (X - \overline{X})^2}{N}} = \sqrt{\frac{21.37}{5}} = 2.07$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.} = \frac{\sigma.}{\overline{X}} \times 100 = \frac{2.07}{7.19} \times 100 = 28.78$$

Appendix-V

Calculation of Cash and Bank Balance to Current Deposit Ratio of NABIL

Fiscal Year	Cash and Bank Balance	Current Deposit	X	$(X-\overline{X})^2$
2005/06	630239	2910590	21.65	285.27
2006/07	1399826	3395240	41.23	7.24
2007/08	2671141	5284368	50.55	144.24
2008/09	3372512	5480533	61.54	529
2009/10	1400096	7904619	17.71	433.89
			∑X=192.68	1399.64

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{192.68}{5}=38.54$$

Calculation of Standard Deviation (σ)

$$\sigma \mathbf{D}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{1399.64}{5}}=16.73$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.} = \frac{\sigma.}{\overline{X}}\times 100=\frac{16.73}{38.54}\times 100=43.41$$

Appendix-VI

Calculation of Cash and Bank balance to Current Deposit Ratio of HBL

Fiscal Year	Cash and Bank Balance	Current Deposit	X	$(X-\overline{X})^2$
2005/06	1717352	5028151	34.15	605.65
2006/07	1757341	5589580	31.44	746.38
2007/08	1448143	4784216	30.27	811.68
2008/09	3048527	3218225	94.72	1293.12
2009/10	3866489	3745624	103.23	1977.58
			$\sum X=293.81$	5434.41

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{293.81}{5}=58.76$$

Calculation of Standard Deviation (σ)

$$\sigma=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{5434.41}{5}}=32.97$$

Calculation of Coefficient of Variation (C.V.)

$$\text{C.V.} = \frac{\sigma.}{\overline{X}}\times 100=\frac{32.97}{58.76}\times 100=56.11$$

Appendix-VII

Calculation of Cash and Bank Balance to Interest Sensitive Deposit Ratio of NABIL

Fiscal Year	Cash and Bank Balance	Saving Deposit	X	$(X-\overline{X})^2$
2005/06	630239	8770760	7.19	64.64
2006/07	1399826	10187354	13.74	2.22
2007/08	2671141	12159966	21.97	45.43
2008/09	3372512	14620407	23.07	61.47
2009/10	1400096	13783585	10.16	25.70
			∑X=76.13	199.46

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{76.13}{5}=15.23$$

Calculation of Standard Deviation (σ)

$$\sigma \mathbf{D}=\sqrt{\frac{\sum (X-\overline{X})^2}{N}}=\sqrt{\frac{199.46}{5}}=6.31$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.} = \frac{\sigma.}{\overline{X}}\times 100=\frac{6.31}{15.23}\times 100=41.43$$

Appendix-VIII

Calculation of Cash and Bank Balance to Interest Sensitive Deposit

Ratio of HBL

Fiscal Year	Cash and Bank Balance	Saving Deposit	X	$(X-\overline{X})^2$
2005/06	1717352	14582855	11.78	4.84
2006/07	1757341	15784770	11.13	8.12
2007/08	1448143	17972441	8.06	35.05
2008/09	3048527	20061048	15.20	1.49
2009/10	3866489	16294680	23.72	94.87
			∑X=69.89	144.37

Calculation of Mean

$$\left(\overline{X}\right) = \frac{\sum X}{N} = \frac{69.89}{5} = 13.98$$

Calculation of Standard Deviation (σ)

$$\sigma \mathbf{D} = \sqrt{\frac{\sum (X - \overline{X})^2}{N}} = \sqrt{\frac{144.37}{5}} = 5.37$$

Calculation of Coefficient of Variation (C.V.)

$$\textbf{C.V.} = \frac{\sigma.}{\overline{X}} \times 100 = \frac{5.37}{13.98} \times 100 = 38.41$$

Appendix-IX

Calculation of Loan & Advances to Total Deposit Ratio of NABIL

Fiscal Year	Loan & Advances	Total Deposit	X	$(X-\overline{X})^2$
2005/06	12922543	19347399	66.79	2.82
2006/07	15545779	23342285	66.60	3.49
2007/08	21365053	31915047	66.94	2.34
2008/09	27589933	37348256	73.87	29.16
2009/10	32268873	47345780	68.16	0.09
			$\sum X=342.36$	37.90

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{342.36}{5}=68.47$$

Calculation of Standard Deviation (σ)

$$\sigma \mathbf{D}=\sqrt{\frac{\sum (X-\overline{X})^2}{N}}=\sqrt{\frac{37.90}{5}}=2.75$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.} = \frac{\sigma.}{\overline{X}}\times 100=\frac{2.75}{68.47}\times 100=4.02$$

Appendix-X

Calculation of Loan and Advances to Total Deposit Ratio of HBL

Fiscal Year	Loan & Advance	Total Deposit	X	$(X-\overline{X})^2$
2005/06	14642560	26490852	55.27	75.69
2006/07	16997997	30048418	56.57	54.76
2007/08	19497520	31842789	61.23	7.51
2008/09	24793155	34681345	71.49	56.55
2009/10	27980628	37611202	74.39	108.58
			∑X=318.59	303.09

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{318.95}{5}=63.97$$

Calculation of Standard Deviation (σ)

$$\sigma\mathbf{D}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{303.09}{5}}=7.79$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{7.79}{63.97}\times 100=12.18$$

Appendix-XI

Calculation of Loan and Advances to Total Assets Ratio of NABIL

Fiscal Year	Loan & Advance	Total Assets	X	$(X-\overline{X})^2$
2005/06	12922543	22329971	57.87	2.46
2006/07	15545779	27253393	57.04	5.76
2007/08	21365053	37132759	57.54	3.61
2008/09	27589933	43867397	62.89	11.90
2009/10	32268873	52150237	61.88	5.95
			$\sum X=297.22$	29.68

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{297.22}{5}=59.44$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{29.68}{5}}=2.44$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{2.44}{59.44}\times 100=4.10$$

Appendix-XII

Calculation of Loan and Advances to Total Assets Ratio of HBL

Fiscal Year	Loan & Advance	Total Assets	X	$(X-\overline{X})^2$
2005/06	14642560	29460390	49.70	42.38
2006/07	16997997	33519141	50.71	30.25
2007/08	19497520	36857624	52.89	11.02
2008/09	24933155	40046686	62.26	36.60
2009/10	27980628	42717124	65.50	86.30
			$\sum X=281.06$	206.55

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{281.06}{5}=56.21$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{206.55}{5}}=6.43$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{6.43}{56.21}\times 100=11.44$$

Appendix-XIII

Calculation of Total Investment to Total Deposit Ratio of NABIL

Fiscal Year	Total Investment	Total Deposit	X	$(X-\overline{X})^2$
2005/06	6178533	19347399	31.93	0.01
2006/07	8945311	23342285	38.32	42.25
2007/08	9939771	31915047	31.14	0.46
2008/09	10826379	37348256	29.00	7.95
2009/10	13600916	47345780	28.73	9.55
			$\sum X=159.12$	60.22

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{159.12}{5}=31.82$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{60.22}{5}}=3.47$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{3.47}{31.82}\times 100=10.91$$

Appendix-XIV

Calculation of Total Investment to Total Deposit Ratio of HBL

Fiscal Year	Total Investment	Total Deposit	X	$(X-\overline{X})^2$
2005/06	10889031	26490852	41.10	50.69
2006/07	11822985	30048418	39.35	28.84
2007/08	13340177	31842789	41.89	62.57
2008/09	8710691	34681345	25.12	78.49
2009/10	8444910	37611202	22.45	132.94
			$\sum X=169.10$	353.53

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{169.91}{5}=33.98$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{353.53}{5}}=8.40$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{8.4}{33.98}\times 100=24.72$$

Appendix-XV

Calculation of Total Debt to Equity Ratio of NABIL

Fiscal Year	Total Debt	Total Equity	X	$(X-\overline{X})^2$
2005/06	20019892	2310078	866.63	35317.68
2006/07	24686925	2566467	961.90	8585.87
2007/08	34258187	2874572	1191.77	18826.58
2008/09	40375832	3491566	1156.38	10367.31
2009/10	44877106	4269490	1051.11	11.90
			$\sum X=5227.79$	73109.34

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{5227.79}{5}=1045.56$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{73109.34}{5}}=120.92$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{120.92}{1054.56}\times 100=11.47$$

Appendix-XVI

Calculation of Total Debt to Equity Ratio of HBL

Fiscal Year	Total Debt	Total Equity	X	$(X-\overline{X})^2$
2005/06	27694215	2223634	1245.45	7633.51
2006/07	31372641	2638323	1189.11	962.86
2007/08	33399464	2776068	1203.12	2028.60
2008/09	36038345	3281977	1098.07	3601.20
2009/10	38270500	3628678	1054.67	11.63
			$\sum X=5790.42$	14237.80

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{5790.42}{5}=1158.08$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{14237.80}{5}}=53.36$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{53.36}{1158.08}\times 100=4.61$$

Appendix-XVII

Calculation of Total Debt to Total Assets Ratio of NABIL

Fiscal Year	Total Debt	Total Assets	X	$(X-\overline{X})^2$
2005/06	20019892	22329971	89.65	0.22
2006/07	24686925	27253393	90.58	0.21
2007/08	34258187	37132759	92.26	4.58
2008/09	40375832	43867397	92.04	3.69
2009/10	44877106	52150237	86.05	16.56
			$\sum X=450.58$	25.26

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{450.58}{5}=90.12$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{25.26}{5}}=2.25$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{2.25}{90.12}\times 100=2.49$$

Appendix-XVIII

Calculation of Total Debt to Total Assets Ratio of HBL

Fiscal Year	Total Debt	Total Assets	X	$(X-\overline{X})^2$
2005/06	27694215	29460390	94.00	3.13
2006/07	31372641	33519141	93.60	1.88
2007/08	33399464	36175532	92.33	0.01
2008/09	36038345	39320322	91.65	0.34
2009/10	38270500	42717124	89.59	6.97
			$\sum X=461.17$	12.33

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{461.17}{5}=92.23$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{12.33}{5}}=1.57$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{1.57}{92.23}\times 100=1.70$$

Appendix-XIX

Calculation of Interest Income to Interest Expenses Ratio of NABIL

Fiscal Year	Interest Income	Interest Expenses	X	$(X-\overline{X})^2$
2005/06	1309998	357161	366.78	8886.83
2006/07	1587759	555710	285.72	174.50
2007/08	1978697	758436	260.89	135.02
2008/09	2798486	1153280	242.65	891.61
2009/10	4047725	1960107	206.51	4356
			$\sum X=1362.55$	14443.96

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{1362.55}{5}=272.51$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{14443.96}{5}}=53.75$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{53.75}{272.51}\times 100=19.72$$

Appendix-XX

Calculation of Interest Income to Interest Expenses Ratio of HBL

Fiscal Year	Interest Income	Interest Expenses	X	$(X-\overline{X})^2$
2005/06	1626474	648842	250.67	254.08
2006/07	1775583	767411	231.37	11.29
2007/08	1963647	823745	238.38	13.32
2008/09	2342198	934778	250.56	250.58
2009/10	3148605	1553530	202.67	1027.84
			$\sum X=1173.65$	1557.11

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{1173.65}{5}=234.73$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{1557.11}{5}}=17.65$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{17.65}{234.73}\times 100=7.52$$

Appendix-XXI

Calculation of Return on Loan & Advances Ratio of NABIL

Fiscal Year	Net Profit	Loan & Advances	X	$(X-\overline{X})^2$
2005/06	635262	12922543	4.92	0.85
2006/07	673960	15545779	4.34	0.12
2007/08	746468	21365053	3.49	0.26
2008/09	1031053	27589933	3.74	0.07
2009/10	1139099	32268873	3.53	0.22
			$\sum X=20.02$	1.52

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{20.02}{5}=4$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{1.52}{5}}=0.55$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{0.55}{4}\times 100=13.75$$

Appendix-XXII

Calculation of Return on Loan & Advances Ratio of HBL

Fiscal Year	Net Profit	Loan & Advances	X	$(X-\overline{X})^2$
2005/06	457458	14642560	3.12	0.08
2006/07	491823	16997997	2.89	0.01
2007/08	635869	19497520	3.26	0.18
2008/09	752835	24793155	3.04	0.04
2009/10	508798	27980628	1.82	1.02
			$\sum X=14.13$	1.33

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{14.13}{5}=2.83$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{1.33}{5}}=0.52$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{0.52}{2.83}\times 100=18.37$$

Appendix-XXIII

Calculation of Net Profit/Loss to Total Assets Ratio of NABIL

Fiscal Year	Net Profit/Loss	Total Assets	X	$(X-\overline{X})^2$
2005/06	635262	22329971	2.84	0.22
2006/07	673960	27253393	2.47	0.01
2007/08	746468	37127759	2.01	0.13
2008/09	1031053	43867397	2.35	0.00
2009/10	1139099	52150237	2.18	0.04
			$\sum X=11.85$	0.40

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{11.85}{5}=2.37$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{0.40}{5}}=0.28$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{0.28}{2.37}\times 100=11.81$$

Appendix-XXIV

Calculation of Net Profit/Loss to Total Assets Ratio of HBL

Fiscal Year	Net Profit/Loss	Total Assets	X	$(X-\overline{X})^2$
2005/06	457458	29460390	1.55	0.00
2006/07	491823	33519141	1.47	0.01
2007/08	635869	36175532	1.76	0.03
2008/09	752835	39320322	1.91	0.11
2009/10	508798	42717124	1.19	0.15
			$\sum X=7.88$	0.30

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{7.88}{5}=1.58$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{0.30}{5}}=0.24$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{0.24}{1.58}\times 100=15.19$$

Appendix- XXV

Calculation of Interest Income to Total Loan & Advances Ratio of NABIL

Fiscal Year	Interest Income	Loan & Advances	X	$(X-\overline{X})^2$
2005/06	1309998	12922543	10.14	0.10
2006/07	1587759	15545779	10.21	0.06
2007/08	1978697	21365053	9.26	1.44
2008/09	2798486	27589933	10.14	0.10
2009/10	4047725	32268873	12.54	4.33
			$\sum X=52.29$	6.03

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{52.29}{5}=10.46$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{6.03}{5}}=1.09$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{1.09}{10.46}\times 100=10.42$$

Appendix-XXVI

Calculation of Interest Income to Total Loan & Advances Ratio of HBL

Fiscal Year	Interest Income	Loan & Advances	X	$(X-\overline{X})^2$
2005/06	1626474	14642560	11.11	0.41
2006/07	1775583	16997997	10.45	0.00
2007/08	1963647	19497520	10.07	0.16
2008/09	2342198	24793155	9.45	1.04
2009/10	3148605	27980628	11.25	0.61
			$\sum X=52.33$	2.22

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{52.33}{5}=10.47$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{2.22}{5}}=0.67$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{0.67}{10.47}\times 100=6.39$$

Appendix-XXVII

Calculation of Loan Loss Provision toTotal Loan & Advances Ratio of NABIL

Fiscal Year	Loan Loss Provision	Loan & Advances	X	$(X-\overline{X})^2$
2005/06	3770	12922543	0.03	0.09
2006/07	14206	15545779	0.09	0.06
2007/08	64055	21365053	0.30	0.00
2008/09	45722	27589933	0.17	0.03
2009/10	355829	32268873	1.10	0.58
			∑X=1.69	0.76

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{1.69}{5}=0.34$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{0.76}{5}}=0.39$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{0.39}{0.34}\times 100=114.71$$

Appendix-XXVIII

Calculation of Loan Loss Provision to Total Loan & Advances Ratio of HBL

Fiscal Year	Loan Loss Provision	Loan & Advances	X	$(X-\overline{X})^2$
2005/06	145155	14642560	0.99	0.01
2006/07	90689	16997997	0.53	0.31
2007/08	58431	19497520	0.29	0.64
2008/09	199214	24793155	0.80	0.08
2009/10	692640	27980628	2.84	3.06
			$\sum X=5.45$	4.10

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{5.45}{5}=1.09$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{4.10}{5}}=0.91$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{0.91}{1.09}\times 100=83.48$$

Appendix-XXIX

Calculation of Non-Performing Loan to Total Loan & Advances Ratio of NABIL

Fiscal Year	Non-Performing Loan	Loan & Advances	X	$(X-\overline{X})^2$
2005/06	182624	13278782	1.38	0.08
2006/07	178293	15903023	1.12	0.02
2007/08	161085	21759460	0.74	0.13
2008/09	224817	27999012	0.80	0.09
2009/10	486281	33030968	1.47	0.14
			$\sum X=5.51$	0.46

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{5.51}{5}=1.10$$

Calculation of Standard Deviation (σ)

$$\mathbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{0.46}{5}}=0.30$$

Calculation of Coefficient of Variation (C.V.)

$$\mathbf{C.V.}\ =\ \frac{\sigma.}{\overline{X}}\times 100=\frac{0.30}{1.10}\times 100=27.27$$

Appendix-XXX

Calculation of Non-Performing Loan to Total Loan & Advances Ratio of HBL

Fiscal Year	Non-Performing Loan	Loan & Advances	X	$(X-\overline{X})^2$
2005/06	1040757	15761976	6.60	8.70
2006/07	641615	17793723	3.61	0
2007/08	477229	20179613	2.36	1.66
2008/09	551309	25519519	2.16	2.22
2009/10	1024831	29123754	3.52	0.02
			$\sum X=18.25$	12.60

Calculation of Mean

$$\left(\overline{X}\right)=\frac{\sum X}{N}=\frac{18.25}{5}=3.65$$

Calculation of Standard Deviation (σ)

$$\textbf{SD}=\sqrt{\frac{\sum(X-\overline{X})^2}{N}}=\sqrt{\frac{12.60}{5}}=1.59$$

Calculation of Coefficient of Variation (C.V.)

$$\textbf{C.V.} = \frac{\sigma.}{\overline{X}}\times 100=\frac{1.59}{3.65}\times 100=43.56$$

Appendix-XXXI

Calculation of 't' Value of Total Loan & Advances to Total Assets Ratio of NABIL and HBL

Fiscal Year	X	Y	$(X-\overline{X})^2$	$(Y-\overline{Y})^2$
2005/06	57.87	49.70	2.46	42.38
2006/07	57.04	50.71	5.76	30.25
2007/08	57.54	52.89	3.61	11.02
2008/09	62.89	62.26	11.90	36.60
2009/10	61.88	65.50	5.95	86.30
Total			**29.68**	**206.55**

We Know that,

$\overline{X}$ = 59.44

$\overline{Y}$= 56.21

$$S^2 = \frac{\sum(X-\overline{X})^2+\sum(Y-\overline{Y})^2}{n_1+n_2-2} = \frac{29.68+206.55}{5+5-2} = 29.53$$

$$t_{cal} = \frac{\overline{X}-\overline{Y}}{\sqrt{S^2(\frac{1}{n_1}+\frac{1}{n_2})}} = \frac{59.44-56.21}{\sqrt{29.53(\frac{1}{5}+\frac{1}{5})}} = 0.9389$$

Here

X= Loan and advances to total Assets Ratio of NABIL

Y= Loan and advances to total Assets Ratio of HBL

Tabulated value of 't' test

Level of Significance (l.s.) = 5%

Degree of Freedom (D.F.)= $(n_1+ n_2- 2) = (5+5-2)= 8$

t_{tab}= 2.306

Appendix-XXXII

Calculation of 't' Value of Interest Income to Total Loan & Advances Ratio of NABIL and HBL

Fiscal Year	X	Y	$(X-\overline{X})^2$	$(Y-\overline{Y})^2$
2005/06	10.14	11.11	0.10	0.41
2006/07	10.21	10.45	0.06	0.00
2007/08	9.26	10.07	1.44	0.16
2008/09	10.14	9.45	0.10	1.04
2009/10	12.54	11.25	4.33	0.61
Total			**6.03**	**2.22**

We Know that,

$\overline{X}$ = 10.46

$\overline{Y}$= 10.47

$S^2 = \frac{\sum(X-\overline{X})^2+\sum(Y-\overline{Y})^2}{n_1+n_2-2} = \frac{6.03+2.22}{5+5-2}$= 1.03

$t_{cal} = \frac{\overline{X}-\overline{Y}}{\sqrt{S^2(\frac{1}{n_1}+\frac{1}{n_2})}} = \frac{10.46-10.47}{\sqrt{1.03\ (\frac{1}{5}+\frac{1}{5})}}$ = - 0.0156

$|t_{cal}|$ = 0.0156

Here

X= Interest income to total Loan and advances Ratio of NABIL

Y= Interest income to total Loan and advances Ratio of HBL

Tabulated value of 't' test

Level of Significance (l.s.) = 5%

Degree of Freedom (D.F.)= $(n_1+ n_2- 2)$ = (5+5-2)= 8

t_{tab}= 2.306

Appendix-XXXIII

Calculation of 't' Value of Loan Loss Provision to Total Loan & Advances Ratio of NABIL and HBL

Fiscal Year	X	Y	$(X-\overline{X})^2$	$(Y-\overline{Y})^2$
2005/06	0.03	0.99	0.09	0.01
2006/07	0.09	0.53	0.06	0.31
2007/08	0.30	0.29	0.00	0.64
2008/09	0.17	0.80	0.03	0.08
2009/10	1.10	2.84	0.58	3.06
Total	1.69	5.45	0.76	4.10

We Know that,

$\overline{X}$ = 0.34

$\overline{Y}$= 1.09

$S^2 = \frac{\sum(X-\overline{X})^2+\sum(Y-\overline{Y})^2}{n_1+n_2-2} = \frac{0.76+4.10}{5+5-2} = 0.61$

$t_{cal} = \frac{\overline{X}-\overline{Y}}{\sqrt{S^2(\frac{1}{n_1}+\frac{1}{n_2})}} = \frac{0.34-1.09}{\sqrt{0.61(\frac{1}{5}+\frac{1}{5})}} = -1.5306$

$|t_{cal}| = 1.5306$

Here

X= Loan loss provision to total Loan and advances Ratio of NABIL

Y= Loan loss provision to total Loan and advances Ratio of HBL

Tabulated value of 't' test

Level of Significance (l.s.) = 5%

Degree of Freedom (D.F.)= $(n_1+ n_2- 2) = (5+5-2)= 8$

t_{tab}= 2.306