

**LOAN MANAGEMENT OF COMMERCIAL BANKS (With  
Special Reference to Nepal Bank Ltd. and Himalayan Bank Ltd.)**

Submitted By

**Rajya Laxmi Maharjan**

**PATAN MULTIPLE CAMPUS**

**T.U. Registration. No: 7-1-258-56-98**

**Campus Roll No: 232/062**

**Exam Roll no.1500/064**

A Thesis Submitted To:

**Office of the Dean  
Faculty of Management  
Tribhuvan University**

In partial fulfillment of the requirements for the degree of

**Master of Business Studies (M.B.S)**

**Lalitpur, Nepal  
February, 2012**

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# **RECOMMENDATION**

This is to certify that the thesis:

Submitted by:

**RAJYA LAXMI MAHARJAN**

Entitled:

**LOAN MANAGEMENT OF COMMERCIAL BANKS**

**(With Special Reference to Nepal Bank Ltd. and Himalayan Bank Ltd.)**

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

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# VIVA -VOCE SHEET

We have conducted the viva-voce examination of the thesis

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**(With Special Reference to Nepal Bank Ltd. and Himalayan Bank Ltd.)**

and found the thesis to be the original work of the student written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirements for the degree of

**Master of Business Studies (M.B.S)**

**Viva-Voce Committee**

Head, Research Department .....

Member (Thesis Supervisor) .....

Member (External Expert) .....

Date: .....

## DECLARATION

I here by declare that the work reported in this thesis entitled ***LOAN MANAGEMENT OF COMMERCIAL BANKS (With Special Reference to Nepal Bank Ltd. and Himalayan Bank Ltd.)*** submitted to Patan Multiple Campus, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the Master's Degree in Business Study (M.B.S.) under the supervision of Prof. Bijaya Gopal Shrestha, Lecturer of Patan Multiple Campus.

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This thesis entitled Loan Management of Commercial Banks (With Special Reference to Nepal Bank Ltd. and Himalayan Bank Ltd.) has been prepared for the partial fulfillment of the requirement of Master's Degree of Business Studies (M.B.S) under the Faculty of Management, Tribhuvan University, is based on research models involving the use of quantitative and qualitative model to analyze the loan management of Commercial Banks (With Special Reference to Nepal Bank Ltd. and Himalayan Bank Ltd.).

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Rajya Laxmi Maharjan  
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## **ABBREVIATIONS**

BS	= Bikram Sambat
CB	= Commercial Bank
CV	= Coefficient of Variation
FY	= Fiscal Year
HBL	= Himalayan Bank Limited
I.e	= That is
LM	= Loan Management
Ltd.	= Limited
MBS	= Master of Business Studies
NBL	= Nepal Bank Limited
NIC	=Nepal Industrial and Commercial Bank
NPA	= Non – Performing Assets
NRB	= Nepal Rastra Bank Limited
RBB	= Rastriya Banijya Bank Limited
ROA	= Return on Assets
SD	= Standard Deviation
SCBNL	= Standard Chartered Bank Nepal Limited
TA	= Total Assets

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# CHAPTER -1

## INTRODUCTION

### 1.1 Background of the Study

Banking sector play an important role in the economic development of the country. Commercial banks are one of the vital aspects of this sector, which deals in the process of redirecting the available resources to the needy sector. It is the intermediary between the deficit and surplus of financial resources. People keep their surplus money as deposits in the banks and hence banks can provide such funds to finance the industrial activities in the form of loans and advances. It pools the funds scattered in the community and mobilizes them to the productive sector. If a bank behaves irresponsibly, the costs borne by the economy are enormous. A large amount of depositor's money is at stake. The bankers have the responsibility of safeguarding the interest of the depositors, the shareholders and the society they are serving. Therefore, a sound, financially healthy, competitive and reliable banking system is essential for every country to develop and secure its economic growth. In Nepal, among the available financial institutions banking industry dominates all. Thus, banking is a vital part of national economy and a vehicle for the mobilization of economy's financial resources and extension of credit to the business and service enterprises.

For any industry to survive it should look to have profit and bank also not falling in exception, aims at making a huge profit. Since loans and advances are more profitable than any other assets, they are willing to lend as much as of its fund as possible. Loan is regarded as the most income generating assets especially in commercial banks. It 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 investment; the most of the investment activities based on the loan; it is the main factor for creating profitability.

Webster's Dictionary defines loan as "something lent; esp. a sum of money lent, often for a specified period and repayable with interest". Financial institutions lend money out of deposit, they have received. They must increase money by advancing loans since they have to pay interest on deposits.

Banks do not keep cent percent reserve against deposit for meeting the demands of depositors, as all depositors do not need money at the same time. Banks with a small reserve satisfy their demand whenever demonstrated and grant loan from excess reserve than depositor's need to needy feasible subscriber.

Loans and advances are the important item on the assets side of the balance sheet of commercial banks. "Banks earn interest on credits and advances, which is one of the major sources of income for the banks. Banks prepare credit portfolio, otherwise it will not only add bad debts but also affect profitability adversely"

Commercial banks perform a wide spectrum of functions. Loan management is the most critical factor in determining the strength of any bank. Primary factor that can be considered are the quality of loan portfolio, mix of risk assets and credit administration system. However, advancing loans is one of their major functions. Bank loans contribute a lot to the growth of new business, which ultimately improves the economic health of the country. The role of bank loan in the economic development of the country is of great value. Normally, commercial banks loans in four forms namely overdraft, cash credit, direct loan and discounting bills of exchange. Loans and advances constitute a major portion of the assets of a commercial bank and the interest income earned from loans and advances is a major contributor to a bank's profit.

If the loan asset of the bank turns out to be non-performing or least liquid, the bank cannot obtain the targeted return from loans and advances. Thus an effective management of loan is a must.

## **1.2 Statement of the Problem**

Commercial banks are major components of financial system and they work as a catalyst of economic development of the nation. The main objective of the bank is profit and wealth maximization with the responsibility of safe guarding the interest of the stakeholders. The major problem in almost all developing countries and Nepal being no exception is that of capital formation and proper utilization. In these countries the commercial banks have to shoulder more responsibilities and act as development bank due to the lack of other specialized institutions. The problem of

lending has become very serious for developing countries like Nepal (Singh; 1974:41).

Commercial banks are not properly utilizing their deposits because of lack of sound lending policy and investment opportunities. Banks are reducing their interest rates on the deposits and the minimum balance to be maintained is also reducing. They are found to be making loan only on short-term basis against movable merchandise. There is hesitation to invest on long-term projects because they are much more safety minded. So they follow conservative loan policy, which is based on string security. They are found to be more interested in investment in less risky and highly liquid sectors i.e. treasury bills, development bonds and other securities. They keep high liquid position and flow lower funds to the productive sectors, these results into lower profitability to Commercial banks and ignorance to the national economic growth process. Lending is the major source of income for commercial banks though it involves high risk. It may effect negatively or positively to the company's profitability and liquidity, so it is one of the most important decisions for company. Financial and banking sectors are facing the problem of swelling non-performing assets (NPA). The total NPA in the banking system is about 35 billions.

Commercial banks have lack of far sightedness and lower productivity due to lack of supervision regarding whether there is proper utilization of their investment. On healthy competition in banking sectors lead to grant much more loans, advances and other facilities to its clients against insufficient deposits. Unsecured loans are the other part for liquidation of banks. If such loans are issued without following the guidelines of the company then the bank will not be able to earn profit. Instead it might even loose the principle amount.

In general the study seeks to trace out the general credit policy and practices in the bank. In addition to this the study attempts to solve the following problems on credit function of commercial banks:

- ) What is the liquidity position, the impact of deposits in liquidity and its effects on lending practices?

- ) What is the portfolio of loans and advances in the bank?
- ) What is the proportion of NPA to total loan and advances of the bank?
- ) What is the lending policy?
- ) What is the situation of recovery status of the bank?

### **1.3 Objective of the Study**

The main objective of the study is to find out the loan management position of the commercial banks. The basis of the study is to find out the exact situation in the credit management aspects (practice of disbursing loan and its recovery)

Commercial Banks:

- ) To analyze the lending efficiency of subjected banks
- ) To analyze the portfolio behavior of loans and advances of the subjected banks
- ) To analyze the trend of loan disbursement and loan recovery of subjected banks
- ) To find out the strength and weakness in loan administration of the bank.

### **1.4 Significance of the Study**

Research itself has its own importance because it aims to gain knowledge and to add new literatures in existing field. The significance of this study lies mainly in filling a research gap on the study of loan management of commercial bank .This study will contribute significantly to solve the problem existing in the bank to formulate the policy and strategies to maintain credit activities effectively. Mainly, the study is important for the researcher to fulfill the academic requirements of master degree. On the other hand the study is important for commercial banks, scholars, investors, students, government and many other parties. To conclude, this study will be helpful to those who want to study in further detail and widely in this field. At last, it is

expected that the study will be a drop of literature in the field of commercial bank and their loan management analysis.

The following are the few points, which throw lights on the importance on this thesis

1. As a business student, it is a golden opportunity to show skill in financial analysis; this report will show the intelligence and skill of the student. This report is a criterion for evaluation of the student's qualification.
2. This thesis will provide student an experience in financial analysis.
3. This thesis will provide information to the student as to how the business house is running.
4. This thesis might be useful for those who are willing to know something about the loan management in Bank.
5. This thesis may be useful for the library purpose so that any student wanting to prepare a report can have some ideas about it.
6. This thesis can be used as a guideline while preparing a small project report.

### **1.5 Limitations of the Study**

Though best possible efforts have been made to prepare this fieldwork report, this report is still not free of some limitations. The limitations inherit in this report are:

- The statistics, which is used for the purpose of the study, is secondary, which consist of banks publication, audited reports and other secondary sources, bank publications may not be always reliable because they may publish the reports according to their profit policy and market situation & personal interviews and questionnaires may not be factual so the data may not be hundred percent accurate.
- Some information relating to the subject matter could not be obtained because of the bank's secrecy. So, there are some difficulties to get the sufficient information as banks hesitate to provide data easily.

- A deep knowledge of the subject matter could not be gained because of time restriction. The study has been completed within a limited time period and resources so, the result may not be as it had to be.
- This study is associated with only to the financial performance of Subjected banks.

## **1.6 Organization of the study**

Some preliminary pages have been incorporated in the beginning of the report that contains list of tables, list of figures, list of abbreviations and list of contains. This study is divided into five chapters, Chapters 1 of this study is about the introduction of the study. This chapter includes the introduction explaining the problem or thesis the purpose and scope of the study, and general background of the Study, statement of the problem, object of the study, limitations of the study and significance of the study. Chapter 2 of the study is devoted for review of literature. In this chapter, the review from books, journals, thesis and independent studies are taken into account. Chapter 3 attempts to deal about the methodological aspect of the research. It highlights the research design, population and sample, natures and source of data, method of analysis, data analysis tools Chapter 4 concentrates on presentation and analysis of data. In this section the analyzed data should be tasted by means of different test statistics. There are different test statistics, like Arithmetic Mean, Karl person's coefficient correlation, Diagrammatic presentation (Bar diagram, Pie chart, histogram, graph of time series, Graph of frequency distribution) and financial tools like Liquidity ratio, Asset Management ratio, Activity Ratio, Loan and advance portfolio, Interest and loan & advance performance, Loan and loss provision portfolio. Analysis according to the nature of data and problem the appropriate tools can be chosen. The statistical tests and financial tools help in drawing conclusion. Finally, chapter 5 has been assigned for summary of the study, conclusion and recommendations including implication for the study works. This chapter summarizes the overall aspects of the research and has been attempted to draw important conclusions along with recommendations foe the future research issues

## CHAPTER -2

### REVIEW OF LITERATURE

Review of literature is the fundamental part of research work which describes what research studies have been conducted in the past and what remains to be done. It reviews research studies or other related proposition in related area of the study so that all the past studies, their conclusions and deficiencies may be known and further research can be conducted. The main reason for the full review of research of the past is to know the outcomes of those investigations in areas where similar concepts and methodologies had been used successfully. In this process, efforts has been made to examine and review some of the related books, articles published in different economic journals, bulletins, dissertation papers, magazines, newspapers, and websites. This chapter is comprehensive study on the conceptual framework review of books, journals and various researches regarding loan management of NBL and HBL. Review of Literature can be studied by dividing it in the following ways:

- ) Conceptual Framework
- ) Review of Related Studies
- ) Research Gap

#### 2.1 Conceptual Framework

Under this heading meaning & concept of the terms used in the study is cleared out.

##### 2.2.1 Loan Management:

“Effective management of the loan and the credit function is fundamental to a bank’s safety and soundness. Loan management (LM) is the process by which risks that are inherent in the credit process are managed and controlled. Because review of the LM process is so important, it is a primary supervisory activity .Assessing LM involves evaluating the steps bank management takes to identify and control risk throughout the credit process. The assessment focuses on what management does to identify issues before they become problems” (*Rose; 2002:47*).

“Lending is the principal business activity for most commercial banks. The loan is typically the largest asset and the predominate source of revenue. As such, it is one of the greatest sources of risk to a bank’s safety and soundness. Whether due to lax credit standards, poor risk management, or weakness in the economy, loan problems have historically been the major cause of bank losses and failures”. (*Khan; 1982: 110*)

Loan management is especially focused on the management of loan disbursement and collection procedures, controlling and monitoring of lending activities. Here, planning denotes consideration of risk and return to meet profit object along with division of loan assets among consumer, commercial and mortgage. Organization refers to putting goals and objectives into action through definition and process with support functions. Controlling entails making and monitoring loans as per deadlines supported by corrective actions to be taken in granting loans if necessary:

All the activities followed by the bank for the disbursement and collecting of loan are known as loan management.

#### **A. Loan disbursement:**

Banks are expected to support their local communities with an adequate supply of credit for all legitimate business to consumer financial needs and to price that credit responsibility in line with competitively determined interest rates. "In deed, making loans is the principal economic function of banks to fund consumption and investment spending by business, individuals and units of government. How will a bank perform its lending function has a great deal to do with the economic health of its region, because banks loan support the growth of new business and jobs. Loans often seem to convey positive information to the market place about borrower's credit quality, enabling to obtain more and perhaps some what cheaper funds from other source."

In banking sector all transaction and unavoidable loan disbursement policy and its working methods or procedure is regarded very important. The policy of loan flow, loan administration, audit of loan, renewable of loan, the conditions of loan flow,

documents of loan flow, the provision of security, the procession of the payment of the capital and its interest and others such procedures which plays a great role in healthy competitive activities.

## **B. Loan Collection**

A bank or any financial institution can be described necessary amount to their borrowers and collect the entire disburse amount in time if there is a good loan management system. "Just as expediting the collection process conserves cash slowing disbursements accomplishes the same thing by the same thing keeping cash on hand for longer period. An obvious way to do this is simply to delay payment, but this involves equally obvious difficulties. Firms have, in the past, devised rather ingenious methods for 'legitimately' lengthening the collection period on their own check ranging from maintenance disbursement accounts in remote banks to using slow, awkward payment procedure. Since such practices are usually recognized for what they are, their use should be avoided.

Designation of repayment of the loan is also an art to the bankers. The appropriate selection of the repayment method according to the nature of loan is also a challenging part of lending. Loan is defined as the amount expected to be repaid with interest. In each loan, modalities for repayments is mentioned which is affected by the nature of debt. In case of long-term loan, payment is received in the form of installments (principal + Interest) as per pre-fixed schedule. So in the case of hire purchase loan while in case of overdraft, interest is paid at the given frequency (monthly/ quarterly/ bi-annually) while principal is paid at any time before expiry of the facility. In case of part payment, interest is paid first and remaining amount is utilized to reduce principal outstanding. There are loans in which interest and full debt is paid in lump sum. In some cases, interest is paid periodically and full debt at maturity.

### **2.1.2 Loan Management Objectives**

“Loan objectives establish specific, measurable goals for the bank. The board of directors must ensure that loans are made with the following three basic objectives in mind.” (*Crosse; 1963: 73*)

- To grant loans on a sound and collectible basis.
- To invest the bank’s funds profitably for the benefit of shareholders and the protection of depositors.
- To serve the legitimate credit needs of their communities.

### **2.1.3 Strategic Planning for the Loan**

“For most banks, meeting the aforementioned three objectives will require that senior management and the board of directors develop medium- and long-term strategic plans and objectives for the loan portfolio. These strategies should be consistent with the strategic direction and risk tolerance of the institution. They should be developed with a clear understanding of their risk/reward consequences. They also should be reviewed periodically and modified as appropriate. In drawing up strategic objectives, management and the board should consider establishing” (*Crosse; 1963: 85*)

- What proportion of the balance sheet, the loan should comprise?
- Goals for loan quality.
- Goals for portfolio diversification.
- How much the loan should contribute to the bank’s financial objectives?
- Loan product mix.
- Loan growth targets by product, market, and portfolio segment.
- Product specialization.
- What the bank’s geographic markets should be.

- Targeted industries.
- Targeted market share.
- Community needs and service.
- General financial objectives (e.g., increase fee income).

The bank's loan policies, underwriting guidelines, and procedures should communicate and support the strategic objectives for the portfolio. MIS should be able to inform management about whether performance measures up to plans. Management should evaluate business, marketing, and compensation plans to ensure that short-term goals and incentives are consistent with strategic portfolio objectives and risk tolerances. In community banks without formal strategic plans, senior management should be able to articulate the bank's strategic objectives. It should be evident, as well, that the board of directors has endorsed those objectives.

#### **2.1.4 The Loan Policy**

The loan policy is the primary means by which senior management and the board guide lending activities. Although the policy primarily imposes standards, it also is a statement of the bank's basic credit philosophy. It provides a framework for achieving asset quality and earnings objectives, sets risk tolerance levels, and guides the bank's lending activities in a manner consistent with the bank's strategic direction. Loan policy sets standards for portfolio composition, individual credit decisions, fair lending, and compliance management.

Loan policies vary in length, organization, degree of detail, and breadth of topics, there is no ideal format. Frequently, the bank's general lending policy will be supplemented by more detailed underwriting standards, guidelines, and procedures. Within the same banking company, certain aspects of the policy may vary because of factors such as geographic location, economic conditions, personnel, or portfolio objectives. The format should be tailored to fit the needs of a particular bank, and the scope and detail should be commensurate with the complexity of the bank's lending activities. (*William; 1960: 104*)

In all but very small community banks, the loan policy will be written.

“The policy should provide a realistic description of where the bank wants to position itself on the risk/reward spectrum. It needs to provide sufficient latitude for a bank to respond to good business opportunities while concurrently controlling credit risk. In normal circumstances, a bank should be able to achieve portfolio objectives and respond to changing market conditions without triggering a limit. Limits should not be so conservative that insignificant changes breach them, nor should they be so liberal that they have no practical effect”. (*Grywinski, 1991:75*)

“For the policy to be an effective risk management tool, it must clearly establish the responsibilities of those involved in the lending process. For example, who is authorized to approve a covenant violation, who arbitrates risk rating differences, can a credit-scored decision be overridden? Lenders must know what is expected of them. When policy is vague or too broad, credit standards may be unclear and virtually nothing may be regarded as an exception. If the policy states that a bank will extend credit to established businesses, almost any company would qualify. But a policy further requiring the business to be profitable, in operation for at least two years, and located within the bank’s community is providing meaningful guidance” (*Grywinski: 1991: 77*)

When policy is too prescriptive and particular, exceptions to policy will become the rule and meaningless exception data will mask meaningful trends, thereby diminishing the effectiveness of the policy. Because exceptions are so important, the policy should address them specifically; it should state when they are acceptable and how they should be identified, mitigated, and documented. Some lending standards, such as those that implement legal requirements or those whose violation quickly translates into losses, have greater significance than others. More substantive exceptions should have heightened reporting requirements senior management and the board. Failure to comply with the provisions of loan policy concerning exceptions is generally regarded as a material weakness.

“Policies should be periodically reviewed and revised to accommodate changes in the bank’s strategic direction, risk tolerance, or market conditions. Policy review should consider the organizational structure, breadth and complexity of lending activities, capabilities and skills of lending personnel, and strategic portfolio quality and earnings objectives. Changes in regulations and business conditions also need to be considered. In addition to providing an opportunity for change, the review should evaluate how well the policy has guided lending decisions. For example, a high volume of exceptions indicates that many loan decisions are being made outside the policy. This could mean that the bank is assuming more risk than is desirable or that the policy is too restrictive. If the bank’s policy is too restrictive, easing it could increase business opportunities without unduly increasing risk. Conversely, the absence of exceptions may indicate that the policy is too vague, and a tightening of the policy could strengthen the controls on loan quality. All policy reviews should include the organizational unit responsible for assessing compliance with policy”  
(*Reed, Edward, Cotter & Smith; 1980: 82*)

### **2.1.5 Loan Policy Topics**

While the form and contents of loan policies and procedures will vary from bank to bank, there are some topics that should be covered in all cases. These are: (*Chopra; 1989: 17*)

- Loan authorities.
- Limits on aggregate loans and commitments.
- Portfolio distribution by loan category and product.
- Geographic limits.
- Desirable types of loans.
- Underwriting criteria.
- Financial information and analysis requirements.

- Collateral and structure requirements.
- Margin requirements.
- Pricing guidelines.
- Documentation standards.
- Collections and charge-offs.
- Reporting requirements.
- Guidelines for loan participations.
- Off-balance-sheet exposure.

The policy may also address insider transactions, affiliate transactions, conflicts of interest, the code of ethics, community support, appraisal requirements, environmental assessment requirements, relevant accounting issues (such as charge-off loans, nonperforming loans, and debt restructuring), and the allowance for loan and lease losses. Any administrative requirements for granting loans should be covered in the policy. Policies and procedures should also ensure compliance with laws and regulations.

### **2.1.6 Loan Approval Process**

The loan approval process is the first step towards good portfolio quality. When individual credits are underwritten with sound credit principles, the credit quality of the portfolio is much more likely to be sound. Although good loans sometimes go bad, a loan that starts out bad is likely to stay that way. The foremost means to control loan quality is a solid loan approval process.

Every loan approval process should introduce sufficient controls to ensure acceptable credit quality at origination. The process should be compatible with the bank's credit culture, its risk profile, and the capabilities of its lenders. Further, the system for loan approvals needs to establish accountability. Each method of loan approval has inherent

strengths and weaknesses. The committee method is advantageous because knowledge can be shared, but it may diminish accountability and often slows a bank's responsiveness. The individual signature authority system is more timely and establishes clear accountability, but it can create undue credit risk if a lender's knowledge and experience are inadequate to his or her authority. (*Diamond; 1960: 173*)

Laddered or joint authorities, variations that some banks employ, combine elements of both systems. The involvement of an independent loan approval authority whose primary goal is quality (such authority might be invested in a senior credit officer or credit administrator) is also a method to introduce more objectivity to the loan approval process. Whatever approach or combination of approaches a bank uses, internal control mechanisms are necessary to ensure that the approval system produces sound credit decisions.

“An effective loan approval process establishes minimum requirements for the information and analysis upon which a credit decision is based. It provides guidance on the documents needed to approve new credit, renew credit, increase credit to existing borrowers, and change terms in previously approved credits. It will also designate who has the authority to approve credit or changes in credit terms. Loan authorities should be commensurate with the experience of the lender/credit officer and take into consideration the type of credit, the amount of credit, and the level of risk involved. Generally, underwriting document standards should include: (*Dahal & Dahal; 2007: 39*)

- Financial information including current and historical balance sheet and income data, balance sheet, income, and cash flow projections, when appropriate, and comparative industry data when appropriate.
- Financial analysis, including repayment capacity.
- Collateral identification and valuation.
- Guarantor support and related financial information.
- Summary of borrower and affiliated credit relationships.

- Loan terms, including tenor and repayment structure.
- Pricing information, including relationship profitability data.
- Covenants and requirements for future submission of financial data.
- Exceptions to policy and underwriting guidelines.
- Information fields to capture data for concentration reporting, identifying SNCs (shared national credits), etc.
- Risk rating or recommended risk rating.

The approval process for consumer loans may be more streamlined, but should still include sufficient information to support the credit granting decision, including, when applicable, scorecard data.

## **2.2 Conceptual Review of Loan Management**

### **2.2.1 Review of NRB Directives Relating to Loan Classification and Loan Loss**

**Provision** ([www.nrb.org.np](http://www.nrb.org.np))

**1. Classifications of Loan and Advances:** Effective from FY 2058/59 (2001/02) banks shall classify outstanding principal amount of loan and advances on the basis of aging. As per the directives issued by NRB, all loans and advances shall be classified into the following four categories:

**a. 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 are classified and defined as performing loans.

**b. Sub-Standard Loan:** - All loans and advances that are past due for a period of 3 months to 6 months shall be included in this category.

**c. Doubtful Loan:** - All loans and advances which are past due for a period of 6 months to 1 year shall be included in this category.

**d. Loss:** - All loans and advances which are past due for a period of more than 1 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.

Loans 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 substandard 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 bulls purchased and discounted.

### **2.2.2 Loan Loss Provision**

a. 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 follows:

**Table: 2.1**

#### **Classification of Loan Loss Provision**

Loan Classification	Minimum Loan Loss Provision
Pass	1%
Standard	25%
Doubtful	50%
Loss	100%

Loan loss provision set aside for performing loan is defined as ' General Loan Loss Provision' and loan loss provision set aside for non-performing loan is defined as

'Specific Loan Loss Provision.' Where the banks provide for loan loss provisioning in excess of the proportion as required under the directives of NRB, the whole amount of such additional provisioning may be included in General Loan Loss Provision under the supplementary capital.

b. Loan loss provisioning to rescheduled or restructured loans should be as follows:

- i. For rescheduled/ restructured loan, loan loss provision should be at least 12 percent.
- ii. If priority sector or deprived sector loan which is insured or guaranteed priority sector credit has been rescheduled or restructured, provision should be only 25 percent of above point (i) for such loans. (i.e. 25% of 12.50%)
- iii. If interest and principle of rescheduled/restructured loans have been served regularly since last two years, such loans can be converted into 'pass' loan.

c. Priority sector or deprived sector loans which are not insured should be provisioned as per clause no 'a'.

d. Where the loan is extended only against personal guarantee, a statement of the assets, equivalent to the personal guarantee amount not claimable by any other shall be obtained. Such loan shall be classified as per above and where the loans fall under the category of pass, substandard and doubtful, in addition to the normal loan loss provision applicable for the category, an additional provision by 20 percentage shall be provided. Classification of such loans and advances shall be prepared separately. Hence the loan loss provision required against the personal guarantee loan will be 21%, 41%, and 70% for pass, substandard and doubtful category respectively.

### 2.2.3 Reviews of Related Studies

**Banstala (2005)**, has made of study on "*Loan disbursement and repayment pattern of Agricultural Development Bank of Nepal*". He studies whether there is a significant relationship between loan disbursement and repayment. His second research question is whether there is a significant relationship between loan disbursement and outstanding loan. His first question is solved through the test of Karl Pearson's coefficient of correlation and regression analysis. Repayment loan of Bank seems to be directly proportional to the loan disbursement because both have shown movement in same direction i.e. there was increasing order. His second question is also solved through same analysis. Outstanding loan of the banks seems to be directly proportional to the loan disbursement. Because both have shown movement in same direction i.e. there was increasing order. Based on the conclusion of the study and analysis of findings, his five most important recommendations are,

- 1) The amount of the bank's loan disbursement is largely dependent upon the amount of loan repayment in each year. So, the bank should encourage to farmers by various policy such as subsidy on loan, interest etc. for the repayment of loans.
- 2) The bank should provide the facilities of supervision for the effective utilization of its loans.
- 3) The decision making power should be given to managers of branch and sub-branch offices to disburse large amount of loan to farmers.
- 4) The bank should focus to disburse short-term loan.
- 5) The bank should case to collect long-term loan.

**Pyakurel, (2006)**, has made a study on "*Loan Disbursement and Recovery of Nepal Bank Limited*" with the objectives to see loan disbursement process, to analyze the condition of loan recovery and to see the efficiency of new management on recovery of loan. For this trend analysis, ratio analysis and correlation and regression analysis have been used. Trend for five years is studied and interpreted.

Loan disbursement trend shows that it is decreasing every year. He says that what ever the disbursement process is, profit is not decreasing.

Similarly, he analyzes the priority sector loan into agriculture sector, cottage industry, service sector, hire purchase and deprived sector loan. Although he presents the data of disbursement, collection and outstanding figures are excluded. He found the present disbursement and recovery of NBL is normal. It is able to recover due loan unexpected. By the conflict bank reduces many branches and it and not disburse additional loan in priority sector. He opinion is that the new management of NBL is not only effective for collecting over due loan, it is effective in managing every essential factors of bank. He concludes that bank face lot of fraud by bad-employee in case of loan disbursement, recovery and expenses. His recommendation is related with supervision and inspection. His view is that the system must be strict, effective and efficient. Loan should be provided with technical facility. Policy should be formulated taking into consideration of geographical features and infrastructure development of the country.

**Yadav, (2007)**, in his thesis entitled "*A Case Study on Non Performing Assets-with special reference to Nepal Bank Limited and Rastriya Bank Limited*" aims his objectives to specify general reasons of NPA in NBL and RBB and NBL, point out effectiveness of financial reform program in NBL and RBB and recommend to overcome the problems of two banks regarding the NPA's. The share of RBB and NBL in the assets and liabilities of he banking sector is around 50%, comparative efficiency of both of these bank is not well. He focuses that the situation of deposit mobilization of NBL and RBB was focusing to the quality of loan rather than in the volume of loan. Both the financial institutions are able to reduce the level of huge level of NPL to minimum level. Similarly, after the implementation of the financial sector reform program NBL and RBB are able to earn profit from the 2061/062. Further credit financial indicators of these banks seem irrelevant in comparison to NRB standard. Also, various acts and regulations are enacted for the financial sector reform program but the implementation of policies and directives like directed sector credit is insufficient.

**Dahal, (2009)**, in her study on *“Loan Management of NIC Bank with Special Reference to Personal Loan”* tries to explore insight in the loan management aspects (practice of personal loans) of NIC bank. On the basis of primary data, the researcher came to conclude that NIC bank is efficient in loan management and charges appropriate interest rates both on NIC Ghar Subidha and NIC Sajilo Karza. Similarly, the paper document maintained by the bank while disbursing loan is convenient and the valuation of collateral is also satisfactory. Eventually, it can be concluded that interest rate is the major determinant in personal loan disbursement and careful evaluation of the loan proposal is essential before disbursing loan.

She uses simple correlation and regression analysis to draw the relation between amounts of personal loan with the net profit of bank and uses the trend analysis to show that the interest rate will grow up in the future.

Some of her important recommendations are as follows:

- a. The bank should quest the most productive and secure sector to overflow its loan and thus maximize its profit.
- b. The bank should scrutinize the loan proposal and the valuation of collateral shrewdly to ensure the chance of loan recovery.
- c. While disbursing personal loan, the background of both the loaner and the guarantor should be considered strictly to ensure loan recovery. NIC bank should try to collect the feedback from the customers on the requirements that the bank has set out for loan disbursement in order to decrease the harassment and increase the customer satisfaction.
- d. Along with the Ghar Subidha, NIC Sajilo Karza should also be increased and thus finally increase the personal loan amount. The bank should also introduce new scheme to disburse loan on the personal loan headings.
- e. NIC bank should charge the reasonable interest rate to sustain for long run and thus fascinate more customers toward it.

### **2.3 Research Gap:**

Very few researches have been made so far entitled “Loan Management of Nepal Bank Ltd & Himalayan bank Ltd” all of the above researches made are concerned with the loan management of any one financial institution hence this study tries to find out the loan management policy of two different financial institutions so this study is slightly different from the previous ones. Effort on this particular subject will be found properly genuine and it will be recognized valuable study in this particular subject

## CHAPTER - 3

### RESEARCH METHODOLOGY

Research can be defined as an organized, systematic, database, critical, scientific inquiry or investigation into a specific problem, undertaken with the objective of finding answers or solutions to it. It is the systematic and objective analysis and recording of controlled observations that may lead to the developments of generalization principles or theories, resulting in prediction and possibility of ultimate control of events.

Research has two important aspects. First, it is sufficiently broad to include all types of investigations requiring solutions to a problem. Second, it explicitly recognizes the systematic nature of the research process in which data are gathered, recorded, analyzed, and interpreted in an orderly manner.

Research methodology refers to the various sequential steps to be adopted by a researcher in studying a problem with certain object(s) in view. It describes the methods and processes applied in an entire aspect of the study. In fact, research methodology is a systematic way of solving the research problems.

#### **3.1 Research Design.**

Research design means Systematic planning of research, usually including (1) the formulation of a strategy to resolve a particular question; (2) the collection and recording of the evidence; (3) the processing and analysis of these data and their interpretation; and (4) the publication of results.

Research design is an overall framework or plan for the collection and analysis of data that focuses on the data-collection methods, the research instruments utilized, and the sampling plan to be followed. Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to control

variance. The problem, the methodology, data gathering, data analysis and report writing are the basic elements of a research design.

This research study attempts to analyze the loan management of banking sectors. The research design basically follows its loan proceed methods, current scenario of management and future planning for this section. Mostly the analysis is based upon secondary data, i.e. of few years' financial statements of the sample firms, collected directly from those firms and their websites.

According to Kerlinger (1986) "Research Design is the plan structure and strategy of investigation conceived so as to obtain answers to research questions and to control variance. The plan is the overall scheme or program of the research. It includes an outline of what the investigator will do from writing the hypothesis and their operational implications to the final analysis of data the structure of the research is more specific it is the outline, the scheme the paradigm of the operation of the variables and their relation juxtaposition; we build structural schemes for accomplishing operational research purpose. Strategy as used here is also more specific than plan. In other words, strategy implies how the research objectives will be reached and how the problems encountered in the research will be tackled" (p.275)

### **3.2 Data Collection Procedures**

Specifically, the nature of the data is about to be both primary & secondary, but here we use only secondary data as the basic purpose of the study is to fulfill the requirement for the degree of MBS, TU.

#### **Secondary Data;-**

Those data which are collected by one agency, organization or person but used by other agencies, organization or person are called secondary data or secondary sources. It refers to those, which are for already gathered by others. Secondary data are often in the form of published data. However, the unpublished data such as the records, reports of statistics gathered or compiled by others prior to our study are also secondary data.

Collection of secondary data is comparatively cheaper than the collection of primary data but the secondary data may not be in the form that the investigator needs.

The required secondary data are collected from Nepal Stock Exchange, Security Board and the head offices of the respective banks. Annual reports are collected from the sample firms and the Security Board. Besides, the other required data are collected from various sources like the websites, newspapers, magazines, and journals, published and unpublished reports as well.

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

**Population:** The well-specified or identifiable group of people, events or things of interest that the researcher wishes to investigate is known as the population. Population is whole aggregate number in which the researcher has to study.

According to Young "The entire group from which a sample is chosen is known as the population."

Population may be finite or infinite. A finite population is one where the entire member can be easily counted or one containing a fixed number of elements.

**Sample:** is the part of the population that we actually examine in order to gather information. Population is a large unit so it is time consuming, tedious and nearly impossible to analyze each and every individual of the population. So, only a part of population is considered. That finite subject of any population is called the sample

In other words, a sample is any number selected to represent the population according to some rule of plan. Thus a sample is smaller representation of the population.

Sampling thus is the process of selecting a few from a bigger group to become the basis of estimating or predicting a fact, situation or outcome regarding the bigger group.

According to Kerlinger sampling is the process of selecting any portion of a population or universe as representative of the population.

An experiment, observational study or a survey, selects a sample from the population of all individuals about which we desire information. We base conclusions about the population on the basis of study of sample.

The population for this study comprises all the commercial banks of Nepal. There are 17 commercial banks in Nepal. Among them 12 are listed in Nepal Stock Exchange whereas the remaining 5 are not listed. The shares of listed commercial banks are traded actively in the share market. Since the study basically deals with the dividend policy and its impact on market price of stock, the banks declaring dividend are considered and others are set aside. The following are the 2 sample commercial banks selected from among the populations:

1. Nepal Bank Limited
2. Himalayan Bank Limited

These are the leading commercial banks of Nepal

### **3.4 Sources Of Data**

The study is based on secondary data. The required data for analysis are directly collected from the balance sheet, profit and loss account of concerned banks from the annual report provided. It has also taken the NRB research report for the purpose of comparison to see whether the studied banks going as per the rules and regulation of the central bank.

The main source of data assessed under the study includes concerned banks Nepal Bank Limited and Himalayan Bank Limited

### **3.5 Method of Data Analysis.**

Data analysis, in this study, is done according to the pattern of data available. Specific financial and statistical tools are used in this research to show the relationship between different variables related to the study. Regarding presentation, the calculated results are tabulated under different headings for the ease of reading and then they are

compared with each other to interpret the results. Mean, Correlation analyses are done to study the relationship between the variables. Apart from that, questionnaires with Executive and officer level of staff and customer are the important for analysis about loan management.

Presentation and Analysis of the collected data is the core parts of the research work. The collected raw data are first presented in systematic manner in tabular form and are then analyzed by applying different financial and statistical tools to achieve the research objective. Beside that some graph charts and tables have been presented to analyze and interpret of the study.

Various Financial & statistical tools are used for the purpose of data analysis.

### **3.6 Data Analysis Tools**

Various Financial & statistical tools are used in this study to estimate the relationship between two or more than two variables.

#### **3.6.1 Financial Tools**

To evaluate the financial condition and performance of a company, the financial analyst needs certain yardstick. The yardstick frequently used is a ratio of index relating two pieces of financial data to each other. Analysis and interpretation of various ratios should give experienced, skilled analysis a better understanding of the financial condition and performances of the firm than they would obtain from analysis of the financial data alone.

The type of analysis varies according to the specific interest of the party involved. Trade creditors are interested primarily in the liquidity of a firm. Their claims are short term, and the ability of a firm to pay these claims is best judged by means of a thorough analysis of its liquidity. The claims of bondholders, on the other hand are long term. Accordingly, they are more interested in the cash flow ability of the company to service

debt over the long run. The bondholder may evaluate this ability by analyzing the capital structure of the firm, the major sources and uses of fund, its profitability over time, and projections of future profitability.

### **Liquidity Ratio**

Liquidity ratios are used to judge a firm's ability to meet short-term obligation if a company. Under this ratio the following ratios are calculated.

**a. NRB balance to total deposit:** NRB has made the Commercial Banks to deposit certain fund of the Commercial Bank in the central bank which is changing time to time as the demand of the time.

The ratio is calculated as followed:

$$\text{NRB balance to total deposit ratio} = \frac{\text{NRB Deposit}}{\text{Total Deposit}}$$

**b. Total liquid fund to total deposit:** Total liquid fund to total deposit ratio is the indication of the short term obligation capacity of the demand of the depositor money. Higher ratio shows the higher capacity of payment on demand of the money and vice versa.

We have,

$$\text{Total liquid fund to total deposit} = \frac{\text{Total Liquid Fund}}{\text{Total Deposit}}$$

### **Activity Ratio**

Activity ratio measures the efficiency of the bank to manage its asset in profitable and satisfactory manner. A commercial Bank must manage its asset properly to earn high profit. Under this research study deposit collection and investment procedure of the selected bank is also explained with the help of activity ratio. Under this chapter following ratios are analyzed.

**a. Loan & advances to total deposit:**

This ratio measures the extent to which the banks are successful to mobilize their total deposit on loan and advances. Loan and advances are outside asset which yield profit to the bank. Increment of loan and advances is the main target of all Commercial Banks. So higher the ratio better is the mobilization of the funds.

We have,

$$\text{Credit to total deposit} = \frac{\text{Loan and Advances}}{\text{Total Deposit}}$$

**b. Loan loss ratio:**

Loss of loan is occurred when the debtor's fail to pay their loan. Loss of loan is not only the default of debtor's but it is because of the failure of recovery of loan by the bank. Negligence in its part makes a negative impact on the earnings and capital of a bank very badly. Greater loan loss provision is made in income statement if high loss is expected. But this will lead to low profit and possible losses that produce low increase or decrease in capital. The loan loss ratio shows how efficiently the bank manages its loan and advances and, makes effort for timely recovery of loan.

As per the rules of NRB, the loan loss provision is made as per the nature of loans that are as follows.

<u>Classification of Loan</u>	<u>Provision</u>
Pass Loan	1%
Substandard Loan	25%
Doubtful Loan	50%
Bad/Loss Loan	100%

We have, Loan loss ratio =  $\frac{\text{Loan Loss Provision}}{\text{Loan and Advance}}$ .

## **Profitability Ratio**

Profitability ratio measures the overall banking operation of the company in regards to the profit. Profitability ratio is determined by the financial institution to find out their profit earning capacity on various kinds of funds they employed. Profit indicates the efficiency of the bank. A bank can make the profit through the sound lending policy and the quality of service it provides. Higher is the profit ratio higher will be the efficiency of the bank. Following are the some profitability ratio studied in this report.

a. **Return on loan and advances:** Return on loan and advance ratio indicates how efficiently the bank has utilized its resources in form of loan and advances. This ratio is calculated as:

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

b. **Return on total working fund ratio:**

This ratio shows the overall profitability of all working fund i.e. total assets, it is also known as Return On Assets (ROA). A firm has to earn satisfactory return on assets of working fund in order to provide long-term service. This ratio is calculated as:

$$\text{Return on total working fund ratio} = \frac{\text{Net Profit}}{\text{Total Assets}}$$

c. **Total Interest earned to total outside assets:**

This ratio measures the capacity of the firm for earning interest through proper utilization of outside assets. Higher ratio shows the efficiency of using outside assets to earn interest. This ratio can be calculated as:

$$\text{Total Interest earned to total outside assets} = \frac{\text{Total Interest Earned}}{\text{Total Outside Assets}}$$

### 3.6.2 Statistical Tools

#### (i) Arithmetic Mean: -

The sum of all the observations divided by number of observation is called arithmetic mean or simple average. In equation:

$$\bar{X} = \frac{\sum X}{n}$$

Where,  $\sum X = X_1 + X_2 + X_3 + \dots + X_n = \text{Sum of given set of observation}$

$n = \text{Number of items observed.}$

$X = \text{Variables}$

#### (ii) Standard Deviations (S.D): -

Karl Pearson first suggested standard deviation in 1893 A.D. as a measure of dispersion. It is usually denoted by sigma ( $\sigma$ ). The measurement of the scatter ness of the mass of figures in a series about an average is known as dispersion and standard deviation measures the absolute dispersion. Greater the amount of dispersion greater will be the standard deviation and vice versa. A small standard deviation means high degree of uniformity of the observation as well as homogeneity of a series. A large standard deviation refers low uniformity and homogeneity of the series.

Symbolically,

$$SD (\sigma) = \sqrt{\frac{\sum fX - \bar{X}N}{N}}$$

#### (iii) Coefficient of variation (C.V.): -

The relative measure of dispersion based on standard deviation is known as coefficient of standard deviation. Coefficient of dispersion based on standard deviation multiplied by 100 is known as coefficient of variation (C.V.)

$$C.V. = \frac{S.D.}{\text{Mean}} \times 100\%$$

The coefficient of variation reflects the relationship between standard deviation and mean. Since C.V. is independent of unit, two distributions can be compared with the help of it for their variability. Higher CV denotes higher variability, i.e., lesser uniformity and consistency and vice versa.

**(iv) Correlation coefficient :**

Correlation is defined as the "relationship" (of association) between (Among) the one dependent variable (or factor) and one (or more than one) independent variable (s) or factor (s). In the other words, correlation is the relationship between (or among) two or more variables (I.e. Only one variable dependent and one or more variable (s) independent).

$$\text{Correlation of coefficient, } r = \frac{N \cdot \sum XY - \sum X \sum Y}{\sqrt{N \cdot \sum X^2 - (\sum X)^2} \cdot \sqrt{N \cdot \sum Y^2 - (\sum Y)^2}}$$

Where,

N = Number of pairs of observation.

X= Variable

Y = Variable

r = correlation of coefficient

The relationship between the two variable can be measured either by graphical method (scatter diagram) or by numerical calculation method.

The numerical measurement of relationship between the two variables is denoted by the symbol "r" whose values ranges from -1 to +1

Interpretation:

- i) If r=0, there is no relationship between the variables
- ii) If r<0, there is negative relationship between the variables
- iii) If r>0, there is positive relationship.
- iv) If r=+1, the relationship is perfectly positive
- v) If r=-1, the relationship is perfectly negative

## Hypothesis testing (t- test for observed sample correlation coefficient)

Hypothesis means the presumption or quantitative statement of the population which may be true or false .on order to make proper decision about the quantitative statement of population testing of hypothesis technique is used.

In order to test if the sample correlation coefficient  $r$  is significant of any correlation between the variables in the population or it is just due to the fluctuation of sampling, we use t- test for significance of an observed correlation.

### Set up hypothesis

**Null hypothesis**  $H_0 : \dots \neq 0$  i.e. there is no correlation between loan & advance and total deposit or there is no significant difference between loan & advance and total deposit.

**Alternative hypothesis**  $H_0 : \dots = 0$  i.e. loan & advance and total deposit are correlated or the correlation coefficient is not zero.

**Level of significance:** Fixed the level of significance at  $\alpha = 5\%$  here we assumed a level of significance at 5 %

### Test static

Under  $H_0$ , the test static is

$$t = \frac{r}{\sqrt{\frac{1-r^2}{n-2}}}$$

Where  $r$  = correlation coefficient and  $n$ = sample size

**Critical value:** Tabulated or critical value of  $t$  at  $\alpha\%$  level of significance for  $(n-2)$  degree of freedom in a one tailed or two tailed test is obtained from  $t$  –tables

**Decision:** if calculated  $t$  is less than or equal to  $t$  tabulated accept null hypothesis otherwise reject null hypothesis in favor of alternative hypothesis.

## CHAPTER-4

### DATA PRESENTATION AND ANALYSIS

This chapter contains the analysis and interpretation of the available and relevant data of two commercial banks selected as the sample banks. Five years' data period covering from the F/Y 2062/63 to 2066/67 B.S. have been analyzed and interpreted as per the research methodology defined in chapter three. To have a deep insight of the loan management in Nepal Bank limited and Himalayan Bank limited, firstly various steps involved in loan management are discussed. Then the trend analysis of various aspects related to loan management in NBL & HBL is done.

#### **Presentation of Data:**

The presentation of the tables and figures are shown with help of data. This section of chapter consists of the tabular and graphical presentation and analysis of data. In addition, some statistical tools such as mean, standard deviation and correlation are also used to present and analyze data. Trend analysis is mainly based on data relating to loans and advances, bills purchased and discounted, interest income on loans and advances and commission and discount on bills purchased and discounted.

#### **4.1. Data presentation of Nepal Bank Limited**

Nepal Bank Limited provides on various headings like project loan, overdraft, term loans personal loan, hire purchase loans personal housing loan, car loans, self employment schemes for small entrepreneurs and soft loan to facilitate export and import business.

**Table : 4.1**

#### **Composition of Loan of Nepal Bank**

S.No.	Area
1	Education Loan
2	Personal Loan
3	Auto Loan
4	Margin Lending
5	Home Loan
6	Corporate Loan
7	Consumer Loan

#### 4.1.1 Loans, Advances and Overdraft

Loans, advances and overdraft occupy the largest portion of the total assets of Nepal bank. Nepal Bank provides loans on different headings like Education loan, Auto loan, Home loan, corporate loan, consumer etc. The position of loan of Nepal Bank from fiscal year 2005/2006 to 2009/2011 is presented through table and figure.

**Table : 4.2**

#### **Loans Issued Over the Period**

Rs

(‘000’)

Year	Loan issued	Change (in Rs.)
2005/06	9,756,162.747	-
2006/07	11,058,477.657	1,302,314.91
2007/08	13,251,962.768	2,193,485.11
2008/09	17,614,898.83	4,362,936.06
2009/10	20,367,310.000	2,752,411.17

Table 4.2 shows the total loan extended by the Nepal Bank Nepal over different years it has already been shown that the bank provides loan on different headings like Education Loan, Auto loan, Consumer loan, Margin Lending, Home loan, Corporate Loan etc.

This table tries to reflect the loan amount disbursement during the recent five years periods. Loan issued in 2005/06 was 9,756,162.747, in year 2006/07 it increased to 11,058,477.657, in year 2007/08 it again increased to 13,251,962.768, It increased to 17,614,898.825 in the year 2008/09 it took an increasing trend and reached to 20,367,310 in the year 2009/10.

The table also shows the change in the loan issued in the year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 is 1302314.91, 2193485.11, 4362936.06, and 2752411.17 respectively

This can be shown with the help of bar diagram as below:

**Figure : 4.1**

**Position of Total loan issue over different Year**

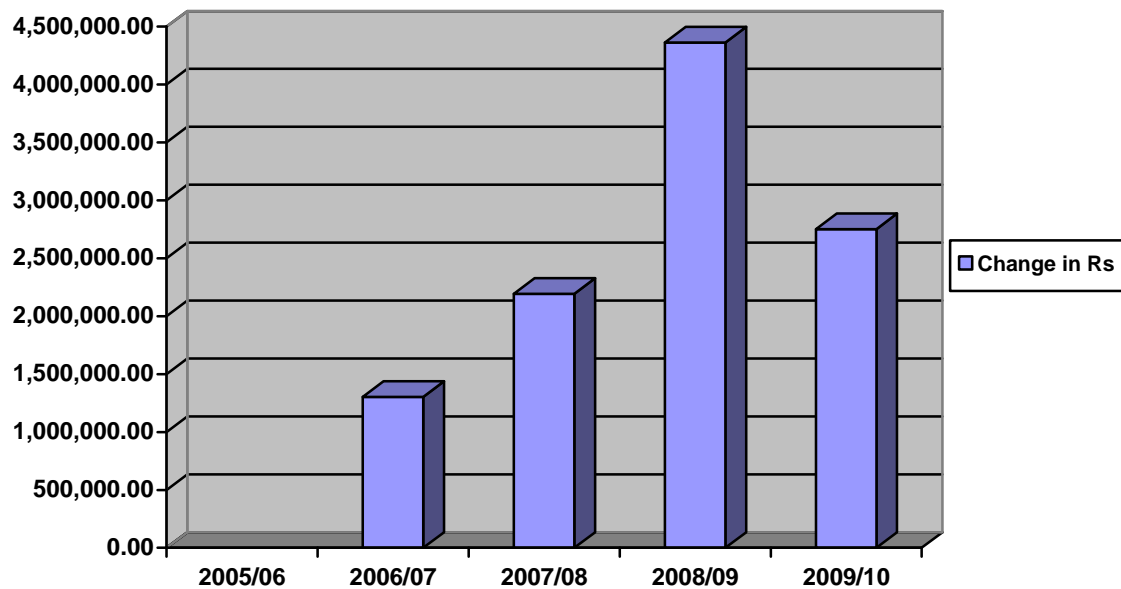


Figure 4.1 shows the change in the loan issue during the five years period the bar shows the rupees amount change in the loan during the year amount is measured in Y- axis and years shown in X- axis. The bar diagram shows loan amount took an increasing trend so the change in Rs in the year 2006/07 was 1,302,314.91 it rose up to 4,362,936.06 in the year 2008/09 and declined in the year 2009/10.

**4.1.2 NRB Balance to total Deposit Ratio**

NRB has directed all the commercial banks to deposit certain percentage of total deposit in NRB balance. The ratio is calculated as

$$\text{NRB balance to total deposit} = \frac{\text{NRB deposit}}{\text{Total deposit}}$$

**Table : 4.3****NRB Balance to Deposit****Rs in (000)**

Years	NRB Balance	Total Deposit	Ratio
2005/06	5353964.032	35829765.050	0.1494278
2006/07	5224859.643	39014204.359	0.133922
2007/08	4430641.018	41829391.063	0.1059217
2008/09	6619700.019	45194232.465	0.1464722
2009/10	5839458.480	40800815.000	0.1431211
<b>Mean (X) = 0.135773</b>			

*(Source: Annual report of NBL)*

Through the Table 4.3 the short term obligation capacity of the bank is analyzed. NRB has directed all the commercial banks to deposit certain percentage of total deposit in the NRB balance. Due to the changes in directives from time to time it seems fluctuating to maintain the liquidity position of the bank. It has highest ratio of 14.94% in the year 2005/06 and lowest ratio of 10.59% in the year 2007/08. From the above table it has found that NBL has maintained average as NRB balance 13.57% out of its total deposit. It has fluctuating trend of liquidity position.

**4.1.3 Total liquid fund to total deposit ratio**

The capacity of short term obligation of the bank is measured by the ratio of total liquid fund to total deposit. Higher ratio shows the higher capacity of payment on demand of money and vice versa. The ratio is calculated as;

$$\text{Total liquid fund to total deposit} = \frac{\text{Total Liquid Fund}}{\text{Total Deposit}}$$

**Table: 4.4****Liquid Fund to Deposit Ratio****Rs in (000)**

Years	Liquid Fund	Total Deposit	Ratio
2005/06	6464917.22	35829765.050	0.18043426
2006/07	6310926.29	39014204.359	0.16175971
2007/08	5612433.43	41829391.063	0.1341744
2008/09	8135354.85	45194232.465	0.1800087
2009/10	7209208.000	40800815.000	0.17669274
<b>Mean (X) = 0.16661396</b>			

*(Source: Annual report of NBL)*

Liquid fund is the amount kept by bank which is equivalent to the cash. Liquid funds are required to meet the short term obligation and to gain the image and satisfaction of the customers. NRB has directed all the commercial banks to maintain minimum 5% CRR which is changing from time to time. NRB has decreased its minimum requirement from 7% to 5%. Hence, the banks have decreased the liquidity ratio so as to increase the amount of loan and advances.

In Table, 4.4 it has found that NBL has maintained average 16.66% as liquid fund of its total deposit. It has fluctuating trend of liquidity position. It has maintained highest ratio of 18.04% in the year 2005/06 and lowest ratio of 13.41% in the year 2007/08.

#### 4.1.4 Loan and Advances to total Deposits

The major two functions of bank is accepting deposits and providing loans. Therefore all the deposits in Nepal Bank are also for the purpose of deploying it in the form of loan and advances in profitable enterprises. Therefore, the total credit of Nepal Bank in the form of loans, advances to that of total deposits should be analyzed which is as follows:

**Table: 4.5**

**Loans and Advance to Total Deposit Ratio                      Rs in (000)**

Years	Total loan & Advances	Total Deposit	Ratio
2005/06	9,756,162.747	35829765.050	0.367
2006/07	11,058,477.657	39014204.359	0.3527
2007/08	13,251,962.768	41829391.063	0.3156
2008/09	17,614,898.825	45194232.465	0.2565
2009/10	20,367,310.000	40800815.000	0.2357
<b>Mean (X) = 30. 55%</b>			

*(Source: Annual report of NBL)*

It would be profitable for Nepal Bank to invest maximum of the total deposit. But it is not possible as a certain cash has to be maintained in the premises of the bank to fulfill withdraw facilities of the clients and at the same time bank has to maintain certain percentage as reserve amount according to NRB a rule.

In Table, 4.5 the loan and deposits of the year 2005/06, 2006/07, 2007/08, 2008/09, & 2009/10 are 9756162.747, 11058477.657, 13251962.768, 17614898.825, 20367310.000 and 35829765.050, 39014204.359, 41829391.063, 45194232.465, 40800815.000 respectively and similarly the ratios between the loan & advances and total deposits are 36.7%, 35.27%, 25.65% & 23.57% respectively.

Table 4.5 shows the total loan to total deposit ratio trend of Nepal Bank, which is 30.55% in average of 6 years. The mean value indicates that 30.55% of total deposit has been given out as loan and advances to the enterprise, firms, companies etc.

**Figure : 4.2**

**Loan & Advance to total Deposit**

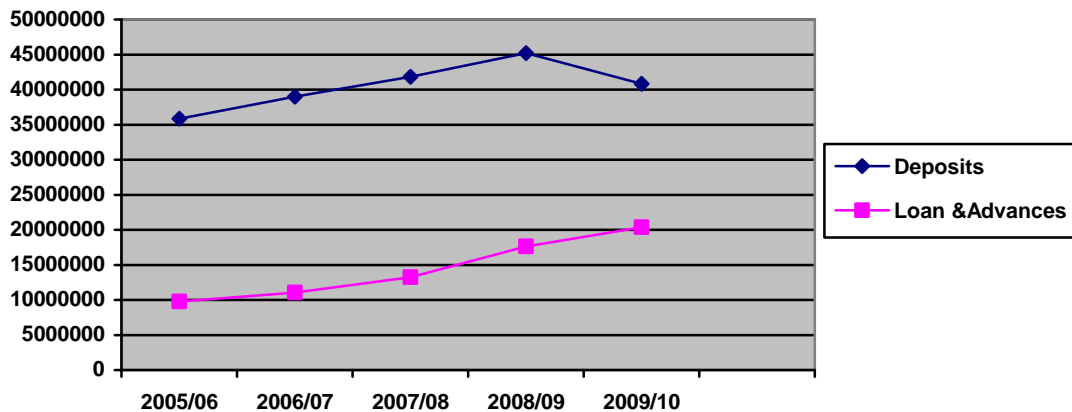


Figure 4.2 shows total deposit collected & total loan disbursed the upward line shows the deposits collected by the bank where as the downward line shows loan & advances issued. Deposits rise from 2005/06 up to 2008/09 and the declined in the year 2009/10. Loan and advance increased slightly from year 2005/06 to 2006/07 & then it rise in increasing trend.

**Figure : 4.3**

**Ratio of Loan & Advance to Deposit**

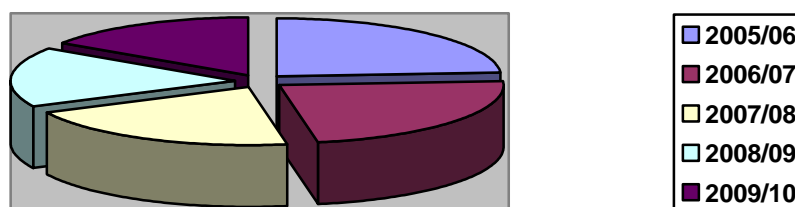


Figure 4.3 shows the ratio of total deposit to total loans & advance during the five years period. The ratio was 36.7% in 2005/06 and it declined 35.27% in 2006/07 31.56% in the year 2007/08, 25.56% in 2008/09 and finally in 2009/10 it reached to 23.57%.

**4.1.5 Loan Loss Provision**

Let us observe the provision to loan and advances ratio of Nepal Bank of five years. This ratio is calculated by dividing the amount of provision by loan and advances and this ratio is in term of percentage.

We Have,  $\text{Loan loss ratio} = \frac{\text{Loan Loss Provision}}{\text{Loan and Advance}}$

**Table : 4.6**

**Loan Loss Provision to Loan and Advance ratio**

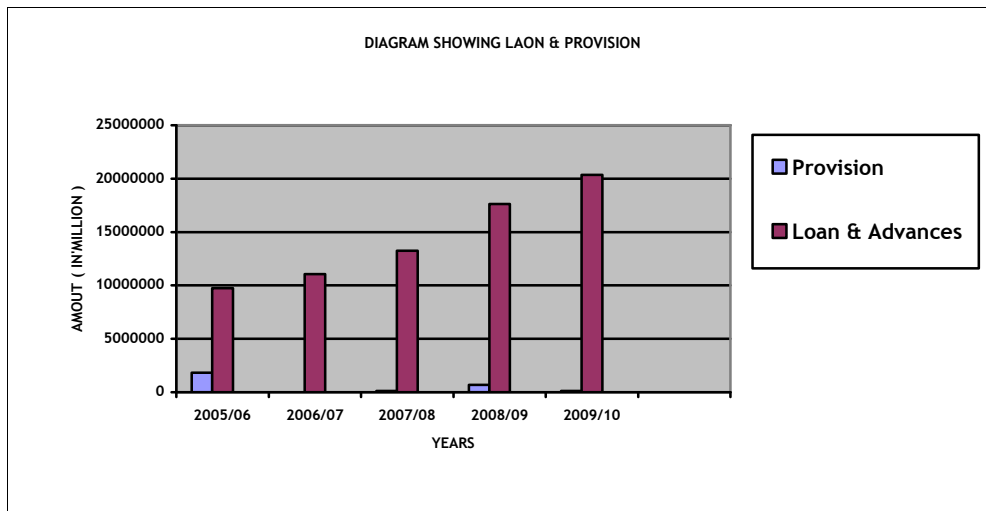
Year	Loan loss provision	Loan & Advance	Ratio
2005/06	1,813,642.37	9756162.747	18.58971008
2006/07	-	11,058,477.66	-
2007/08	134,361.75	13,251,962.77	1.013900773
2008/09	676372.384	17,614,898.83	3.839774446
2009/10	115155	20,367,310.00	0.565391306
Mean			1.8063

*(Source: Annual report of NBL)*

In Table, 4.6 it presents the loan loss provision to total loan of Nepal Bank for the study period of 2005\06 to 2009/10; of the financial sector reform program. The ratio for the study is 1.8063%, which means loan loss provision is 1.8063% of the total loan. The ratio of 2005/06 higher than the average ratio i. e 18.59% In the fiscal year 2006/07 there is no provision for loan loss. Loan loss provision was 1.0139 in the yr 2007/08 where as in 2008/09 it was 3.84 it decreased to 0.566 in the year 2009/10. The trend of the total loan and advance is of increasing while the trend of loan loss provision is decreasing though banks should make higher percentage of provision for the non performing loans Nepal Rastra Bank has directed the commercial banks to maintain the level of loan loss provision in the creation level based on the quality of the loan. For example bank should make 50% provision for doubtful debt while the provision for good loan just 1%.

**Figure: 4.4**

**Ratio of loan & advance and Provision**



Provision for possible loan losses in Nepal Bank has been made as per the directive of NRB to cover the risk inherent to bank's lending portfolio. Normally a provision to loan and advances ratio 3% is regarded to be better.

Generally, a higher provision to loan and advances ratio shows the inefficiency of management

#### 4.1.6 Return on Loan And Advances :

Net profit of commercial banks depend on loan and advances so , calculation of return on total loan and Advance is very important to find out the financial condition of the bank. The ratio is calculated as;

$$\text{Return on Total Loan and Advance} = \frac{\text{Net Profit}}{\text{Loan \& Advance}}$$

**Table : 4.7**

#### **Return on Loan & Advance Rs in (000)**

Year	Net profit after Tax	Loan & Advances	Ratio
2005/06	1,207,264.86	9756162.747	0.12374382
2006/07	226,952.91	11,058,477.66	0.02052298
2007/08	239,214.01	13,251,962.77	0.01805121
2008/09	894,254.18	17,614,898.83	0.05076692
2009/10	379252	20,367,310.00	0.01862062
Mean			0.04634111

*(Source: Annual report of NBL)*

Table 4.7 shows that return on loan and advance ratio is highest 12.37 %in the year 2005/06 after that the ratio decreased to 2.05% & 1.80% in the year 2006/07 & 2007/08 . In the year 2008/09 there is a slight growth in the ratio to 5.07% but in year 2009/10again it decreases to 1.86% . So, the average return on loan & advance is 4.63% .

#### 4.1.7 Return on Total Assets ratio:

**Table : 4.8**

#### **Return on Total Assets ratio**

Year	Net profit after Tax	Total Assets	Ratio
2005/06	1,207,264.86	35,918,905.11	0.033610848
2006/07	226,952.91	39,258,793.51	0.005780945
2007/08	239,214.01	42053444.31	0.005688333
2008/09	894,254.18	47559110.61	0.018803005
2009/10	379252	44519843	0.008518718
Mean			0.01448037

*(Source: Annual report of NBL)*

Table 4.8 shows the comparative analysis of return on total assets of Nepal Bank limited for the study period 2005/06 to 2009/10. The bank has satisfactory performance in term of profitability. The average ratio of return on total assets for the study period is -0.01448037.

#### 4.1.8 Interest income related to loan and advances

When loans are granted it can be performing as well as non-performing and whether it is performing or not is judged by the interest earned by the loans. The following table and figure shows interest income earned by loan & advances

**Table : 4.9**

**Interest incomes earned by loan & advance.**

(NRs “000”)

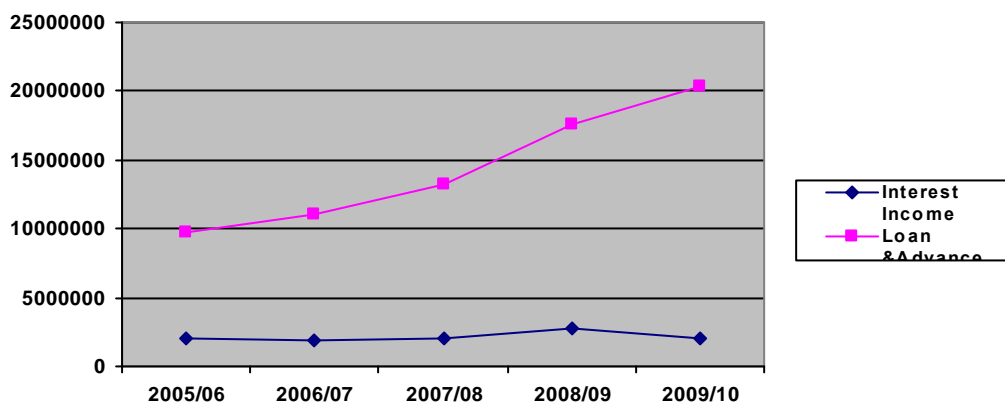
Year	Loan& Advances	Interest income
2005/06	35,918,905.11	2,049,029.774
2006/07	39,258,793.51	1,848,611.557
2007/08	42053444.31	2,094,905.989
2008/09	47559110.61	2690058.308
2009/10	44519843	2057003.000

(Source: Annual report of NBL)

The above table can be shown with the help of linear diagram as below:

**Figure : 4.5**

**Interest income related to loan and advances**



From the table and figure, it is clear that both the loan amount and interest income is increasing simultaneously likewise; it also indicates that all loans are performing loans,

which earns interest in regular basis. This is possible due to Nepal Bank's systematic credit policy only.

#### **4.1.9 Statistical Analysis**

##### **4.1.9.1 Analysis of Mean, SD & C.V. of Loan & Advance and Deposit**

<b>Variables</b>	<b>Mean</b>	<b>SD</b>	<b>C.V</b>
<b>Loan &amp; Advance</b>	14409762.4	3999821.798	27.76%
<b>Total Deposit</b>	40,533,681.59	3095370.725	8%

*(Appendix- 1)*

The table shows that average total deposit of NBL is 40533681.59 thousands of which average of Rs 14409762.4 is used towards granting loan and advance SD of loan & advance and total deposit is 3999821.798 and 3095370.73 and CV of loan & advance and total deposit is 27.76% and 8% respectively.

##### **4.1.9.2 Trend Analysis of Loan & Advance and Total Deposit**

The trend value of total loan & Advance and total deposit of Nepal Bank Ltd is calculated under this section. An effort has been made to forecast for next five years from 20010/11 to 20014/15

**Table :4.10****Calculation of trend value & estimation of loan and advance for next Five years period***(Appendix- 2)*

<b>Year</b>	<b>Year (X)</b>	<b>a</b>	<b>b</b>	<b>Trend Value</b>
2005/06	-2	14409762	277871.57	13854019.3
2006/07	-1	14409762	277871.57	14131890.8
2007/08	0	14409762	277871.57	14409762.4
2008/09	1	14409762	277871.57	14687634
2009/10	2	14409762	277871.57	14965505.5
2010/11	3	14409762	277871.57	15243377.1
2011/12	4	14409762	277871.57	15521248.7
2012/13	5	14409762	277871.57	15799120.2
2013/14	6	14409762	277871.57	16076991.8
2014/15	7	14409762	277871.57	16354863.4

Table 4.10 shows the total Loan & advance of the banks is in increasing trend. If other things remain constant the total Loan & Advance of Nepal Bank Ltd will be Rs. 15243377.1 in the FY 2010/11 and will reach to Rs 16354863.4 in the FY 2011/12, it increases every year by 277871.57.

**Table : 4.11**

**Calculation of trend value & estimation of Total deposit for next five years period**

<b>Year</b>	<b>Year (X)</b>	<b>a</b>	<b>b</b>	<b>Trend Value</b>
2005/06	-2	40533682	16612213	7309255.98
2006/07	-1	40533682	16612213	23921468.8
2007/08	0	40533682	16612213	40533681.6
2008/09	1	40533682	16612213	57145894.4
2009/10	2	40533682	16612213	73758107.2
2010/11	3	40533682	16612213	90370320
2011/12	4	40533682	16612213	106982533
2012/13	5	40533682	16612213	123594746
2013/14	6	40533682	16612213	140206958
2014/15	7	40533682	16612213	156819171

*(Appendix- 3)*

Table 4.11 shows that total deposit of the bank is also increasing the trend value of total deposit was 7309225.98 in the year 2005/06 it reached 90370320 and 156819171 in the years 2010/11 and 2014/15 respectively. The trend lines for Loan & advance and total deposit is shown in line graph as follows:

**Figure: 4.6**  
**Estimated value of loan & Advance up to the FY 2014/15**

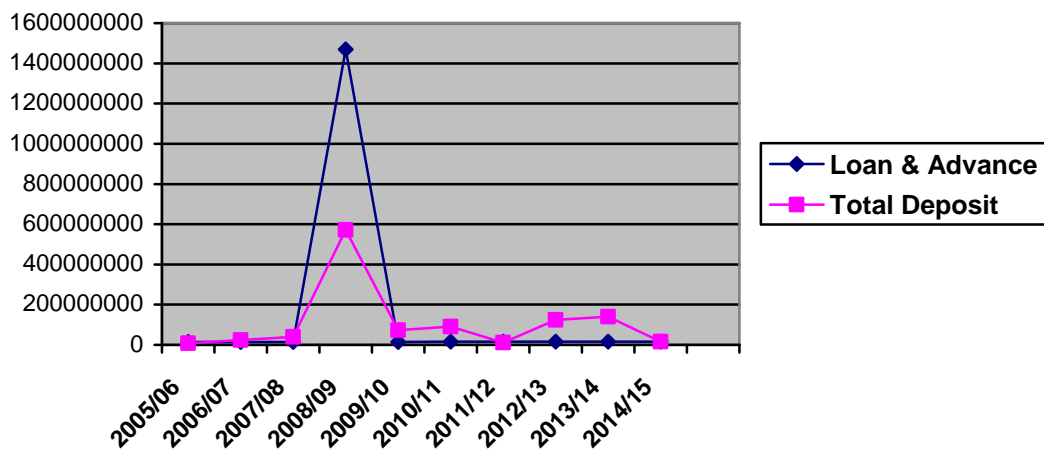


Figure 4.6 shows both deposit and loan and advance took an increasing trend but total deposit increased more steadily than loan and advance. That means the ratio of increment is greater in total deposit than in loan and advance.

#### 4.1.9.3 Analysis of Correlation of Loan & Advance to total Deposit

Correlation co-efficient helps to measure the relationship between two variables. It is denoted by “r”. If  $r=1$ , the variables are perfectly and positively co-related. If  $r=0$ , they are un correlated and if  $r= (-1)$ , they are perfectly negatively co-related. Here we try to find out the relationship between Loan & Advance and Deposit of Nepal Bank Ltd.

Bank	r	$r^2$	$t_{cal}$	$t_{tab}$	Result
Nepal Bank Ltd	0.447490944	0.20024814	0.86671	3.182	Not Significant

(Appendix- 4)

As  $r = + 0.447490944$  there is positive relationship between loan and deposit. Thus, loan and deposit is positively correlated with each other. Coefficient of determination ( $r^2$ ) is 0.20024814 which depicts that dependent variable (loan & advance) is explained

by independent variable (Deposit) about 20.02% only. But while testing of hypothesis, it is found that the value of 'r' is insignificant because 't' calculated is less than 't' tabulated which says we should accept null hypothesis that says there is no correlation between loan & advance and total deposit.

## 4.2 Data Presentation of Himalayan Bank Limited

### 4.2.1 Composition of Loan of Himalayan Bank Ltd.

Himalayan Bank being a commercial bank, functions in a same way by accepting deposits from the savers and giving loans to the users. But before giving loans to any firm, company or project, it makes appraisal and if seemed viable then only grants loan. They provides on various headings like project loan, overdraft, term loans personal loan, hire purchase loans personal housing loan, car loans, self employment schemes for small entrepreneurs and soft loan to facilitate export and import business

**Table: 4.12**

#### **Composition of Loan of Himalayan Bank**

Corporate Loan	Retail /consumer Loan
Project / Consortium Loan:	Hire Purchase Loan
Non Revolving Cash Credit:	Housing Loan
Working Capital Financing:	Subidha Loan
Overdraft Facility	Credit Card Loan
Demand Loan	Loan against Fixed Deposit Receipt
Revolving Cash Credit	Loan against Government Bonds & Bonds of Bank
Pledge Loan:	Loan against First Class Bank Guarantees
Export Credit Facilities:	Loan against Shares
Bank Guarantee	

Letter Of credit	
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#### 4.2.2 Loans, Advances and Overdraft

Loans, advances and overdraft occupy the largest portion of the total assets of Himalayan bank. It provides loans on different headings like hire purchases loan , Home loan, corporate loan, Small & medium entrepreneur loan etc. The position of loan of Nepal Bank from fiscal year 2005/2006 to 2009/2010 is presented through table and figure.

**Table: 4.13**  
**Loan Issued & rupee change in loan amount**  
Rs in “000”

Year	Loan issued	Change(in Rs.)
2005/06	14642559.56	
2006/07	16997997.05	2355437.491
2007/08	19497520.48	2499523.436
2008/09	24793155.27	5295634.787
2009/10	27980628.76	3187473.491

*(Source: Annual report of HBL)*

Table 4.13 shows the total loan extended by the HBL over different years. It is already known that the bank extended loan on different headings like hire purchase loan, Home loan, corporate loan, Small & Medium Entrepreneur loan etc.

This table tries to reflect the increment to loan amount in each year. In the year 2005/06 it has 14642559.59, in the year 2006/07 it has 16997997.05, in the year 2007/08 it rose to 19497520.48, again in the year 2008/049 it rose to 24793155.27, and finally in the year 2009/10 it reached to 27980628.76. Such progress is possible only when there is good management. The Bank is willing to grant excess loan and planning to increase it in the future days.

In this way, the change in the loan issued in the year 2006/07, 2007/08, 2008/09 and 2009/10 are 2355437.491, 2499523.436, 5295634.787, and 3187473.491 respectively. Rupee amount change in the year 2008/09 is highest i.e.5295634.787

This can be shown with the help of bar diagram as below:

**Figure : 4.7**  
**Total Loan Issued & Rupee change during the year**

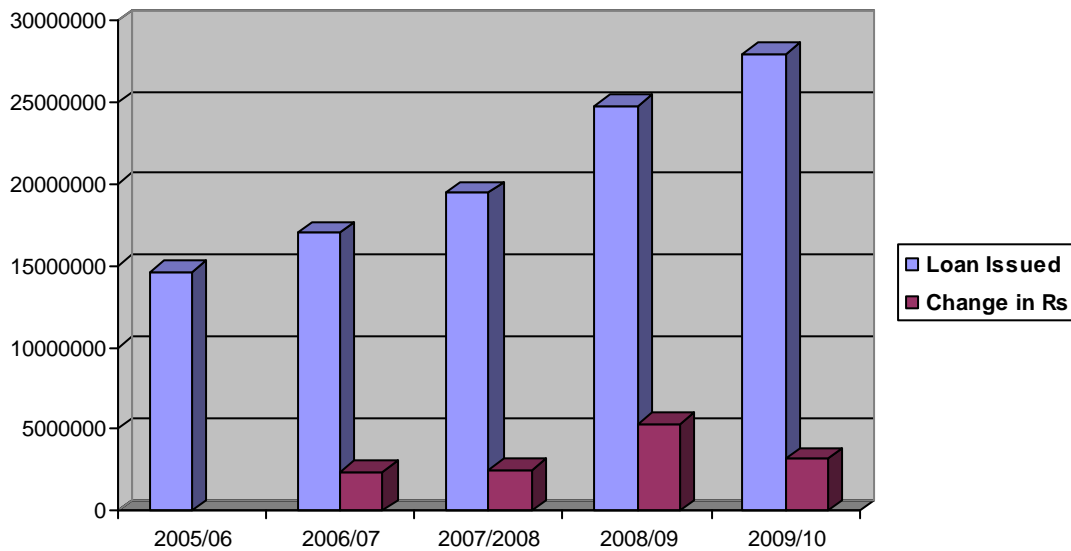


Figure 4.7 also shows the increasing trend of loan and advances and the change in rupee amount regarding the previous year.

### 4.2.3 NRB Balance to total Deposit Ratio

NRB has directed all the commercial banks to deposit certain percentage of total deposit in NRB balance. The ratio is calculated as

$$\text{NRB balance to Total Deposit} = \frac{\text{NRB Deposit}}{\text{Total Deposit}}$$

**Table : 4.14****NRB Balance to total deposit ratio**

Rs in (000)

Years	NRB Balance	Total Deposit	Ratio
2005/06	1096253.097	26490851.640	0.041382327
2006/07	1272543.067	30048417.756	0.042349753
2007/08	935841.697	31842789.356	0.029389438
2008/09	2328405.821	34681345.179	0.067137125
2009/10	2604790.901	37611202.274	0.06925572
<b>Mean (X) = 0.049902873</b>			
<b>S.D.(†) = 0.017478576</b>			

*(Source: Annual report of HBL)*

Table 4.14 shows the ratio between NRB balance and total deposit of HBL. As directed by NRB there should be minimum 5% in the NRB for sound liquidity position. The shows HBL has been sound at maintaining average of 4.99% (which is nearly 5%) of balance at NRB.

**4.2.4 Total liquid fund to total deposit ratio**

The capacity of short term obligation of the bank is measured by the ratio of total liquid fund to total deposit. Higher ratio shows the higher capacity of payment on demand of money and vice versa. The ratio is calculated as;

$$\text{Total liquid fund to Total Deposit} = \frac{\text{Total Liquid Fund}}{\text{Total Deposit}}$$

**Table: 4.15****Total liquid funds to total deposit ratio Rs. in “000”**

Years	Liquid Fund	Total Deposit	Ratio
2005/06	1717352.335	26490851.640	0.064828129
2006/07	1757340.952	30048417.756	0.058483644
2007/08	1448142.890	31842789.356	0.045477891
2008/09	3048526.788	34681345.179	0.087901054
2009/10	3866490.684	37611202.274	0.102801571
<b>Mean (X) = 0.071898457</b>			
<b>S.D.(†) = 0.023125087</b>			

*(Source: Annual report of HBL)*

In, Table 4.15 it has found that Himalayan Bank Ltd has maintained average 7.18% as liquid fund of its total deposit. It has fluctuating trend of liquidity position. It has maintained highest ratio of 8.79% in the year 2008/09 and lowest ratio of 4.54% in the year 2007/08.

#### 4.2.5 Loan & Advance to total deposit:

This ratio measures the ability of the bank to mobilize their total deposit on loan and advances. Increase in loan and advances results increase in profit of the banks. Hence, commercial banks target to increase the loan and advances to yield higher profit. Higher ratio indicates better utilization of fund. The ratio is calculated as;

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

**Table : 4.16**

#### **Ratio of total loan to deposit Rs (“000”)**

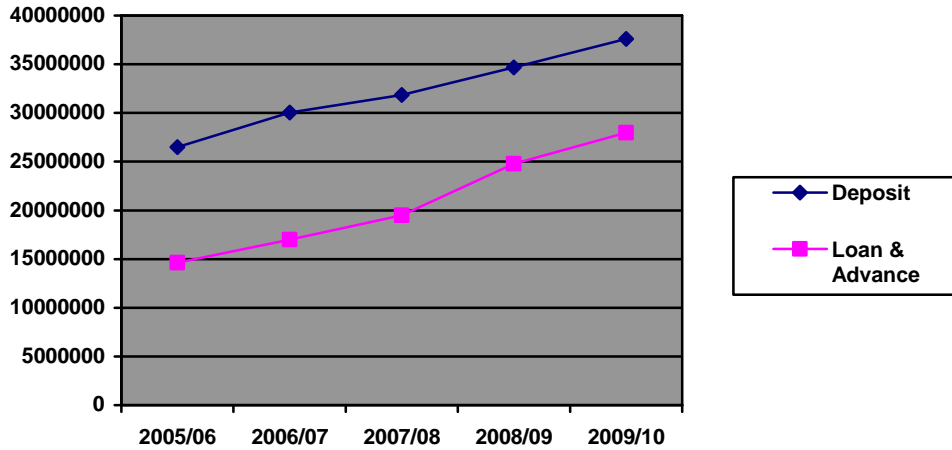
Years	Total loan & Advances	Total Deposit	Ratio (NRs. in million)
2005/06	14642559.56	26490851.640	0.552740235
2006/07	16997997.05	30048417.756	0.565686
2007/08	19497520.48	31842789.356	0.612305
2008/09	24793155.27	34681345.179	0.71488
2009/10	27980628.76	37611202.274	0.743944
<b>Mean (X) = 0.5527</b>			

*(Source: Annual report of HBL)*

Table 4.16 shows the total loan & advance, total deposit & total loan to deposit ratio it depicts total deposits from year 2005/06 to 2009/10 which is increasing and as the deposit increases the amount of loan & advance also increases. The ratio of total loan to total deposit is also increasing it was 0.5527 in the year 2005/06, 0.5656 in 2006/07, 0.6123 in 2007/08, 0.7148 in 2008/09 and finally it was 0.7439 in the year 2009/10.

Figure : 4.8

Trend line of Total Loan & Advance



4.2.6 Loan Loss Provision

Future is uncertain. Existing pass may become bad loan in the future so, to avoid that risks, banks make provision from the certain amount of profit. As per the rules of NRB, the loan loss provision is made as per the nature of loans that are as follows.

<u>Classification of Loan</u>	<u>Provision</u>
Pass Loan	1%
Substandard Loan	25%
Doubtful Loan	50%
Bad/Loss Loan	100%

Let us observe the provision to loan and advances ratio of HBL of Five years. This ratio is calculated by dividing the amount of provision by loan and advances and this ratio is in term of percentage.

**Table: 4.17**

**Loan loss provision to loan and Advance Ratio**

			Rs (000)
Year	Loan Loss Provision	Loan & Advances	Ratio (NRs. in million)
2005/06	56561.901	14642559.56	0.003862842
2006/07	412654.152	16997997.05	0.024276634
2007/08	184106.852	19497520.48	0.009442578
2008/09	19484.655	24793155.27	0.000785888
2009/10	265542.038	27980628.76	0.00949021
	Mean (X)		0.00957163

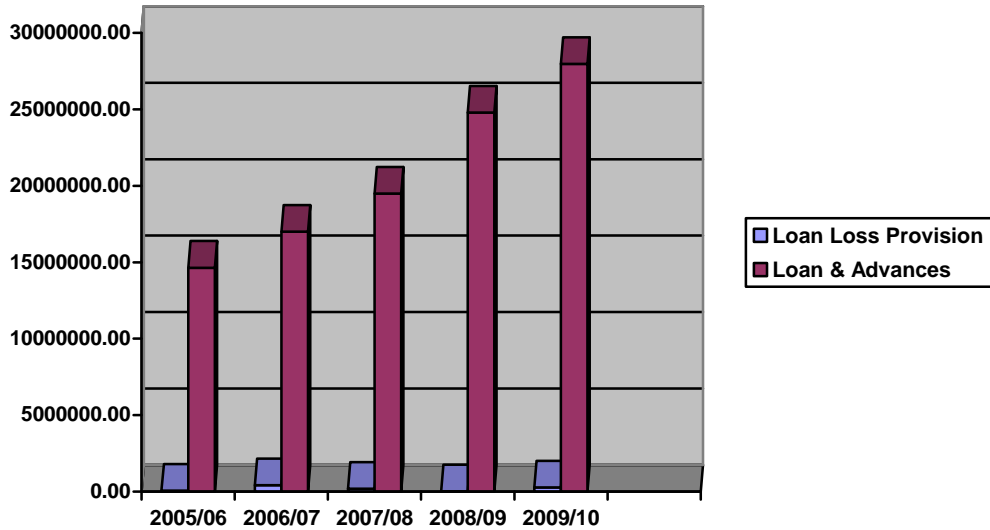
*(Source: Annual report of HBL)*

In Table, 4.17 it presents the loan loss provision to total loan of HBL for the study period of 2005\06 to 2009/10; of the financial sector reform program. The ratio for the study is .009570, which means loan loss provision is .009570 of the total loan. The ratio of 2005/06 is lower than the average ratio i.e. .009570 with the increasing trend of loan & advances the loan loss provision is also increasing s. Higher ratio of loan loss provision to total loan indicates that the bank has increasing trend non performing loans. According to the general standard, banks should make higher percentage of provision for the non performing loan. Nepal Rastra Bank has directed the commercial banks to maintain the level, based on the quality of the loan. For example bank should make 50 % of provision for the good loan us just 1 %. Even though the total loan is in the decreasing trend, the loan loss provision has increased in the F.S.R.P. This increase can be subjected to the strict adherence to the Nepal Rastra Banks directive on loan loss provision and increase in additional provision. The provision helps to overcome the unnecessary burden of non performing assets.

It can also bee shown as bar graph as follows the taller bars represents the loan & advances over the period and the shorter bars indicate loan loss provision made by the bank during that period.

**Figure: 4.9**

**Loan loss provision to loan and Advance Ratio**



**4.2.7 Return on loan & Advance :**

Net profit of commercial banks depends on loan and advances. So, calculation of Return on total loan and advances is very important to find out the financial condition of the banks. The ratio is calculated as;

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

**Table: 4.18**

**Return on loan & advance**

Year	Net profit after Tax	Loan & Advance	Ratio
2005/06	457457.696	14642559.56	0.03124165
2006/07	491822.905	16997997.05	0.02893417
2007/08	635868.519	19497520.48	0.03261279
2008/09	762834.735	24793155.27	0.03076796
2009/10	508798.193	27980628.76	0.01818394

#### 4.2.8 Return on Total Assets ratio:

Return on total Assets measures the relationship between total assets and the profit of the bank.. The ratio is calculated as;

$$\text{Return on total working fund} = \frac{\text{Net Profit}}{\text{Working Fund}}$$

**Table : 4.19**

#### **Return on total Assets**

Year	Net profit after Tax	Total Assets	Ratio
2005/06	457457.696	29460389.672	0.01552789
2006/07	491822.905	33519141.111	0.014672897
2007/08	635868.519	36175531.637	0.01757731
2008/09	762834.735	39330131.823	0.019395682
2009/10	508798.193	42717124.613	0.0119108717

*(Source: Annual report of HBL)*

Table 4.19 shows the comparative analysis of return on total assets of HBL for the study period of 2005/06 to 2009/10. The bank has a very good performance on term of profitability in such a few period of time. However the ratio keep on fluctuating, in the beginning year the ratio was 15.53% it was 14.67% in the year 2006/07, in the 2007/08 &2008/09 it rose to 17.58% &19.39% after that it decreased to 11.91 in the year 2009/10.

#### 4.2.9 Interest income related to loan and advances

For the banks & financial institutions providing loans & advances are one of the major investment alternative, it generates interest income to them. When loans are granted it can be performing as well as non-performing and whether it is performing or not is judged by the interest earned by the loans. Here we try to depict interest income earned by the bank during 5 years period.

**Table : 4.20**

**Interest income related to Loan & advance**

**Rs (000)**

Year	Loan& Advances	Interest income
2005/06	14642559.56	1626473.819
2006/07	16997997.05	1775582.617
2007/08	19497520.48	1963647.472
2008/09	24793155.27	2342198.179
2009/10	27980628.76	3148605.196

*(Source: Annual report of HBL)*

**Figure : 4.10**

**Chart showing Interest income and loan & Advance**

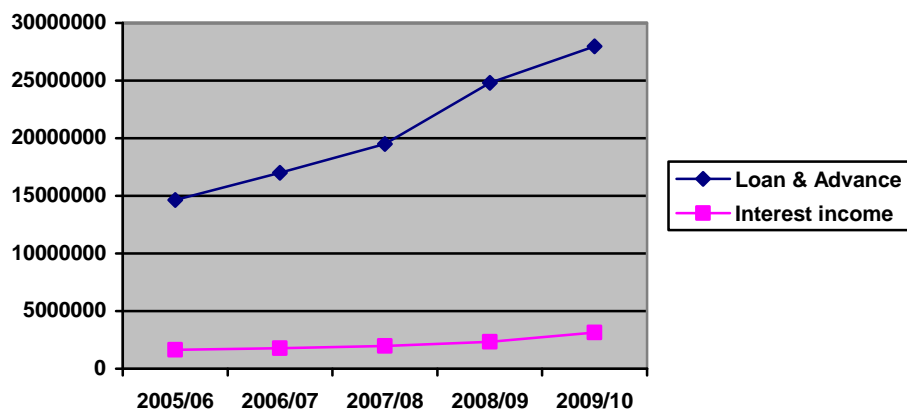


Figure 4.10 and the Table 4.20 both shows loan & advance & interest income both are increasing this shows the loan & advances are of performing nature because they earned interest income. Interest income in the Year 2005/06 was 1626473.819 while loan amount was 14642559.56, in the year 2006/07 Rs 1775582.472 was earned with loan amount of Rs 16997997.05, in the year 2007/08 loan & advance was 19497520.48 & interest income it earned was 1963647.472, the interest income in the year 2008/09 was 2342198.179 while loan & advance was 24793155.27 and lastly in the year 2009/10 loan & advance was 27980628.76 & it earned Rs 3148605.196.

#### 4.2.10 Statistical Analysis :

Under this topic following statistical tools are calculated

1. Mean, SD & C. V. of loan & advance And Total Deposit
2. Trend analysis of deposit, loan & advances
3. Correlation coefficient between loan & advance and total deposit
4. T test for significance of an observed correlation coefficient

##### 4.2.10.1 Mean, SD & C.V. of Loan & Advance and Total Deposit

Variables	Mean	SD	C.V
<b>Loan &amp; Advance</b>	20782372.22	4930941.428	23.73%
<b>Total Deposit</b>	32134921.24	3814925.643	11.872%

(Appendix- 5)

From the above table it has been found that Himalayan bank has average deposit of 32134921.24 thousands of which the average of 20782372.22 has been disbursed as loan and advance, the SD of loan & advance is 4930941 and total deposit is 3814925.643 and CV of loan & advance and total deposit are 23.73% and 11.87% respectively.

##### 4.2.10.2 Correlation coefficient between loan & advance to total deposit;

Deposits and loan and advances are the life blood of any commercial banks. The existence of the commercial banks depends upon the total deposit collected and the total amount granted as loan and advances. The relationship between deposit and loan and advances should be optimum to gain profit. Correlation coefficient measures the degree of relationship between to variables i.e. deposit and loan and advances. In this analysis deposit is independent variable and loan and advances is dependent variable. The main reason of finding out of correlation between these two variables is to justify whether deposits are significantly used as loan and advances or not.

Here, it is found that correlation coefficient  $r = + 0.984$ , there is high degree of positive relationship between loan and deposit. Thus, loan and deposit is highly correlated with each other. For testing of significance t- test is done by solving a hypothesis problem

Bank	r	$r^2$	$t_{cal}$	$t_{tab}$	Result
HBL	0.984	0.968	9.527	3.182	Positively correlated

*(Appendix- 6)*

The above table shows that the correlation coefficient of HBL is 0.984 and it shows positive relationship between deposit and loan and advances. There is significant relationship between these two variables. The coefficient of determination ( $r^2$ ) is 0.968 which depicts that the dependent variable (loan and advances) is explained by the independent variable (deposits) about 96.8%. Similarly, the calculated value of t' is greater than the tabulated value which means alternative hypothesis, that says there is positive correlation between loan & Advance and total deposit.

#### 4.2.10.3 Trend Analysis of Loan & Advance

**Table: 4.21**

**Calculation of trend value & estimation of loan and advance for next Five years period**

<b>Year</b>	<b>Year (X)</b>	<b>a</b>	<b>b</b>	<b>Trend Value</b>
2005/06	-2	2078	344.71	1388.58
2006/07	-1	2078	344.71	1733.29
2007/08	0	2078	344.71	2078
2008/09	1	2078	344.71	2422.71
2009/10	2	2078	344.71	2767.42
2010/11	3	2078	344.71	3112.13
2011/12	4	2078	344.71	3456.84
2012/13	5	2078	344.71	3801.55
2013/14	6	2078	344.71	4146.26
2014/15	7	2078	344.71	4490.97

*(Appendix- 7)*

The trend value of total loan & Advance of HBL is calculated under this section. An effort has been made to forecast for next five years from 20010/11 to 20014/15

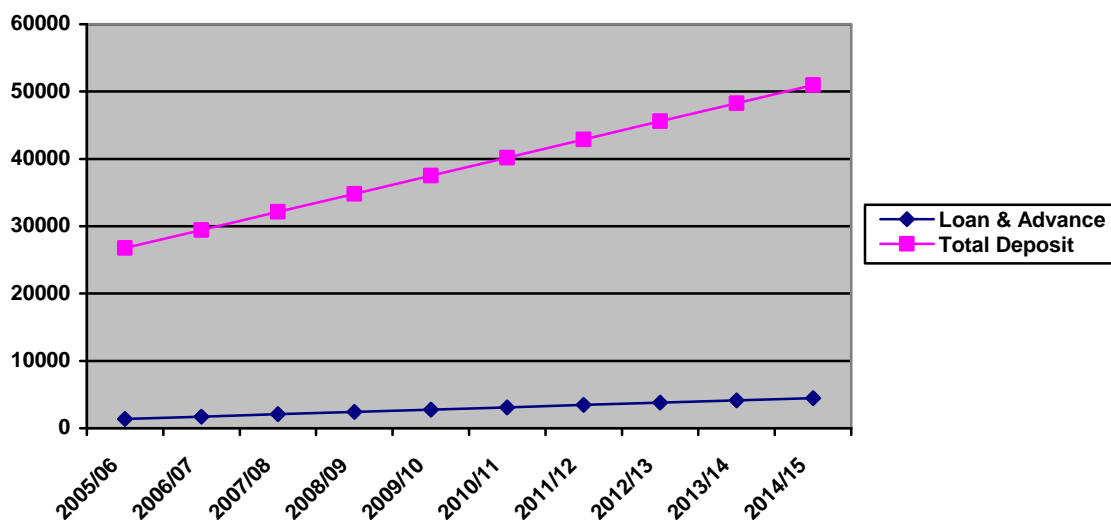
**Table:4.22****4.2.10.4 Trend Analysis of total deposit**

<b>Year</b>	<b>Year (X)</b>	<b>a</b>	<b>b</b>	<b>Trend Value</b>
2005/06	-2	32135	2687.4	26760.2
2006/07	-1	32135	2687.4	29447.6
2007/08	0	32135	2687.4	32135
2008/09	1	32135	2687.4	34822.4
2009/10	2	32135	2687.4	37509.8
2009/10	3	32135	2687.4	40197.2
2010/11	4	32135	2687.4	42884.6
2011/12	5	32135	2687.4	45572
2012/13	6	32135	2687.4	48259.4
2013/14	7	32135	2687.4	50946.8

(Appendix- 8)

**Figure: 4.11**

**Trend lines of loan & advance & Total Deposit**



Both the Table 4.22 and Figure 4.11 shows an increasing trend of loan & advance It is forecasted that HBL will have increasing trend of loan and advances. The possible capacity of granting loan and advances of HBL seems higher. Loan & advances of HBL in the year 2015 is Rs. 4490.97 million. Similarly there is also an increasing trend of total deposit and it is forecasted that the bank will follow an increasing trend regarding total deposit till the year 20014/15 it reached Rs 50946.8 million in the year 2014/15. Higher the total higher is the capacity of granting loan & advance so HBL seems to be more successful in the future to earn more profit because the expected future value of total deposit and Loan & advance both follow an increasing trend. However it seems the portion of total deposit used for granting loan & advance is very low.

### 4.3 Major Findings of the study

#### 4.3.1 Finding of Nepal Bank Limited

- ❖ It is found from the study that the total deposit collected by Nepal Bank limited was increasing every year except in the year 2008/09 during the five year period till 2009/10.
- ❖ NRB has directed all the commercial banks to keep minimum 5% of total deposit in the NRB balance so as to maintain the liquidity position. Nepal Bank Limited has an average mean ratio of 16.66% it reveals that the bank is in sound position in this regard.
- ❖ Loan & advance took an increasing trend. It was 9756169.745thousands in the year 2005/06 it rose to 20367310 thousands till the year 2009/10.
- ❖ Even though loan & advance took an increasing trend the ratio of loan & advance to total deposit is very low. The average mean ratio of loan & advance to deposit is 30% which is very less portion of deposit.
- ❖ Loan loss provision of NBL during the period of 5 years was fluctuating .the ratio of loan loss provision to total loan & advance in the year 2005/06 was 18.59 which was the highest of all in the year 2006/07 there has been no provision made for loan loss and in the year 2009/10 least of all 0.565% provision made for loan loss.
- ❖ It has been found from the study that interest income earned from loan and advance are increasing during the study period of 5 years except for the year 2006/07.

- ❖ The study says the average ratio of return on total assets for the study period is 0.01448 which shows satisfactory performance in terms of profitability.
- ❖ The statistical analysis shows the average amount (mean) of loan and advance and total deposit is 14409762.4 and 40533681.59, SD is 3999821.798 and 3095370.725 and CV is 27.76%. and 8% respectively.
- ❖ The analysis also shows that loan & advance & deposits are positively correlated. However the degree of correlation is very less so the t- test has been conducted.
- ❖ t-test verifies that loan & advance has no significant relation with total deposit since 't' calculated is less than 't' tabulated how ever the value of r is not zero.
- ❖ The trend analysis loan & advance and total deposit shows the increasing trend of both loan & advances and total deposit over the 5 years period & also forecasts the creasing trend values of loan & advance and total deposit.

#### **4.3.2 Finding of Himalayan Bank Limited**

- ❖ The study shows Himalayan Bank Limited has increasing trend of deposits during the study period of five years.
- ❖ Loan & advances are increasing; it was 1464.25 million in the year 2005/06 it rose to 2798.06 million till the year 2009/10.
- ❖ Liquidity position of bank is sound since the mean liquidity ratio is 4.99% as directed by NRB the minimum ratio is 5%

- ❖ The ratio for the study is .009570, which means loan loss provision is .009570 of the total loan. The ratio of 2005/06 is lower than the average ratio i.e. .009570 with the increasing trend of loan & advances the loan loss provision is also increasing. Higher ratio of loan loss provision to total loan indicates that the bank has increasing trend non performing loans. The bank didn't have the practice of accounting for the additional loan loss Provision.
- ❖ According to the NRB directives, banks can only include the loan loss provision Created in respect of Pass loan in the supplementary capital. The bank had included the loan loss provision in respect of restructured.
- ❖ It has been found from the study that interest income earned from loan & advance are increasing it was 1626473.819 thousands in the year 2005/06 and it rose to 3148605.196 at the end of year 2009/10.
- ❖ The study depicts the satisfactory performance of HBL regarding the profitability; the average ratio of return on total assets is 0.1156 for the study period of 5 years.
- ❖ The statistical analysis shows that average amount (mean ) of loan & advance and total deposit are 20782372.22 and 32134921.24 SD of loan & advance and total deposit are 4930941.428 and 3814925.643 finally CV of loan & advance is 23.73% and that of total deposit is 11.872%.
- ❖ Statistical analysis shows that loan and advance & deposits are positively correlated and it also suggests that the dependent variable i.e. loan & advances of is highly dependent upon the total deposit.

- ❖ t- test for significance of an observed correlation coefficient proved that the correlation coefficient 'r' is significant since the value of 't' calculated is greater than value of 't' tabulated.
  
- ❖ The trend of Loan & advance and total deposit of Himalayan Bank Limited is increasing till 2009/10. and it is estimated that both loan and advance and total deposit will take an increasing trend .( if other things remain constant)

## CHAPTER - 5

### 5.1 Summary

This chapter is a complete conclusion and suggestion package, which contains summary conclusion of the findings and actionable plans. This would be meaningful to the top management of the bank to initiate an action and achieve the desire result. Summary gives the brief introduction to the entire chapter of the study and shows the actual facts of the present situation under the topic of the study. Conclusions of the findings are based on the consequences of the analysis of relevant data by using various financial and statistical tools. Here we try to summarize whole study: Banking system is backbone of the national economy, which supports it to erect and rise up and the prosperity of banking system depends on the two major functions, viz, deposit collection and lending. At present situation, deposit collection is not much difficult, as liquidity of overall banking system is rising up.

But the lending function is not like that, as banks are facing two major challenges in lending. First of all, due to unfavorable political environment and violence, businessmen are reluctant to invest in business, so the volume of loan and advances is not in regular trend and if loan is given, the problem of turning loan to non-performing is another challenge that banks are facing. In addition, various risk like credit risk, interest rate risk, liquidity risk, price risk, foreign exchange risk, transaction risk and so on are associated with lending. So, to disburse loan in the most productive and secure sector has become the target of each bank.

Commercial banks need to keep optimum relation between deposit collection procedure and loan policy. The idle money collected by the commercial banks as deposits should be properly utilized either by granting loan to the needy parties or by making investment in the productive sector to earn more profit. CB should have sound investment policy for mobilization of the available fund. A CB mainly focuses on its two functions i.e. collection of deposit through various scheme and granting those amount as loan to the customers by providing various facilities.

Here the study has been conducted on Loan Management of Commercial Banks with special reference to Nepal Bank Limited and Himalayan Bank Limited the effort has been made with the objectives of providing true insight of loan management. . To achieve the objectives of the study different financial and statistical tools have been adopted. All of the analysis made revolves within the secondary data that have been collected mainly through the account department of concerned banks and their web sites.

For the convenience, the study has been divided mainly into five main chapters, viz, a) Introduction, b) Review of Literature, c) Research Methodology, d) Data Presentation and Analysis and e) Summary, Conclusion and Recommendations. A study of six years period (2005/06 to 2009/10) of loan, advance and overdraft shows that loan assets of both Nepal Bank Limited and Himalayan Bank Limited are following an increasing trend up to year 2009/10.

In this research both the banks seems performing well enough to attract their customers. Since both deposits and loan & advances took an increasing trend. Liquidity position of both the banks is sound since both the banks are able to maintain 5% of total deposit as in NRB as directed by NRB. The study also shows the return on assets of NBL is satisfactory while that of HBL is good. So both the banks have satisfactory performance regarding profitability.

Loans and advances and total deposit are positively correlated of HBL which shows that an increase in total deposit leads to an increase in loan and advances and vice versa. Through hypothesis testing, the significance has been checked. Which resulted that, there is no significant difference between total deposit & loan & advance. However in NBL the correlation coefficient between deposit and loan & advance found to be insignificant which is proved by t –test, even though the correlation coefficient was not equal to zero. That means change in deposit does not affect the amount of loan & advance.

## **5.2 Conclusion**

Most of the Nepalese commercial banks still lack such orientation and they could not be able to build effective credit policy for loan management. However, it is necessary to assess the appropriate credit policy in commercial banks for performance effectiveness. Most of the commercial banks are running into profit where as few banks are running into loss. Many commercial banks were making very good profit in past few years but that is decreasing in following years. It is, because the instability in loan management of the banks.

After conducting a thorough study of loan management of commercial Banks, it can be said that Private sector Banks are able to perform the loan management satisfactorily till date. All the aspects of loan approval to loan settlement have been paid due attention.

- The loan asset of HBL is increasing during the study period of five years. HBL also increases its lending capacity. Although loan asset of NBL is also increasing but it's lending capacity less than that of HBL.
- The fluctuation inherent in the interest income on loan and advances is because of the fluctuation in the interest rate itself. A decline in the interest income to loan and advances is not good sign for banks.

- Positive correlation between total deposit and loan and advances is a good sign until the deposit follows an increasing trend. But once the total deposit suffers decline, loans and advances will also be adversely affected.
- The total loan loss provision of Banks shows that the bank is safe in case of non-repayment of loan since there is adequate provision. But at same time it is not possible to rule out the fact that a higher loan loss provision reflects the inefficiency of . In case of NBL loan loss provision was highest 18.58% in the year 2005/06 and in the year 2006/07 there has not been made any provision which definitely reflects an inefficiency of management.
- Higher the non- performing loans to total loan and advances ratio the less effective the banks performance would be.
- The high amount of doubtful debt and its provision is not good for the banks performance. Even though banks should make a provision for doubtful debts according to the reasonable standards

Though the management of loans and advances in commercial banks are satisfactory till date, but still the bank needs to adopt some improvement to make loan management more effective.

### **5.3 Recommendation**

Most major banking problems have been caused by weaknesses in loan management. Banks should now have a keen awareness of the need to identify measure, monitor and control credit as well as well as to determine that they hold adequate capital against these risks that they are adequately compensated for risks incurred. Over the past year, banks have seen a pronounced rise in non-performing assets as certain segments in their portfolios continue to deteriorate. With such great

exposures come the needs for even greater safety measures. A sound application of these measures, combined with enhanced measuring, pricing and managing credit can provide enormous business benefits.

While substantial progress has been made in solving individual aspects of loan management problem, the development of a consistent framework for managing all sources of credit risk has been much slower to evolve. In fact, even the most sophisticated financial institutions have yet to integrate the disparate components of loan that are needed to support consistent risk and reward management on an enterprise-wide basis'.

It is easy to understand the difficulties of developing an enterprise-wide loan management risk solution: Loan management risk comes in many different shapes, sizes and colors. Further these different types of risk are often managed strictly in silos. The sources of risk are remarkably diverse and can include everything from corporate and sovereign bonds to credit derivatives and over-the-counter derivatives (such as interest rate swaps) to syndicated loans, middle market and small business commercial loans, to retail mortgages and credit cards. To further complicate things banks tend to manage and plan risk separately from marker risk, leading to the development of different cultures within a financial institution.

There is no doubt that an effective management is must for all banking faction. However, it is more important for lending function of commercial banks. Based on the conclusions derived from the study of loan management in Commercial Banks, the banks are suggested to work in the light of following recommendation: -

) Various acts and regulations are enacted for the financial sector reform but implementation of policies and directives like directed sector credit, sufficient provision for loan loss, volume of NPA is vital because of the increasing trend of NPA in commercial banks.

) NRB should regulate all the deposit accepting financial institution under the supervision and regulatory activity so that general people can feel security of their deposit.

) NRB should tight the supervision and inspection activity towards the commercial banks and financial institution so that the accounting manipulation can be avoided. It is because; there is huge decrease in the net profit in Nepal Bank due to the lack of quality credit.

) While invested a maximum amount of its funds on risky assets (i.e. loan). Thus, the banks should always threatened by the fear of default .It will be better if the banks diverts some amount of its funds from lending and invests it in less risky investment alternatives. This will help the bank diversify the risk.

) The increase in loan loss provision of commercial banks is reflecting the inefficiency of management. The bank needs to reduce its loan loss provision. This can be done by proper risk management, which includes

- Carefully screening of loan application
- Proper valuation of security
- Proper appraisal of projects

) Commercial banks should provide the facility of interest rate rebate to borrower who repays the loan before stipulated time. This may help to increase the number of early payers that will reduce default risk

) If there are large numbers of borrower, it will be difficult to properly manage the funds lend to them. But there are few borrowers it will be quit convenient to manage the loan effectively.

) Commercial Banks should conduct a market research on a periodic basis. This will help to identify the potential borrowers .The identified potential borrowers can

be attracted towards the bank by the application of various promotional tools.

) Profit is life blood of any organization. Profit maximization is the main objectives of any organization so banks are recommended to diversify it's investment on more profitable sector and adopt sound investment policy.

) Liquidity and profitability is like two side of a coin both are inter related and have converse relation one can be achieved only at cost of other. If a bank has high liquidity it can not be sound in profitability as it has to hold more assets in the form of cash. So banks should try to make balance and maintain reasonable liquidity to get optimum level of profitability.

## Appendix-1

### Calculation of Mean, SD & CV of Loan and Advance of NBL

Year	Loan& Advances(X)	$x - \bar{x}$	$(x - \bar{x})^2$
2005/06	9756162.747	-4653599.655	21655989749016.10
2006/07	11058477.66	-3351284.742	11231109421962.00
2007/08	13251962.77	-1157799.632	1340499987859.34
2008/09	17614898.83	3205136.428	10272899522092.60
2009/10	20367310	5957547.598	35492373382435.60
<b>Sum</b>	72048812.01	0	79992872063365.60

$$\text{Mean, } \bar{X} = \frac{\sum X}{n} = \frac{72048812.01}{5} = 14409762.4$$

Here,

n = Number of items observed.

X= Variables

$$\begin{aligned} \text{SD}(\dagger) &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{79992872063365.60}{5}} \\ &= 3999821.798 \end{aligned}$$

$$\begin{aligned} \text{C. V.} &= \frac{\text{S. D.}}{\text{Mean}} \times 100\% \\ &= \frac{3999821.798}{14409762.4} \times 100\% \\ &= 0.277577221 \times 100\% \\ &= 27.7577\% \end{aligned}$$

### Calculation of Mean, SD & CV of Total Deposit of NBL

Year	Total Deposit (X)	x Z $\bar{x}$	(x Z $\bar{x}$ ) <sup>2</sup>
2005/06	35829765.05	(4703916.54)	22126830790825.30
2006/07	39014204.36	(1519477.23)	2308811047626.17
2007/08	41829391.06	1295709.48	1678863045159.62
2008/09	45194232.47	4660550.88	21720734482698.10
2009/10	40800815	267133.41	71360260127.32
<b>Sum</b>	(X)=202668407.9		47906599626436.50

$$\text{Mean, } \bar{X} = \frac{\sum X}{n} = \frac{202668407.9}{5} = 40,533,681.59$$

Here,

n = Number of items observed.

X= Variables

$$\begin{aligned} \text{SD (†) } &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{47906599626436.50}{5}} \\ &= 3095370.725 \end{aligned}$$

$$\begin{aligned} \text{C. V. } &= \frac{\text{S. D.}}{\text{Mean}} \times 100\% \\ &= \frac{3095370.725}{40533681.59} \times 100\% \\ &= 0.08 \times 100\% \\ &= \mathbf{8\%} \end{aligned}$$

## APPENDIX-2

### Trend Analysis of Loan & advances of NBL for the year 2005/06 to 2009/10

(Rs. In '000')

Year (X)	Total Deposit (Y)	x=X-2007/08	x <sup>2</sup>	xy
2005/06	35829765.05	-2	4	-71659530.1
2006/07	39014204.36	-1	1	-39014204.4
2007/08	41829391.06	0	0	0
2008/09	45194232.47	1	1	45194232.5
2009/10	40800815	2	4	81601630
Sum	(y)=202668407.9	0	10	16122128

**For trend line**

**Value of a**

$$a = \frac{\sum y}{n}$$

$$= \frac{202668407.9}{5}$$

$$= 40533681.58$$

**Value of b**

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

$$= \frac{166122128}{10}$$

$$= 16612212.8$$

**Now trend line of loan amount Y on time X**

$$Y = a + bx$$

$$= 40533681.58 + 16612212.8 (-2)$$

$$= 7309255.98$$

**Calculation of trend value & estimation of Total Deposit for next Five years period**

<b>Year</b>	<b>Year (X)</b>	<b>a</b>	<b>b</b>	<b>Trend Value</b>
2005/06	-2	40533682	16612213	7309255.98
2006/07	-1	40533682	16612213	23921468.8
2007/08	0	40533682	16612213	40533681.6
2008/09	1	40533682	16612213	57145894.4
2009/10	2	40533682	16612213	73758107.2
2010/11	3	40533682	16612213	90370320
2011/12	4	40533682	16612213	106982533
2012/13	5	40533682	16612213	123594746
2013/14	6	40533682	16612213	140206958
2014/15	7	40533682	16612213	156819171

### Appendix-3

#### Trend Analysis of Loan & Advance of NBL for the year 2005/06 to 2009/10

(Rs. In '000')

Year (X)	Loan and advances(Y)	$x=X-2007/08$	$x^2$	$xy$
2005/06	9756162.747	-2	4	-19512325.49
2006/07	11058477.66	-1	1	-11058477.66
2007/08	13251962.77	0	0	0
2008/09	17614898.83	1	1	17614898.83
2009/10	20367310	2	4	40734620
Sum	(y)=72048812.01	0	10	27778715.68

**For trend line**

**Value of a**

$$a = \frac{\sum y}{n}$$

$$= \frac{72048812.01}{5}$$

$$= 14409762.4$$

**Value of b**

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

$$= \frac{2777871.568}{10}$$

$$= 277871.568$$

**Now trend line of loan amount Y on time X**

$$Y = a + bx$$

$$= 14409762.4 + 277871.568 (-2)$$

$$= 8854019.2$$

**Calculation of trend value & estimation of loan and advance for next Five years period**

<b>Year</b>	<b>Year (X)</b>	<b>a</b>	<b>b</b>	<b>Trend Value</b>
2005/06	-2	14409762	277871.57	13854019.3
2006/07	-1	14409762	277871.57	14131890.8
2007/08	0	14409762	277871.57	14409762.4
2008/09	1	14409762	277871.57	14687634
2009/10	2	14409762	277871.57	14965505.5
2010/11	3	14409762	277871.57	15243377.1
2011/12	4	14409762	277871.57	15521248.7
2012/13	5	14409762	277871.57	15799120.2
2013/14	6	14409762	277871.57	16076991.8
2014/15	7	14409762	277871.57	16354863.4

( Appendix - 4)

**Correlation between Loan & Deposit of Nepal Bank**

Year	Loan & Advances (X)	Total Deposits (Y)	XY	X <sup>2</sup>	Y <sup>2</sup>
2005/06	9756162.747	35829765.05	349561019014573.00	95182711545950.60	1283772063538200.00
2006/07	11058477.66	39014204.36	431437707337735.00	122289928156719.00	1522108141843840.00
2007/08	13251962.77	41829391.06	554321533018891.00	175614517257466.00	1749697956450410.00
2008/09	17614898.83	45194232.47	796091832658551.00	310284660791135.00	2042518648552400.00
2009/10	20367310	40800815	831002847357650.00	414827316636100.00	1664706504664220.00
	(X)=72048812.01	(Y)=202668407.9	XY=2962414939387400.00	X <sup>2</sup> =1118199134387370.00	Y <sup>2</sup> =8262803315049080.00

$$\begin{aligned} \text{Correlation of coefficient, } r &= \frac{\sum XY - \frac{\sum X \sum Y}{N}}{\sqrt{\left[ \sum X^2 - \frac{(\sum X)^2}{N} \right] \left[ \sum Y^2 - \frac{(\sum Y)^2}{N} \right]}} \\ &= 0.447490944 \end{aligned}$$

**t- test for observed sample correlation coefficient**

Hypothesis means the presumption or quantitative statement of the population which may be true or false .on order to make proper decision about the quantitative statement of population testing of hypothesis technique is used.

Set up hypothesis

Null hypothesis  $H_0 : \dots X0$  i.e. there is no correlation between loan & advance and total deposit or there is no significant difference between loan & advance and total deposit.

Alternative hypothesis  $H_0 : \dots | 0$  i.e. loan & advance and total deposit are correlated or the correlation coefficient is not zero.

Level of significance: Fixed the level of significance at  $| X 5 \%$  here we assumed a level of significance at 5 %

Test static

Under  $H_0$ , the test static is

$$\begin{aligned}
t &= \frac{\bar{X} - \mu}{\frac{s}{\sqrt{n}}} = \frac{0.4475 - 0}{\frac{\sqrt{0.20025}}{\sqrt{5}}} \\
&= \frac{0.4475}{\sqrt{0.04005}} \\
&= 0.86671
\end{aligned}$$

Critical region:

The tabulated value of t at 5% level of significance and 3 degree of freedom is 3.182

Decision: since t calculated is less than t tabulated we accept null hypothesis and reject alternative hypothesis which says there is a positive relation between loan & advance and total deposit.

(Appendix-5)

Calculation of Mean, SD & CV of Loan and Advance of HBL

Year	Loan& Advances(X)	$x - \bar{x}$	$(x - \bar{x})^2$
2005/06	14642559.56	-6139812.664	37697299549014.80
2006/07	16997997.05	-3784375.174	14321495457587.50
2007/08	19497520.48	-1284851.744	1650844004059.84
2008/09	24793155.27	4010783.046	16086380642081.00
2009/10	27980628.76	7198256.536	51814897158066.70
Sum	103911861.1	0	121570916810810.0

$$\text{Mean } \bar{X} = \frac{\sum X}{n} = \frac{103911861.1}{5} = 20782372.22$$

Here,

n = Number of items observed.

X= Variables

$$\begin{aligned} \text{SD}(\dagger) &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{121570916810810}{5}} \\ &= 4930941.428 \end{aligned}$$

$$\begin{aligned} \text{C. V. } &= \frac{\text{S. D.}}{\text{Mean}} \times 100\% \\ &= \frac{4930941.428}{20782372.22} \times 100\% \\ &= 0.237265572 \times 100\% \\ &= 23.7265572\% \end{aligned}$$

### Calculation of Mean, SD & CV of total Deposit

Year	Loan& Advances(X)	$x - \bar{x}$	$(x - \bar{x})^2$
2005/06	26490851.64	-5644069.601	31855521660932.30
2006/07	30048417.76	-2086503.485	4353496792917.13
2007/08	31842789.36	-292131.885	85341038233.65
2008/09	34681345.18	2546423.938	6484274872019.43
2009/10	37611202.27	5476281.033	29989653952395.50
Sum	160674606.2	0	72768288316498.00

$$\text{Mean } \bar{X} = \frac{\sum X}{n} = \frac{160674606.2}{5} = 32134921.24$$

$$\begin{aligned} \text{SD}(\sigma) &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{72,768,288,316,498.00}{5}} \\ &= 3814925.643 \end{aligned}$$

$$\begin{aligned} \text{C. V.} &= \frac{\text{S. D.}}{\text{Mean}} \times 100\% \\ &= \frac{3814925.643}{32134921.24} \times 100\% \\ &= 0.118715886 \times 100\% \\ &= 11.872 \end{aligned}$$

## APPENDIX-6

### Trend Analysis of Loan & Advance

Estimation of Loan & advances of HBL for the year 2005/06 to 2009/10  
( Rs. In Million)

years	Loan and advances(Y)	$x$	$x^2$	$xy$
2005/06	1464.255956	-2	4	-2928.511912
2006/07	1699.799705	-1	1	-1699.799705
2007/08	1949.752048	0	0	0
2008/09	2479.315527	1	1	2479.315527
2009/10	2798.062876	2	4	5596.125752
<b>Sum</b>	<b>10,391</b>	<b>0</b>	<b>10</b>	<b>3447.129662</b>

**Value of a**

$$a = \frac{\sum y}{n}$$

$$= \frac{10391}{5}$$

$$= 2078$$

**Value of b**

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

$$= \frac{3447.129}{10}$$

$$= 344.713$$

**Now trend line of loan amount Y on time X .**

$$Y = a + bX$$

$$= 2078 + 344.713(-2)$$

$$= 2078 - 689.426$$

$$= 1388.57$$

### Calculation of trend value of loan and advance

<b>Year</b>	<b>Year (X)</b>	<b>a</b>	<b>b</b>	<b>Trend Value</b>
2005/06	-2	2078	344.71	1388.58
2006/07	-1	2078	344.71	1733.29
2007/08	0	2078	344.71	2078
2008/09	1	2078	344.71	2422.71
2009/10	2	2078	344.71	2767.42
2010/11	3	2078	344.71	3112.13
2011/12	4	2078	344.71	3456.84
2012/13	5	2078	344.71	3801.55
2013/14	6	2078	344.71	4146.26
2014/15	7	2078	344.71	4490.97

## APPENDIX-7

### Trend Analysis of total deposit of HBL

years	Total Deposit (Y)	$x$	$x^2$	$xy$
2005/06	26490.851640	-2	4	-52981.70328
2006/07	30048.417756	-1	1	-30048.41776
2007/08	31842.789356	0	0	0
2008/09	34681.345179	1	1	34681.34518
2009/10	37611.202274	2	4	75222.40455
Sum	160674.6062	0	10	26873.62869

**Value of a**

$$a = \frac{\sum y}{n}$$

$$= \frac{160675}{5}$$

$$= 32135$$

**Value of b**

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

$$= \frac{26874}{10}$$

$$= 2687.4$$

Now trend line of loan amount Y on time X .

$$Y = a + bX$$

$$= 32135 + 2687.4(-2)$$

$$= 32135 - 5374.8$$

$$= 26760.2$$

### Calculation of trend value of Total Deposit

<b>Year</b>	<b>Year (X)</b>	<b>a</b>	<b>b</b>	<b>Trend Value</b>
2005/06	-2	32135	2687.4	26760.2
2006/07	-1	32135	2687.4	29447.6
2007/08	0	32135	2687.4	32135
2008/09	1	32135	2687.4	34822.4
2009/10	2	32135	2687.4	37509.8
2010/11	3	32135	2687.4	40197.2
2011/12	4	32135	2687.4	42884.6
2012/13	5	32135	2687.4	45572
2013/14	6	32135	2687.4	48259.4
2014/15	7	32135	2687.4	50946.8

(APPENDIX-8)

Correlation between Loan & Deposit of HBL

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

= 0.984

Decision:

As r=+0.984, there is high degree of positive relationship between loan and deposit. Thus, loan and deposit is highly correlated with each other. Not only this, it also shows that there is an optimum utilization of deposit fund in the bank

t-test for significance of correlation coefficient

Set up hypothesis

Null hypothesis  $H_0 : \rho = 0$  i.e. there is no correlation between loan & advance and total deposit or there is no significant difference between loan & advance and total deposit.

Alternative hypothesis  $H_1 : \rho \neq 0$  i.e. loan & advance and total deposit are correlated or the correlation coefficient is not zero.

Level of significance: Fixed the level of significance at 5% here we assumed a level of significance at 5%

Test static

Under  $H_0$ , the test static is

$t = \frac{r}{\sqrt{\frac{1-r^2}{n-2}}}$

$= \frac{0.984}{\sqrt{\frac{1-0.968}{5-2}}}$

= 9.527539032

Critical region:

The tabulated value of t at 5% level of significance and 3 degree of freedom is 3.182

## BIBLIOGRAPHY

Baidya, S. (1997). *Banking and Management*, Kathmandu: Monitor Nepal.

Basantala, T.R. (2005) *Loan Disbursement and Repayment Pattern of Agricultural Development Bank*. (Unpublished Master Thesis ) Faculty of Management, Tribhuvan University, Nepal.

Cheney, J. & Moses, EA. (1999). *Fundamentals of Investment*. St. Paul: West Publishing Company.

Chopra, V. (1989). *Lending Policy of Financial Institutions*. New Delhi: Prentice Hall of India.

Crosse, H.K (1963). *Management Policies for Commercial Banks*. New Jersey: Prentice Hall Inc.

Dahal, B. & Dahal, B. p.(2007) *Fundamentals of Investments*. Kathmandu: Taleju Prakashan.

Dahal, P. (2009). *Loan Management of NIC Bank with Special Reference to Personal Loan*. (Unpublished Master Thesis) Faculty of Management, T.U.

Desai, V.R. Mutlik (1967). *Banking Development in India Bombay*; Pc Mansktol and sons Pvt. Ltd

Francis, Jack Clarke (1991). *Investment Analysis and Management*. New York: Mc Graw Hill.

Gitman L.T. & Jochnk (1990). *Fundamental of Investing*. New York: Harper & Row Publishers.

Grywinski, K. (1991) *Fundamental of Banking and Insurance*. New York: The Dryden Press.

Gupta, G.P (1984). *Banking System, its Role in Expert Development*. New Delhi: S. Chand and Company.

Joseph, J. (1998). *Financial Institutions and Markets*. USA: Blackwell Publishers.

Khan, M.Y.(1982) *Industrial Finance*. New Delhi: Tata McGraw Hill Publishing Company.

Koch, W. Timothy & Macdonald, S. Scott (2004). *Bank managment*. Cleveland: Thomson South- Westren.

Kothari, C. R. (1990). *Research Methodology: Method and Practice*. New Delhi: Weiley Eastern Ltd.

Kunuwar, K.B.(2003). *The Himalayan Poverty*. Kathmandu: The Meena Prakashan.

Mishkin, Frederic S. (1998). *Financial Management Theory and Practice*. New York: McGraw Hill.

Panday, I.M. (1999). *Financial Management (8th edition)*. New Delhi: Vikash Publishing House.

Paul, E. Green and Donald, S. Till (1999). *Research Marketing Decisions*. New York: SimmonsBoardman Publishing Co.

Pyakurel, S.P. (2006). *Loan Disbursement and Recovery of Nepal Bank Limited*. (Unpublished Master Thesis) Faculty of Management, Tribhuvan University, Nepal.

Reed, E.W., Edward, K., Cotter, Richard V. & Smith, Richard k. (1980). *Commercial Banking*. New Jersey: Prentice Hall Inc.

Rose, Peter S. (2002). *Commercial Bank Management*. New York: Mc- Graw Hill Publication.

Saunders, Anthony & Cornett, Marcia M. (2004). *Financial Markets and Institutions*. New Delhi: Tata McGraw Hill Publishing Company limited.

Sharpe, W.F., Alexender, G.J. & Barly, J.V. (1998). *Investment. (5th edition)*. New Delhi: Prentice Hall of India.

Shrestha, N. (2004). *A Study on Non Performing Loan and Loan Loss Provisioning of Commercial Banks with reference to NBL, NABIL, SCBNL*. (Unpublished Master Thesis) Faculty of Management, Tribhuvan University , Nepal.

Shrestha, R.R (1993). *Loan Management in Nepal*. Kathmandu: Pairavi Prakashan.

Shrestha, S. & Amatya, S. (2002). *Statistics and Quantitative Techniques For Business Studies. (1st edition)*. Kathmandu:Nepal, Ratna Pustak Bhandar.

Shrestha, M.K. (2000). *Fundamentals of Investment*. Kathmandu: M.K. Publishers and Distributors.

Singh, S.P. & Singh, S. (1983). *Financial Analysis For Credit Management In Banks*. New Delhi: Vikash Publishing House Ltd.

Sthapit, A.B. (2003). *Statistical Methods. (4th edition)*. Kathmandu: Nepal, Educational Publishers and Distributors.

William, Diamond (1990). *Development of Finance Company*. Maryland: The John Hopkins Press.

Wolf, H.K. & Pant, P.R. (2002). *A Hand book for Social Science Research and Thesis Writing*. Kathmandu: Buddha Academic Publisher.

Yadav, U. (2007). *A Case Study on Non Performing Assets with special reference to Nepal Bank Limited and Rastriya Banijya Bank Limited*. (Unpublished Master Thesis) Faculty of Management, Tribhuvan University, Nepal.

Websites:

[www.himalayanbank.com](http://www.himalayanbank.com)

[www.google.com](http://www.google.com)

[www.nepalbank.com](http://www.nepalbank.com)

[www.nepalstock.com](http://www.nepalstock.com)[www.nrb.org](http://www.nrb.org)

## Appendix-1

### Calculation of Mean, SD & CV of Loan and Advance of NBL

Year	Loan& Advances(X)	$x - \bar{x}$	$(x - \bar{x})^2$
2005/06	9756162.747	-4653599.655	21655989749016.10
2006/07	11058477.66	-3351284.742	11231109421962.00
2007/08	13251962.77	-1157799.632	1340499987859.34
2008/09	17614898.83	3205136.428	10272899522092.60
2009/10	20367310	5957547.598	35492373382435.60
<b>Sum</b>	<b>72048812.01</b>	<b>0</b>	<b>79992872063365.60</b>

$$\text{Mean, } \bar{X} = \frac{\sum X}{n} = \frac{72048812.01}{5} = 14409762.4$$

Here,

n = Number of items observed.

X= Variables

$$\begin{aligned} \text{SD} &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{79992872063365.60}{5}} \\ &= 3999821.798 \end{aligned}$$

$$\begin{aligned} \text{C. V.} &= \frac{\text{S. D.}}{\text{Mean}} \times 100\% \\ &= \frac{3999821.798}{14409762.4} \times 100\% \\ &= 0.277577221 \times 100\% \\ &= 27.7577\% \end{aligned}$$

### Calculation of Mean, SD & CV of Total Deposit of NBL

Year	Total Deposit (X)	$x - \bar{x}$	$(x - \bar{x})^2$
2005/06	35829765.05	(4703916.54)	22126830790825.30
2006/07	39014204.36	(1519477.23)	2308811047626.17
2007/08	41829391.06	1295709.48	1678863045159.62
2008/09	45194232.47	4660550.88	21720734482698.10
2009/10	40800815	267133.41	71360260127.32
Sum	(X)=202668407.9		47906599626436.50

$$\text{Mean, } \bar{X} = \frac{\sum X}{n} = \frac{202668407.9}{5} = 40,533,681.59$$

Here,

n = Number of items observed.

X= Variables

$$\begin{aligned} \text{SD (s)} &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{47906599626436.50}{5}} \\ &= 3095370.725 \end{aligned}$$

$$\begin{aligned} \text{C. V.} &= \frac{\text{S. D.}}{\text{Mean}} \times 100\% \\ &= \frac{3095370.725}{40533681.59} \times 100\% \\ &= 0.08 \times 100\% \\ &= 8\% \end{aligned}$$

## APPENDIX-2

### Trend Analysis of Loan & advances of NBL for the year 2005/06 to 2009/10

(Rs. In '000')

Year (X)	Total Deposit (Y)	x=X-2007/08	x <sup>2</sup>	xy
2005/06	35829765.05	-2	4	-71659530.1
2006/07	39014204.36	-1	1	-39014204.4
2007/08	41829391.06	0	0	0
2008/09	45194232.47	1	1	45194232.5
2009/10	40800815	2	4	81601630
Sum	(y)=202668407.9	0	10	16122128

**For trend line**

**Value of a**

$$a = \frac{\sum y}{n}$$

$$= \frac{202668407.9}{5}$$

$$= 40533681.58$$

**Value of b**

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

$$= \frac{166122128}{10}$$

$$= 16612212.8$$

**Now trend line of loan amount Y on time X**

$$Y = a + bx$$

$$= 40533681.58 + 16612212.8 (-2)$$

$$= 7309255.98$$

**Calculation of trend value & estimation of Total Deposit for next Five years period**

<b>Year</b>	<b>Year (X)</b>	<b>a</b>	<b>b</b>	<b>Trend Value</b>
2005/06	-2	40533682	16612213	7309255.98
2006/07	-1	40533682	16612213	23921468.8
2007/08	0	40533682	16612213	40533681.6
2008/09	1	40533682	16612213	57145894.4
2009/10	2	40533682	16612213	73758107.2
2010/11	3	40533682	16612213	90370320
2011/12	4	40533682	16612213	106982533
2012/13	5	40533682	16612213	123594746
2013/14	6	40533682	16612213	140206958
2014/15	7	40533682	16612213	156819171

### Appendix-3

#### Trend Analysis of Loan & Advance of NBL for the year 2005/06 to 2009/10

(Rs. In '000')

Year (X)	Loan and advances(Y)	$x=X-2007/08$	$x^2$	XY
2005/06	9756162.747	-2	4	-19512325.49
2006/07	11058477.66	-1	1	-11058477.66
2007/08	13251962.77	0	0	0
2008/09	17614898.83	1	1	17614898.83
2009/10	20367310	2	4	40734620
Sum	(y)=72048812.01	0	10	27778715.68

**For trend line**

**Value of a**

$$a = \frac{\sum y}{n}$$

$$= \frac{72048812.01}{5}$$

$$= 14409762.4$$

**Value of b**

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

$$= \frac{2777871.568}{10}$$

$$= 277871.568$$

**Now trend line of loan amount Y on time X**

$$Y = a + bx$$

$$= 14409762.4 + 277871.568 (-2)$$

$$= 8854019.2$$

**Calculation of trend value & estimation of loan and advance for next Five years period**

<b>Year</b>	<b>Year (X)</b>	<b>a</b>	<b>b</b>	<b>Trend Value</b>
2005/06	-2	14409762	277871.57	13854019.3
2006/07	-1	14409762	277871.57	14131890.8
2007/08	0	14409762	277871.57	14409762.4
2008/09	1	14409762	277871.57	14687634
2009/10	2	14409762	277871.57	14965505.5
2010/11	3	14409762	277871.57	15243377.1
2011/12	4	14409762	277871.57	15521248.7
2012/13	5	14409762	277871.57	15799120.2
2013/14	6	14409762	277871.57	16076991.8
2014/15	7	14409762	277871.57	16354863.4

(Appendix - 4)

Correlation between Loan & Deposit of Nepal Bank

Year	Loan & Advances (X)	Total Deposits (Y)	XY	X <sup>2</sup>	Y <sup>2</sup>
2005/06	9756162.747	35829765.05	349561019014573.00	95182711545950.60	1283772063538200.00
2006/07	11058477.66	39014204.36	431437707337735.00	122289928156719.00	1522108141843840.00
2007/08	13251962.77	41829391.06	554321533018891.00	175614517257466.00	1749697956450410.00
2008/09	17614898.83	45194232.47	796091832658551.00	310284660791135.00	2042518648552400.00
2009/10	20367310	40800815	831002847357650.00	414827316636100.00	1664706504664220.00
	(X)=72048812.01	(Y)=202668407.9	XY=2962414939387400.00	X <sup>2</sup> =1118199134387370.00	Y <sup>2</sup> =8262803315049080.00

$$\begin{aligned} \text{Correlation of coefficient, } r &= \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}} \\ &= \frac{2962414939387400.00}{\sqrt{1118199134387370.00} \sqrt{8262803315049080.00}} \\ &= 0.447490944 \end{aligned}$$

**t- test for observed sample correlation coefficient**

Hypothesis means the presumption or quantitative statement of the population which may be true or false .on order to make proper decision about the quantitative statement of population testing of hypothesis technique is used.

Set up hypothesis

Null hypothesis  $H_0 : \rho = 0$  i.e. there is no correlation between loan & advance and total deposit or there is no significant difference between loan & advance and total deposit.

Alternative hypothesis  $H_1 : \rho \neq 0$  i.e. loan & advance and total deposit are correlated or the correlation coefficient is not zero.

Level of significance: Fixed the level of significance at  $\alpha = 5\%$  here we assumed a level of significance at 5 %

Test static

Under  $H_0$ , the test static is

$$\begin{aligned}
t &= \frac{\bar{X} - \mu}{\frac{s}{\sqrt{n}}} \\
&= \frac{0.4475 - 0}{\frac{\sqrt{0.20025}}{\sqrt{5}}} \\
&= 0.86671
\end{aligned}$$

Critical region:

The tabulated value of t at 5% level of significance and 3 degree of freedom is 3.182

Decision: since t calculated is less than t tabulated we accept null hypothesis and reject alternative hypothesis which says there is a positive relation between loan & advance and total deposit.

(Appendix-5)

Calculation of Mean, SD & CV of Loan and Advance of HBL

Year	Loan& Advances(X)	$x - \bar{x}$	$(x - \bar{x})^2$
2005/06	14642559.56	-6139812.664	37697299549014.80
2006/07	16997997.05	-3784375.174	14321495457587.50
2007/08	19497520.48	-1284851.744	1650844004059.84
2008/09	24793155.27	4010783.046	16086380642081.00
2009/10	27980628.76	7198256.536	51814897158066.70
Sum	103911861.1	0	121570916810810.0

$$\text{Mean } \bar{X} = \frac{\sum X}{n} = \frac{103911861.1}{5} = 20782372.22$$

Here,

n = Number of items observed.

X= Variables

$$\begin{aligned} \text{SD}(\dagger) &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{121570916810810}{5}} \\ &= 4930941.428 \end{aligned}$$

$$\begin{aligned} \text{C. V.} &= \frac{\text{S. D.}}{\text{Mean}} \times 100\% \\ &= \frac{4930941.428}{20782372.22} \times 100\% \\ &= 0.237265572 \times 100\% \\ &= 23.7265572\% \end{aligned}$$

### Calculation of Mean, SD & CV of total Deposit

Year	Loan& Advances(X)	$x - \bar{x}$	$(x - \bar{x})^2$
2005/06	26490851.64	-5644069.601	31855521660932.30
2006/07	30048417.76	-2086503.485	4353496792917.13
2007/08	31842789.36	-292131.885	85341038233.65
2008/09	34681345.18	2546423.938	6484274872019.43
2009/10	37611202.27	5476281.033	29989653952395.50
Sum	160674606.2	0	72768288316498.00

$$\text{Mean } \bar{X} = \frac{\sum X}{n} = \frac{160674606.2}{5} = 32134921.24$$

$$\begin{aligned} \text{SD}(\sigma) &= \sqrt{\frac{\sum (X - \bar{X})^2}{N}} \\ &= \sqrt{\frac{72,768,288,316,498.00}{5}} \\ &= 3814925.643 \end{aligned}$$

$$\begin{aligned} \text{C. V.} &= \frac{\text{S. D.}}{\text{Mean}} \times 100\% \\ &= \frac{3814925.643}{32134921.24} \times 100\% \\ &= 0.118715886 \times 100\% \\ &= 11.872 \end{aligned}$$

## APPENDIX-6

### Trend Analysis of Loan & Advance

Estimation of Loan & advances of HBL for the year 2005/06 to 2009/10  
( Rs. In Million)

years	Loan and advances(Y)	$x$	$x^2$	$xy$
2005/06	1464.255956	-2	4	-2928.511912
2006/07	1699.799705	-1	1	-1699.799705
2007/08	1949.752048	0	0	0
2008/09	2479.315527	1	1	2479.315527
2009/10	2798.062876	2	4	5596.125752
<b>Sum</b>	<b>10,391</b>	<b>0</b>	<b>10</b>	<b>3447.129662</b>

**Value of a**

$$a = \frac{\sum y}{n}$$

$$= \frac{10391}{5}$$

$$= 2078$$

**Value of b**

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

$$= \frac{3447.129}{10}$$

$$= 344.713$$

**Now trend line of loan amount Y on time X .**

$$Y = a + bX$$

$$= 2078 + 344.713(-2)$$

$$= 2078 - 689.426$$

$$= 1388.57$$

### Calculation of trend value of loan and advance

<b>Year</b>	<b>Year (X)</b>	<b>a</b>	<b>b</b>	<b>Trend Value</b>
2005/06	-2	2078	344.71	1388.58
2006/07	-1	2078	344.71	1733.29
2007/08	0	2078	344.71	2078
2008/09	1	2078	344.71	2422.71
2009/10	2	2078	344.71	2767.42
2010/11	3	2078	344.71	3112.13
2011/12	4	2078	344.71	3456.84
2012/13	5	2078	344.71	3801.55
2013/14	6	2078	344.71	4146.26
2014/15	7	2078	344.71	4490.97

## APPENDIX-7

### Trend Analysis of total deposit of HBL

years	Total Deposit (Y)	$x$	$x^2$	$xy$
2005/06	26490.851640	-2	4	-52981.70328
2006/07	30048.417756	-1	1	-30048.41776
2007/08	31842.789356	0	0	0
2008/09	34681.345179	1	1	34681.34518
2009/10	37611.202274	2	4	75222.40455
Sum	160674.6062	0	10	26873.62869

**Value of a**

$$a = \frac{\sum y}{n}$$

$$= \frac{160675}{5}$$

$$= 32135$$

**Value of b**

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

$$= \frac{26874}{10}$$

$$= 2687.4$$

Now trend line of loan amount Y on time X .

$$Y = a + bX$$

$$= 32135 + 2687.4(-2)$$

$$= 32135 - 5374.8$$

$$= 26760.2$$

**Calculation of trend value of Total Deposit**

<b>Year</b>	<b>Year (X)</b>	<b>a</b>	<b>b</b>	<b>Trend Value</b>
2005/06	-2	32135	2687.4	26760.2
2006/07	-1	32135	2687.4	29447.6
2007/08	0	32135	2687.4	32135
2008/09	1	32135	2687.4	34822.4
2009/10	2	32135	2687.4	37509.8
2010/11	3	32135	2687.4	40197.2
2011/12	4	32135	2687.4	42884.6
2012/13	5	32135	2687.4	45572
2013/14	6	32135	2687.4	48259.4
2014/15	7	32135	2687.4	50946.8

(APPENDIX-8)

Correlation between Loan & Deposit of HBL

= 0.984

Decision:

As r=+0.984, there is high degree of positive relationship between loan and deposit. Thus, loan and deposit is highly correlated with each other. Not only this, it also shows that there is an optimum utilization of deposit fund in the bank

t-test for significance of correlation coefficient

Set up hypothesis

Null hypothesis H0 : ... X0 i.e. there is no correlation between loan & advance and total deposit or there is no significant difference between loan & advance and total deposit.

Alternative hypothesis H1 : ... | 0 i.e. loan & advance and total deposit are correlated or the correlation coefficient is not zero.

Level of significance: Fixed the level of significance at | X 5 % here we assumed a level of significance at 5 %

Test static

Under H0, the test static is

t X r / sqrt(1 - r^2) | sqrt(n - 2)

= 0.984 / sqrt(1 - 0.984^2) | sqrt(5 - 2)

= 9.527539032

Critical region:

The tabulated value of t at 5% level of significance and 3 degree of freedom is 3.182