

CHAPTER – I

INTRODUCTION

1.1 Background of the Study

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

Banks are major institutions in financing. Bank involves in a process of collecting scattered money and to help its mobilization in different sectors according to the need of customers. Bank helps to develop saving habit of people, which in turns help to make other people to invest for their business. Banking loan helps to invest in industrial sector, commercial sector, production sector, trade & commerce. Bank also helps to develop international business by initiating as a mediator on export & import. This way banks help to strengthen the national.

Banking is one of the most heavily regulated businesses in the world. Banks are among the most important financial institutions in the economy. They are the principal source of loanable funds for millions of individuals and families and for many units of government. Moreover, bank often act as a major source of credit to small local business ranging from grocery stores to automobile dealers for their stock. Banks are among the most important sources of short term working capital for business and have become increasingly active in recent years in making long-term business loans for new plant and equipment.

Lending is the most important function of a commercial bank. For lending procedure, bank has to make some banking practices such as transferring property in bank's name. The transfer is temporarily made for a loan price &

interest. Lending money is nowadays becoming main resources of revenue to the bank and also involves high risk too. Bank will not provide loan unless it has sufficient sources to the borrower that will be needed in case of future recovery.

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

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

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

1.1.1 Profile of Rastriya Banijya Bank Limited

Rastriya Banijya Bank (RBB) is fully government owned, and the largest commercial bank in Nepal. RBB was established on January 23, 1966 (2022 Magh 10 BS) under the RBB Act. Now, the bank is running under bank and financial institute act 2063. RBB has been contributing to socio economic development of the country for the last four and half decades. The Bank has currently entered into 46 years of service. RBB provides various banking services to a wide range of customers they include elite to poor individuals,

institutional customers, and the customers from industry / business communities.

RBB has Nepal's most extensive banking network with over 128 branches (**124 ABBS Branches**). Through its widest branch and ABBS network RBB has been catering modern Banking services to millions of customers. The Bank was transformed in s company in 2063 1-6 B.S. Following this historical transformation the bank has successfully completed its first ever general assembly on 2076-05-31 BS.

RBB has many correspondent arrangements with major international banks all over the world that facilitate trade finance, bank-originated personal funds transfers and interbank funds transfer via SWIFT. In a bid to promote remittance business, RBB works with Western Union and International Money Express, two leading person-to-person funds transfer networks.

The bank is also in the frontline towards fulfilling corporate social responsibility. The bank has been working as a development partner by acting as a fund administrator of Poverty Alleviation Fund (PAF). Similarly, the bank has been working as a chief administrator in the Educational Assistance Project (run with the assistance of World Bank) aimed at assisting poor and diligent students learning at higher secondary and bachelor level.

1.2 Statement of the Problem

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

However, the financial institutions are increasing regularly. Liquidity is maximum with the financial institutions. Hence, the banks and financial

institutions are competing among themselves to advance lending to limited opportunity sectors. Banks and financial institutions are investing in house loan, hire purchase loan for safety purpose. Lack of good lending opportunities, banks is facing problems of over liquidity. Nowadays, banks have increasing number of deposits in fixed and saving accounts but have decreasing trend in lending behaviors. So, this has caused major problems in commercial banks. Nowadays, due to competition among banks, the interest rate charge for loan is in decreasing trend. Due to unhealthy competition among banks, the recovery of the banks credit is going towards negative trends. Non-performing loans of the banks are increasing year by year. To control such type of state, the regulatory body of the banks and financial institutions, NRB has renewed its directives of the loan loss provision. Therefore, it is necessary to analyze the 'loan management' or loan disbursement recovery provision for loss and write off of credit. For the study, the following research problems have been raised;

- a. Whether the loan investment and loan recovery satisfactory in relation to loan outstanding?
- b. To what extent, the growth rate of loan outstanding, loan recovery and loan investment of the bank is raising on?
- c. Is the bank efficient in controlling non performing loan, and keeping the sufficient provision on loan loss?
- d. What is the relationship of loan and advances with net profit and total deposit?
- e. What will be the loan and advances of the bank in the forthcoming years?

1.3 Objective of the Study

The main objective of this study is to analyze, examine and interpret the loan management of RBB. The other specific objectives of the study are as follows;

- a. To evaluate loan investment and loan recovery in relation to loan outstanding.

- b. To measure the growth rate of loan outstanding, loan recovery and loan investment.
- c. To analyze the non performing loan of the banks and the provision made for default loan.
- d. To measure the deposit mobilization rate on loan and advances and the relationship of loan and advances with net profit.
- e. To estimate the value of loan and advances for the next four year periods.

1.4 Significance of the Study

The study will be mainly beneficial to the shareholders, depositors and other creditors to identify the productivity of their funds in the RBB. Likewise other financial agencies, e.g. financial experts are also interested in the performance of bank. Besides them, the study will also help the management of the bank to analyze the effectiveness of its loan management and policies of the bank in comparison to competitors. The study will also be equally significant to the central bank to formulate the new credit policy, as there are certain loopholes as a result of which the non-performing assets has been regarded as the main problem of the commercial banks in these days.

1.5 Limitations of the Study

The research study has some limitations. The main limitations of the study are as follows: -

- a. Though, there has been in operation of 31 commercial banks in Nepal, only RBB is taken for the proposed study and thus may not represent the whole population.
- b. This study concentrates only on loan management and thus ignores the other financial aspects.
- c. The secondary data will be used for presentation and interpretation. Only a 10-years data will be considered. The reliability of the data depends totally on the annual reports of the bank.

- d. In this study, only selected financial and statistical tools as well as techniques are used.

1.6 Organization of the Study

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

Chapter – I: Introduction

This chapter includes background of the study, the profile of RBB, statement of the problems, objectives of the study, significance of the study, and limitations of the study and organization of the study.

Chapter – II: Review of Literature

This chapter deals with review of literatures, which includes conceptual/theoretical review and review of related studies. Further, the chapter traces out the research gap of the previous studies.

Chapter – III: Research Methodology

This chapter is related to research methodology employed. It includes research design, population and sample, source of data, data collection techniques and data analysis tools.

Chapter – IV: Data Presentation and Analysis

The fourth chapter deals with the data analysis and interpretations of data relating to loan & advances. It also presents major finding of the study.

Chapter – V: Summary, Conclusion and Recommendations

It includes summary and conclusion of the study. Further, recommendations are presented on the basis of findings and conclusions drawn.

Besides these, **Bibliography** and **Appendix** are presented at the end of the study.

CHAPTER – II

REVIEW OF LITERATURE

2.1 Conceptual Framework

2.1.1 Concept of Loan

An arrangement in which a lender gives money or property to a borrower, and the borrower agrees to return the property or repay the money, usually along with interest, at some future point(s) in time. Usually, there is a predetermined time for repaying a loan, and generally the lender has to bear the risk that the borrower may not repay a loan (though modern capital markets have developed many ways of managing this risk).

“Loan is financial assets resulting from the delivery of cash or other assets by a lender to a borrower in return for an obligation of repay on specified date on demand. Loan is the amount of money lent by the creditor (bank) to the borrower (customers) either on the basis of security or without security. Sum of the money lent by a bank is the loan.” (*Chopra; 1989: 35*)

“Loan and advances is an important item on the asset side of the balance sheet of a commercial bank. Bank earns interest on loan and advances, which is one of the major sources of income for banks. Bank prepares loan portfolio, otherwise it will not only add bad debts but also affect profitability adversely.” (*Varshney & Swaroop; 1994: 6*)

“Loan administration involves the creation and management of risk assets. The process of lending takes into consideration about the people and system required for the evaluation and approval of loan requests, negotiation of terms, documentation, disbursement, administration of outstanding loans and workouts, knowledge of the process and awareness of its strength and weaknesses are important in setting objectives and goals for lending activities and for allocating available funds to various lending functions such as

commercial, installment and mortgage portfolios.” (Johnson; 1940: 132)

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

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

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

2.1.2 Types of Lending

The basic types of lending that the bank flows are in the form of;

a) Overdraft

It denotes the excess amount withdrawn over their deposits.

b) Cash Credit

“The credit is not given directly in cash but deposit account is being opened on the name of credit taker and the amount credited to that account. In this way, every credit creates deposit.” *(Rose; 2002: 42)*

c) Direct Credit

Under this, the following types of credit falls;

i) Term Credit

“It refers to money lend in lump sum to the borrowers. It is principal form of medium term debt financing having maturities of 1 to 8 years.

A bank credit with maturities exceeding 1 year is called term credits. The firm agrees to pay interest based on the bank's prime rate and to repay principal in the regular installments. Special patterns of principal payments over time can be negotiated to meet the firm's special needs.” *(Richard; 1996: 80)*

ii) Working Capital Credit

“Working capital denotes the difference between current assets and current liabilities. It is granted to the customers to meet their working capital gap for supporting production process. A natural process develops in funds moving through the cycle are generated to repay a working capital credit.” *(Richard; 1996: 80)*

iii) Priority or deprived sector credit

“Commercial banks are required to extend advances to the priority and deprived sector. 12 % of the total credit must be towards priority sector

including deprived sector. Rs. 2 million for agriculture cum service sector and Rs. 2.5 million for single borrowers are limit sanctioned to priority sector. Institutional support to 'Agriculture Development Bank' and 'Rural Development Bank' are also considered under this category. Deprived sector lending includes:

- a. Advances to poor/downtrodden/weak/deprived people up to Rs. 30,000 for generating income or employment.
- b. Institutional credit to rural development bank.
- c. Credits to NGOs those are permitted to carryout banking transactions for lending up to Rs. 30,000.” (Richard; 1996: 82)

iv) Hire Purchase Financing (Installment Loan)

“Hire-purchase credits are characterized by periodic repayment of principal and interest over the maturity of the credit. Hirer agrees to take the goods on hire at a stated rental including their repayment of principal as well as interest with an option to purchase. A recent survey of commercial banks indicates those banks are planning to offer installment credits on a variable rate basis. It can be secured and unsecured as well as direct and indirect installment credit.” (Richard; 1996: 83)

v) Housing Loan (Real Estate Loan)

“Financial institutions also extend housing loan to their customers. It is different types, such as: residential building, commercial complex, construction of warehouse etc. It is given to those who have regular income or can earn revenue from housing project itself.” (Richard; 1996: 83)

vi) Project Loan

“Project loan is granted to the customers as per project viability. The borrowers have to invest certain proportion to the project from their equity and the rest will be financed as project credit. Construction loans are short-term credits made to developers for the purpose of completing proposed projects. Maturities

on construction loan range from 12 months to as long as 4 to 5 years, depending on the size of the specific project.” (*Johnson, 1940: 242*) The basic guiding principle involved in disbursement policy is to advance funds corresponding to the completion stage of the project. Hence, what percent of the credit will be disbursed at which stage of completion must be spelled in disbursement policy. Term of loan needed for project fall under it.

vii) Consortium Loan

“No single financial institution grant loan to the project due to single borrower limit or other reason and two or more such institutions may consent to grant credit facility to the project of which is baptized as consortium credit. It reduces the risk of project among them. Financiers bank equal (or likely) charge on the project’s assets.” (*Richard; 1996: 85*)

viii) Credit Cards and Revolving Lines of Credit

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

Charge cards and credit lines tied to demand deposit accounts are the two most common revolving credit agreements. It can be further divided into credit cards, automatic overdrafts lines and large credit lines.” (*Richard; 1996: 85*)

ix) Off-balance Sheet Transaction

“In fact, bank guarantee and letter of credit refer to off balance sheet transactions of financial institution. It is also known as contingent liability. Contingent liability pinpoints the liability, which may or may not arise during the happening of certain event. Footnotes are kept as reference to them

instead of recording in the books of accounts.

It is non-funded based remunerative facilities but more risky than the funded until adequate collateral are not taken. Lets its two varieties be described separately.” (*Richard; 1996: 86*)

x) Bank Guarantee

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

xi) Letter of Credit (L/C)

“It is issued on behalf of the customer (buyer/importer) in favor of the exporter (seller) for the import of goods and services stating to pay certain sum of money on the submission of certain documents complying the stipulated terms and conditions as per the agreement of L/C. It is also known as importers letter of credit since the bank of importer does not open separate L/C for the trade of same commodities.” (*Richard; 1996: 86*)

d) Discounting of Bills

It is the main function of commercial banks. Discounting of bill means made payment of bills, which are issued by commercial banks as well as central bank, NRB, before their expiration date or matured time. Therefore, payment should be less than the total amount because of their uncertainty.

2.1.3 Objectives of Lending Policy

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

a) To have a good assets

“Loans are the risky assets though a bank invests the most of its resources in granting loans and advances. The increasing of non-performing loan causes the non-existence of banks. It is the very quality of assets that led bankruptcy of many banks in South East Asia. The objective of sound loan policy is to protect depositors' interest and maximize returns to the shareholder by striking a balance between liquidity and profitability.” (Saunders & Cornett; 2004: 61)

b) To contribute to economic development

“A sound lending policy is required to ensure that the loans are given to the productive sector, which contributes to capital formulation and employment generation.” (Saunders & Cornett; 2004: 61)

c) To give guidance to lending officials

“A borrower should be assured that there would be no discrimination whether he deals with one officer or another. A sound credit policy is imperative to achieve a uniform standard procedure throughout the organization.” (Saunders & Cornett; 2004: 62)

d) To establish a standard for control

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

2.1.4 Principle of Lending Policy

“Good lending policy is essential to carry out the business of lending more effectively. Some policies are as follows:” (*Mishkin; 1998: 116-19*)

a) Principle of safety fund: Banks should look the fact that is there any unproductive or speculative venture or dishonest behavior of the borrower.

b) Principle of liquidity: “Liquidity refers to pay on hands on cash when it needed without having to sell long-term assets at loss in unfavorable market.” (*American Institute of Banking; 1972: 149*) A banker has to ensure that money will come in as on demand or as per agreed terms of repayment.

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

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

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

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

in the same basket" in mind.

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

2.1.5 Key Characteristics of Lending Policy

“Every policy has its own characteristics. The lending policy has the following characteristics:

a) Approved by top management

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

b) Practical and manageable

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

c) Flexibility

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

d) Compliance

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

2.1.6 Systems and Procedures of lending Policy

A sound loan policy interact all the areas of loan effectively that ultimately helps to operate the organization successfully. Basically, a bank has to follow the following systems and procedures in credit policy.

a) Loan Origination

“Banks must operate within a sound and well-defined criteria for new loan as well as the expansion of existing loans. The loans should be extended within the target markets and lending strategy of the institution. Before allowing a loan facility, the banks must make an assessment of risk profile of the customer transaction. This may include:

- i. Loan assessment of the borrower's industry, and macro economic factors.
- ii. The purpose of loan and source of repayment.
- iii. The track record/repayment history of borrower.
- iv. Assess/evaluate the repayment capacity of the borrower
- v. The proposed terms and conditions and covenants.
- vi. Adequacy and enforceability of collaterals.
- vii. Approved form appropriate authority.” *(Reed, Edward, Cotter & Smith; 1980: 72)*

In case of new relationships, consideration should be given to the integrity and repute of the borrowers or counter party as well as its legal capacity to assume the liability. “Prior to entering into any new credit relationship, the bank must become familiar with the borrower or counter party and be confident that they are dealing with individual or organization of sound repute and cordite worthiness. However, a bank must not grant credit simply on the basis of the fact that the borrower is perceived to be highly reputable, i.e. name lending should be discouraged.” *(Koch & Macdonald; 2004: 203)*

“While structuring lending facilities institutions should appraise the amount and timing of the cash flows as well as the financial position of the borrower and intended purpose of the funds. It is utmost important that due consideration should be given to the risk reward trade-off in granting a credit facility and credit should be priced to cover all embedded costs.

Relevant terms and conditions should be laid down to protect the institution's interest.” (*Joseph; 1998: 43*)

Institutions have to make sure that the loan is used for the purpose it was borrowed. Where the obligor has utilized funds for purposes not shown in the original proposal, institutions should take steps to determine the implications on creditworthiness. In case of corporate loans where borrower own group of companies such diligence becomes more important. Institutions should classify such connected companies and conduct credit assessment on group basis.

“In loan syndication, generally the lead institution does most of the credit assessment and analysis. While such information is important, institutions should not over rely on that. All syndicate participants should perform their own independent analysis.

Institution should not over rely on collaterals/covenant. Although the importance of collaterals held against loan is beyond any doubt, yet these should be considered as a buffer providing protection in case of default, primary focus should be on obligor's debt servicing ability and reputation in the market.” (*Grywinski; 1991: 59*)

b) Limit Setting

An important element of credit risk management is to establish exposure limits for single obligors and group of connected obligors. “Institutions are expected to develop their own limit structure while remaining within the exposure limits set by the central bank (i.e. Nepal Rastra Bank). The size of the limits should be based on the credit strength of the obligor, genuine requirement of credit, economic conditions and the institution's risk tolerance. Appropriate limits should be set for respective products and activities. Institutions may establish limits for a specific industry, economic sector or geographic regions

to avoid concentration risk.” (*Shrestha; 1993: 53*)

Some times, the obligor may want to share its facility limits with its related companies. Institutions should review such arrangements and impose necessary limits if the transactions are frequent and significant. Credit limits should be reviewed regularly at least annually or more frequently if obligor's credit quality deteriorates. All requests of increase in credit limits should be substantiated.

c) Loan Administration

Ongoing administration of the loan portfolio is an essential part of the loan process. Loan administration function is basically a back office activity that support and control extension and maintenance of loan. A typical loan administration unit performs following function:

i) Documentation: “It is the responsibility of loan administration to ensure completeness of documentation (loan agreements, guarantees, transfer of title of collaterals etc) in accordance with approved terms and conditions. Outstanding documents should be tracked and followed up to ensure execution and receipt.” (*Desai; 1967: 35*)

ii) Loan Disbursement: “The loan administration function should ensure that the loan application has proper approval before entering facility limits into computer systems. Disbursement should be affected only after completion of covenants and receipt of collateral holdings. In case of exceptions necessary approval should be obtained from competent authorities.” (*Desai; 1967: 35*)

iii) Credit Monitoring: “After the loan is approved and draw down allowed, the loan should be continuously watched over. These include keeping track of borrowers' compliance with credit terms, identifying early signs of irregularity,

conducting periodic valuation of collateral and monitoring timely repayments.”
(Desai; 1967: 36)

iv) Loan Repayment: “The obligors should be communicated ahead of time as and when the principal/markup installment becomes due. Any exceptions such as non-payment or late payment should be tagged and communicated to the management. Proper records and updates should also be made after receipt.” (Desai; 1967: 36)

v) Maintenance of Loan Files: “Institutions should devise procedural guidelines and standards for maintenance of loan files. The loan files not only include all correspondence with the borrower but should also contain sufficient information necessary to assess financial health of the borrower and its repayment performance. It need not mention that information should be filed in organized way so that external /internal auditors or NRB inspector could review it easily.” (Desai; 1967: 36)

vi) Collateral and Security Documents: “Institutions should ensure that all security documents are kept in a fireproof safe under dual control. Registers for documents should be maintained to keep track of their movement. Procedures should also be established to track and review relevant insurance coverage for certain facilities/collateral. Physical checks on security documents should be conducted on a regular basis.” (Desai; 1967: 36)

2.1.7 Credit Monitoring and Control

“Credit risk monitoring refers to incessant monitoring of individual credits inclusive of off-balance sheet exposures to obligors as well as overall credit portfolio of the bank. Banks need to enunciate a system that enables them to monitor quality of the credit portfolio of day-to-day basis and take remedial measures as and when any deterioration occurs. Such a system would enable a bank to ascertain whether loans are being serviced

as per facility terms, the adequacy of provisions, the overall risk profile is within limits established by management and compliance of regulatory limits.

Establishing an efficient and effective credit monitoring system would help senior management to monitor the overall quality of the total credit portfolio and its trends. Consequently the management could fine tune or reassess its credit strategy/policy accordingly before encountering any major setback. The banks credit policy should explicitly provide procedural guideline relating to credit risk monitoring. At the minimum it should lay down procedure relating to;

- i. The roles and responsibilities of individuals responsible for credit risk monitoring
- ii. The assessment procedures and analysis techniques (for individual loans & overall portfolio)
- iii. The frequency of monitoring
- iv. The periodic examination of collaterals and loan covenants
- v. The frequency of site visits
- vi. The identification of any deterioration in loan.” (*Gupta; 1984: 112*)

a) Financial Position and Business Conditions

“The most important aspect about an obligor is its financial health, as it would determine its repayment capacity. Consequently institutions need carefully watch financial standing of obligor. The key financial performance indicators on profitability, equity, leverage and liquidity should be analyzed. While making such analysis due consideration should be given to business/ industry risk, borrowers' position within the industry and external factors such as economic condition, government policies, regulation. For companies whose financial position is dependent on key management personnel and /or shareholders, for example, in small and medium enterprises, institutions would need to pay particular attention to the assessment of the capability and capacity of the management / shareholders.” (*Khan; 1982: 92*)

b) Conduct of Accounts

“In case of existing obligor the operation in the account would give a fair idea about the quality of credit facility. Institutions should monitor the obligor's account activity, repayment history and instances of excesses over credit limits. For trade financing, institutions should monitor cases of repeat extensions of due dates for trust receipts and bills.” (*Khan; 1982: 93*)

c) Loan Covenants

“The obligor's ability to adhere to negative pledges and financial covenants stated in the loan agreement should be assessed and any breach detected should be addressed promptly.” (*Khan; 1982: 93*)

d) Collateral Valuation

“Since the value of collateral could deteriorate resulting in unsecured lending, banks need to reassess value of collaterals in periodic basis. The frequency of such valuation is very subjective and depends upon nature of collaterals. For instance loan granted against shares need revaluation on almost daily basis whereas if there is mortgage of a residential property the revaluation may not be necessary as frequently. Incase of credit facilities secured against inventory or goods at the obligor's premises, appropriate inspection should be conducted to verify the existence the valuation of the collateral.” (*Khan; 1982: 93*)

External Rating and Market Price of securities purchased as a form of lending or long-term investment should be monitored for any deterioration in credit rating of the issuer, as well as large decline in market price. Adverse changes should trigger additional effort to review the creditworthiness.

2.1.8 Managing Loan Problems

The institution should establish a system that helps to identify problem loan ahead of time when there may be more options available for

remedial measures. Once the loan is identified as problem, it should be managed under a dedicated remedial process.

“A bank's loan risk policies should clearly set out how the bank will manage problem credits. Banks differ on the methods and organization they use to manage problem credits. Responsibility for such credits may be assigned to the originating business function, a specialized workout section or a combination of the two, depending upon the size and nature of the credit and the reason for its problems. When a bank has significant credit-related problems, it is important to segregate the workout function from the credit origination function. The additional resources, expertise and more concentrated focus of a specialized workout section normally improve collection results.” (*William; 1990: 21*)

A problem loan management process encompass following basic elements:

a) Negotiation and follow-up

“Proactive effort should be taken in dealing with obligors to implement remedial plans, by maintaining frequent contact and internal records of follow-up actions. Often rigorous efforts made at an early stage prevent institutions from litigations and loan losses.” (*William; 1990: 22*)

b) Workout Remedial Strategies

“Some times appropriate remedial strategies such as restructuring of loan facility, enhancement in credit limits or reduction in interest rates help improve obligor's repayment capacity. However it depends upon business condition, the nature of problems being faced and most importantly obligor's commitment and willingness to repay the loan. While such remedial strategies often bring up positive results, institutions need to exercise great caution in adopting such measures and ensure that such a policy must not encourage obligors to default intentionally. The institution's interest should be the primary

consideration in case of such workout plans it needs not mention here that competent authority, before their implementation, should approve such workout plan.” (William; 1990: 22)

c) Review of Collateral and Security Document

“Institutions have to ascertain the loan recoverable amount by updating the values of available collateral with formal valuation. Security documents should also be reviewed to ensure the completeness and enforceability of contracts and collateral guarantee.” (William; 1990: 23)

d) Status Report and Review

“Problem of credits should be subject to more frequent review and monitoring. The review should update the status and development of the loan accounts and progress of the remedial plans. Progress made on problem loan should be reported to the senior management.” (William; 1990: 23)

2.1.9 Lending Criteria

While screening a credit application, 5Cs to be first considered supported by documents.

a. Character

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

- i. Memorandum and articles of association
- ii. Registration certification
- iii. Tax registration certificate (Renewed)
- iv. Resolution to borrow
- v. Authorization-person authorizing to deal with the bank
- vi. Reference of other lenders with whom the applicant has dealt in the past or bank A/C statement of the customer.”(Chhabra & Taneja;

1991:15)

b. Capacity

“Describes customer's ability to pay. It is measured by applicants past performance records and followed by physical observation. For this, an interview with applicant's customers/suppliers will further clarify the situation. Documents relating to this area were:

- i. Certified balance sheet and profit and loss account for at least past 3 years.
- vii. References or other lenders with whom the applicant has dealt in the past or bank A/C.” (*Chhabra & Taneja; 1991: 15*)

c. Capital

“This indicates applicant's capacity to inject his own money. By capacity analysis, it can be concluded that whether borrower is trying to play with lender's money only or is also injecting his own fund to the project. For capital analysis, financial statements, like certified balance sheet, profit and loss account is the only tools.” (*Chhabra & Taneja; 1991: 16*)

d. Collateral

“Collateral is the security proposed by the borrower. Collateral may be of either nature movable or immovable. Movable collateral comprises right from stock, inventories to plying vehicles. In case of immovable it may be land with or without building or fixtures, plant machineries attached to it.” (*Chhabra & Taneja; 1991: 16*)

e. Conditions

“Once the funding company is satisfied with the character, capacity, capital and collateral then a credit agreement (sanction letter) is issued in favor of the Borrower-stating conditions of the credit to which borrower's acceptance is accepted.” (*Chhabra & Taneja; 1991: 16*)

2.1.10 Project appraisal

“Before providing credit to the customer, bank makes analysis of project from various aspects and angles. It will help the bank to see whether project is really suitable to invest. The purpose of project appraisal is to achieve the guarantee of reasonable return from the project. Project appraisal answers the following questions:

- a. Is the project technically sound?
- b. Will the project provide a reasonable return?
- c. Is the project in line with the overall economic objectives of the country?

Generally, the project appraisal involves the investigation from the following aspects:

- a. Financial aspect.
- b. Economic aspect.
- c. Management/Organizational aspect.
- d. Legal aspect.”(*Gautam; 2004: 258*)

2.1.11 Steps of Lending Process

Commercial bank issue loans but before issuing loans, they follow some steps of lending process. Bank has certain process for providing loans. When an individual or organization needs capital for doing certain works, then they search for loans and bank is the only one reliable and economic source of loan and advances. So, bank imposes following process for providing loans.

a) Loan application

“When a person need loan then he/she ask the loan procedure in the bank. If all the process and information is reasonable, then he/she makes loan application. It is also called loan proposal. For big business loan, it is appropriate to talk with loan officer. Loan officer can also contact to big account holder possessing business organization and ask it they are in need of loan. In developed country’s bank, they search for probable debtors. Banks

make report of economic activities and when they found good customers they contact with them and ask for loan necessity.” (*Breal & Myers; 1991: 52*)

b) Loan interview

“Second process involves the loan interview of applicants who apply for the loan. This interview helps to find out the loan applicant’s nature, i.e. habit, obedient. Bank also collects information about the purpose.” (*Breal & Myers; 1991: 53*)

2.1.12 Need of Loan Policy in Commercial Bank

In bank fund management, the cost of handling is, of course, as important as the availability of funding. Competition, deregulation, economic conditions and increased sophistication in money management on the part of retail and wholesale depositors have increased the cost of bank fund tremendously.

“Making an unsecured loan involves taking a risk and losses on some loans are to be expected. Commercial banks are increasingly facing credit risk (or counter party risk) in various financial instruments other than loans, including acceptances, inter bank transactions, trade financing, foreign exchange transactions, financial futures, swaps, bonds, equities, options, and in the settlement of transactions. Thus, the need of credit policy is the most, as the banks should always try to mitigate the risk related to the loan provided. Steps that banks can take to limit loan losses include obtaining sufficient information on loans and borrowers as well as establishing an internal system of loan review in addition to the loan reviews of regulatory agencies. Banks can also affect or offset credit risk in their loan portfolios by watching the business cycle, varying loan rates against the degree of risk and recognizing risk in loan concentration. Although specific credit risk policy and practices may differ among banks depending upon the nature and complexity of their credit activities, a comprehensive credit risk management program should address the following areas:

- i. Establishing an appropriate credit risk environment,
- ii. Operating under a sound credit granting process,
- iii. Maintaining an appropriate credit administration, measurement and monitoring process.
- iv. Ensuring adequate controls over credit risk.” (*Francis; 1991: 31*)

“Credit risk is a factor in all loans, but to varying degrees. Bank should recognize this variability by matching loan rates to risk. A bank that charges the same rates for many types of loan is not receiving adequate compensation for its riskier loans. In comparison a loan's total yield to its risk, a bank also should consider any supporting deposit balances required in conjunction with the loan and may also want to consider other profitability generated from the customer's relationship with banks.” (*Basel Committee Consultative Paper; 1999: 17*)

1.1.1 2.2 Review of NRB Directives relating to Loan

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 bills purchased and discounted.

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

3. Additional Arrangement in Respect of loss Loan: Even if the loan is not past due, loans having any or all of the following discrepancies shall be classified as “loss”.

- a. Security is not sufficient,
- b. The borrower has been declared bankrupt,
- c. The borrower is absconding or cannot be found,
- d. Purchased or discounted bills are not realized within 90 days from the due date and non fund based letter of credit and guarantees etc are not realized with in 90 days from the date of conversion into fund based are not realized within 90 days,
- e. The credit has not been used for the purpose originally intended,

- f. Owing to non-recovery, initiation as to auctioning of the collateral has passed six months and if the recovery process is under litigation,
- g. Loan provided to the borrowers included in the blacklist of credit information center (CIC),
- h. Project or business is not in operative conditions, project or business is not in operation,
- i. Credit Card Loan is not written off within 90 days from past due date.

4. Additional Arrangements in Respects of Term Loan: In respect of term loans, the classification shall be made against the entire outstanding loan on the basis of the past due period of overdue installment.

5. Prohibition to Recover Principal and Interest by Overdrawing the Current Account and Exceeding the Overdraft Limit: Principal and interest on loans and advance shall not be recovered by overdrawing the borrower's current account or where overdraft facility has been extended, by overdrawing such limit. However, this arrangement shall not be constructed as prohibitive for recovering the principal and interest by debiting the customers' account. Where a system in the bank exists as to recovery of principal and interest by debiting the customers' account, and recovery is made as such resulting in overdraft, which is not settled within one month, such overdrawn principal amount shall also be liable to be include under the outstanding loan and such loan shall be downgraded by one step from its current classification. In respects if recognition of interest, the same shall be as per the clause relating to income recognition mentioned in directives no 4.

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

7. Rescheduling and Restructuring of the Loan: If the bank is confident on the following bases of written plan of action submitted by borrower, it may reschedule or restructure the loans and advances. Clear bases of rescheduling or restructuring should be attached with loan files.

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

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

8. Loan Loss Provisioning: The loan loss provisioning, on the basis of the outstanding loans and advances and bills purchases classified as per this directives, shall be provided as follows:

<u>Classification of Loan</u>	<u>Loan Loss Provision</u>
Pass loan	1%
Sub-standard loan	25%
Doubtful loan	50%
Loss	100%

2.3 Review of Journals and Articles

Srnivasan and Yung (1988), in their well read article, "*A Case Study of Corporate Credit Management*", explained an expert credit granting system prototype in designing expert financial systems. Credit granting process in the participating corporation considered of two distinct phases (1) a customer evaluation phase, where the customer's credit worthiness is evaluated based on a variety of criteria; and ii) a credit limit determination phase, where the conclusions of the analysis are transformed into a credit

limit or the customer. System design was therefore, split into two phase, (i) development of an appropriate data base and knowledge base to support the customer evaluation process and (ii) development of an appropriate model to support the credit limit determination phase.

This article has assumed to describe an expert credit granting prototype designed for a fortune 500 corporation. The focus has been on the conceptual process undertaken for designing the prototype. The model base and rules that comprise the prototype are combination of normative prescriptions and managerial preferences presented in a user-friendly environment issues that need conscious recognition in implementing such

Expert systems in corporate finance were also brought forth. The progress in computer and information technologies has provided financial researcher an opportunity to affect a transfer of the expertise contained in normative model to practicing managers through the medium of intelligent computer systems. This is a modest attempt to provide a conceptual foundation to this notion and illustrate its feasibility.

Shaw and Gentry (1988), in their well read article, “*Managing and Recommending Business Loan Evaluation (Marble) System*”, generalized expert system that minimize the lending expertise of several banking and finance professionals. The objectives of MARBLE are to help lending officer, credit analysis, and loan review committees to improve the evaluation of loan applicants and to learn how expert system operate. Based on the knowledge base and the information provided on the loan applicant, MARBLE synthesizes the information and estimates the likelihood that the loan will be repaid. Knowing that the conclusion recommended by MARBLE reflects the judgments of lending experts, management can use it to assist in the lending decision. The MARBLE system has the capability of learning from decision examples. Examples were used to show the value of inductive

inference in the knowledge acquisition process. This learning capability makes it possible to build an intelligent decision support system. An empirical study shows encouraging result for incorporating inductive learning in MARBLE for loan evaluation.

Duchassi, Shawk, and Seagle (1988), in their well read article, “*A Knowledge-Engineered System for Commercial Loan Decisions*”, have showed Commercial Loan Analysis Support System (CLASS). This article describe an expert system, commercial loan analysis support system (CLASS) is an expert system designed to evaluate a company's financial posture, recommend commercial loan decision and pertinent components, and document the loan analysis. Like a loan officer, CLASS constitutently synthetics a large number of detailed facts into a loan recommendation.

CLASS has been designed to seek our any potential weakness in the prospective borrower and conduct an extensive detailed analysis of each weakness. Weaknesses may be over analyzed but none will be overlooked. This approach is consistent with the general notion in commercial lending that one is primarily concerned with weaknesses instead of strong points which are taken for granted. In addition to the limited validation conducted by the expert a more comprehensive validation can be implemented in two ways. First, the system can be empirically tasted with a large sample of historical loan decisions. Second field tested can be conducted in which loan officer use CLASS while making actual loan decisions. Their judgments can be compared to those of CLASS at each step in the analysis. By building CLASS, it was demonstrated that financial knowledge can be represented and applied to a complex financial problem. It is hoped that the approached described have will page the way for building expert systems that address other important financial problems.

Keith (1999), in his well read article, *“An Evaluation of Bank Credit Policies for Farm Loan Portfolios using the Simulation Approach”*, stated that when many borrowers are combined to form a portfolio, borrowers may be graded on a common basis through the expected loss spectrum for default risk and security risk using a two-dimensional risk classification matrix structure. The extent to which unexpected losses on individual loan securities are correlated defines systematic risk while the remaining portfolio risk constitutes unsystematic risk. Systematic risk among loan securities occurs as a result of correlation of loss probabilities between different types of borrowers. Since the probability of default of borrowers is directly related to their income distributions, correlations of loss distributions occurs as a result of a common set of exogenous factors affecting income distributions of borrowers in different regions and industries. Beta risk on loan securities is therefore assessed on the basis of securities classified for regional and industry segmentations.

Ghimire (2003), in his article, *“Credit Sector Reform and NRB”*, has tried to highlight the effects of change or amendment in NRB directives regarding loan classification and loan loss provisioning. Although the circumstances leading to financial problem or crisis in many Nepali banks differ in many respects, what are common across of the most banks, which increased size of non-performing assets (NPA)? To resolve the problem of the losses or likely losses of this nature facing the industry, NRB as the central bank, amended several old directives and issued many new circulars in the recent years.

Since majority of the loans of most of the commercial banks of the country at present falls under substandard, doubtful and even loss categories, loan loss provisioning now compared to previous arrangement would be dramatically higher. The new classification and provisioning norms are very

lent able as they help to strengthen banks financially. He added that the old system remained in force from 1991 to 2001, which was probably the most volatile decade of the business operation of the country. He has indicated that loan loss provisioning as a percentage of total credit of April 1, 2001 is 5.2% but as April 13, 2003, it has jumped to 18.39%. If only private banks are considered, it is 2.12% of April 2001 where as it is 6.30 % as of April 13, 2003. The total increment in loan loss provision is Rs 11,328.11 million and the total increment in credit is only Rs 7,976.70. He has also stated that tightening provisioning requirements on NPL is essential to ensure that banks remain liquid even during economic downturns.

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

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

Access to finance is vital element for entrepreneurship development in the country. Without it, one cannot think of starting business of any sort. It's mainly due to this reason; most of the students after completing there single- minded look for employment opportunity. No other options, no matter how attractive it would be enter into their mind. It has created huge pressure in

the labor market. In the absence of entrepreneurial activities in the country, employment opportunity will be very limited and even qualified and competent people do not get job. The established notion of the Nepalese bankers that money lent to the wealthy people based on collateral is safe. But is not actually a safe assumption in the face of greater difficulty in loan recovery from these people. Also, this particular segment of market is already over-banked. With the worsening business performance of the Nepalese corporate sector mostly due to the poor management compounded by other factors like sluggish economic conditions and political instability, banks must now explore newer market segment for their sustained growth and success. Under this backdrop, Nepalese commercial banks must change their policy and must understand that even the people living in the low and middle level of economic pyramid can potentially be lucrative market.

Koirala (2006), in his well read article, “*Credit Culture of Commercial Banks in Nepal*”, has concluded that the unorganized moneylenders in Nepal never loose. They used to assess the record of accomplishment of potential borrowers and innocent characters termed as the best borrower. The bank, on the other hand, is an institution established to support and improves development process of a nation. The politicians and the staff have been responsible for the existence of huge volume of NPA in state-owned commercial banks. In order to improve the situation, there is a need to evolve a more acceptable working system backed by cooperation and realization by the banks employees as well as the politicians and stakeholders, who can influence in banks operation.

Garg (2006), in his well read article, “*Principles of Lending and Credit Culture at Rastriya Banijya Bank*”, has concluded that banks credit culture is the unique combination of policies, practices, experience, and management attitudes that defines the lending environment and determines the lending

behavior acceptable to the bank. Loans are not be made unless there is a demonstrated capability for repayment. Lending culture can take cash flows as opposed to security. Every credit must be subject to rigorous analytical scrutiny of the customer's repayment capability prior to approval, and on an ongoing basis following approval. There can be no exceptions to the basics principles of lending.

Dhungana (2006), in his well article, *“Problems of NPL's and the Need of Financial Discipline in the Nepalese Banking System”*, has concluded that poor credit management and deterioration in the quality of loans give birth to non-performing assets. The internal measures play significance role to control the growth of NPL. Best credit practices, culture and policies are required to strengthen the internal factors. The banks should have a proper system and competency on risk management and should insure that risk are accurately identified, assessed and controlled properly. A proper risk management is undoubtedly an important tool for a good banking and NPL management.

He further states that it can be expected that the financial sector reforms will lower down the level of NPL from the existing level and strengthening the banks and financial institution internally to manage the credit portfolio efficiently and support will be continued to make a good credit culture in the system.

Bhandari (2007), in his well read article, *“Etiology and Strategy of Loan Repayment”*, has concluded that lending agencies should adopt several strategies for achieving their target of credit repayment. However, before enforcing coercive actions against entrepreneur and the enterprise, the banks and the lending agencies should follow a series of liberal strategies for recovering their loans.

Zerith (2008), in her article well read article, “*Credit Portfolio Management*”, affirmed that to manage the credit portfolios, bankers must understand not only the risk posed by each credit but also how the risks of individual lending and portfolios are interrelated. These interrelationships can multiply risk many times beyond what it would be if the risks were not related. Until recently, few banks used modern portfolio management concepts to control credit risk. Now, many banks view the credit portfolio in its segments and as a whole and consider the relationships among portfolio segments as well as among loans. These practices provide management with a more complete picture of the bank’s credit risk profile and with more tools to analyze and control the risk.

Zerith further concluded that effective credit portfolio management begins with oversight of the risk in individual loans. Prudent risk selection is vital to maintaining favorable lending quality. Therefore, the historical emphasis on controlling the quality of individual credit approvals and managing the performance of lending continues to be essential. But better technology and information systems have opened the door to better management methods. A portfolio manager can now obtain early indications of increasing risk by taking a more comprehensive view of the credit portfolio.

2.4 Review of Thesis

Lamsal (2004), in his Master’s thesis, “*Lending Practices: A Study on NABIL Bank Ltd., SCB Nepal Ltd. and Himalayan Bank Ltd.*”, has the major objective of examining the credit management in the selected banks. The specific objectives of the study are;

- a. To determine the liquidity position, the impact of deposit in liquidity and its effect on credit practices.
- b. To measure the bank's lending strength.
- c. To analyze the portfolio behavior of credit and measure the ratio and volume of lending made in agriculture, priority and productive sector.

- d. To measure the credit performances in quality, efficiency and its contribution in total income.

The research findings of the study are:

- a. The measurement of liquidity has revealed that the mean current ratio of all the three banks is not widely varied. All of them are capable in discharging their current liability by current asset.
- b. SCBNL's tendency to invest in government securities has resulted with the lowest ratio of loans and advances to total assets ratio whereas NABIL Bank Ltd. has highest due to steady and high volume of loans and advances throughout the years.
- c. The loans and advances and investment to deposits ratio has shown that NABIL Bank Ltd. has deployed the highest proportion of its total deposits in earning activities. This is the indicative of that in fund mobilizing activities NABIL Bank Ltd. is significantly better.
- d. The portfolio analysis has revealed that the flow of loans and advances in agriculture sector is the lowest priority sector among these commercial banks. The contribution of all the banks in industrial sector is appreciable. The contribution made by Himalayan Bank Ltd. in industrial sector is the greatest and that of SCBNL is the least.
- e. The lending in commercial purpose is highest in case of NABIL Bank Ltd. and least in case of SCBNL. SCBNL has highest contribution in service sector lending. It has contributed 25.47 % of its total credit in general use and social purpose.
- f. The mean ratio of interest income to total income has concluded that the contribution of interest income in total income is higher in case of Himalayan Bank Ltd. and lower in case of SCBNL. The interest expenses to total deposits ratio indicate that the cost of fund in Himalayan Bank Ltd. is the highest and that of SCBNL is the least.

Paudel (2005), in his Master's thesis, "*Lending Policy of Commercial Banks in Nepal*", has the objective to provide the credit practices in NIBL and SBI bank. The specific objectives are;

- a. To examine the liquidity and assets management of NIBL and SBI.
- b. To evaluate the investment policy of NIBL and SBI.
- c. To study the growth ratio of loan and advances.
- d. To analyze the investment to total deposit and net profit NIBL and SBI.

His research findings are;

- a. Both banks current assets have exceeded the current liabilities therefore the ratio is considered satisfactory. But the cash reserve ratios have fluctuated in high degree.
- b. NIBL has maintained both current ratio and cash reserve ratio better than that of SBI.
- c. The assets management ratio shows that deposit utilization of NIBL is less effective than SBI.
- d. NIBL has invested lower amount of government securities and share and debenture than that of NIBL.
- e. The growth ratio of total deposit, loan and advances, total investment and net profit of NIBL are less than that of SBI.

Bajracharya (2006), in his Master's thesis, "*A Study on Loan Management of Agriculture Development Bank Limited*" has the main objective to evaluate the lending procedure of ADBL. In addition to this main objective, the study has other specific objectives;

- a. To evaluate the trend of loan investment, collection and outstanding.
- b. To show the achievement of purpose-wise and term-wise loan disbursement, outstanding and collection of ADBL.
- c. To study lending policy, loan recovery procedure, interest rate and discount of ADBL.

His research findings are;

- a. The total investment of development financing increased from Rs. 7.13 billion in FY 057/58 to Rs. 12.85 billion in FY 063/64 registering an annual average growth trend of Rs.0.82 billion or 10.43%.
- b. The total collection of development financing increased from Rs. 5.34 billion in FY 057/58 to Rs. 11.84 billion in FY 063/64 registering an annual average growth trend of Rs. 0.93 billion or 14.22%.
- c. The total outstanding of development financing increased from Rs. 12.89 billion in FY 057/58 to Rs. 22.18 billion in FY 063/64 registering an annual average growth trend of Rs. 1.33 billion or 9.53%.
- d. Actual loan investment/disbursement, collection and outstanding of short-term is gradually increased every year. The lowest percentage of loan collection to disbursement is 76.46% in FY 060/61 and the highest is 87.33% in FY 063/64.
- e. ADBL's targeted and achieved loan disbursement is continuously followed by loan collection amount also in increasing trend. Though achieved collection ratio is increasing each year, achieved loan disbursement is in fluctuating trend since FY 059/60.

Sejuwal (2007), in his Master's Thesis, "*A Comparative Study on Credit Management of Commercial Banks; with Special Reference to NABIL and SCBNL*", has the main objective to explore the credit efficiency or inefficiency and its management in commercial banks. The specific objectives of the study are;

- a. To assess credit practice of selected commercial banks.
- b. To explore the credit efficiency of selected commercial banks.
- c. To explore the relationship with loan and advances, non-performing loan and net profit of selected commercial banks.

His research findings are;

- a. The credit practices of NABIL in terms of total loans to deposit ratio is

found to be more than SCBNL (i.e. $0.6298 > 0.3660$). It indicates that NABIL has been strong to mobilize its total deposit as loan.

- b. In terms of interest income to loan and advances ratio, Nabil has mean score of 0.0932 and SCBNL has the mean score of 0.0858. From this point, NABIL Bank has the best performance in earning interest income.
- c. Lending policy of SCBNL with regard to non-performing loan to total loans and advances was found to be the lowest with the mean value with 0.0351 as compare to NABIL Bank. The result indicates that if non-performing loan increases, the overall banking business will be negatively affected.
- d. The ratio of loans and advances to total assets was found greater in NABIL in comparison with SCBNL which shows the good lending performance of NABIL, whereas in terms of loan and advances to current assets ratio, NABIL has highest mean than that of SCBNL, this meant that NABIL has relatively better practice in short term lending.
- e. Lending policy of SCBNL in terms of loan loss provision to total loans and advances was found relatively better than that of NABIL.

Adhikari (2008), in her Master's Thesis, "*Loan Management of Siddhartha Vikash Bank Limited*", has the main objective to analyze the loan management of the SVBL. The specific objectives of the study are;

- a. To analyze the trends of deposit collection and lending.
- b. To assess total amount of loan.
- c. To evaluate the performance of SVBL in terms of liquidity, profitability, sector wise loan, and non-performing loan.
- d. To analyze the capital adequacy of SVBL.

The major findings of the study are;

- a. Deposit collection of SVBL has significantly increasing trend. There is continuous increasing trend from 10 percent to 100 percent.
- b. In all year total fixed deposit has more contribution than other deposit.

Then more contribution of saving deposit than that of current and call deposit.

- c. Correlation between deposit and loan disbursement is 0.99. This indicates that these two variables relation is highly positive.
- d. Capital adequacy of the SVBL has sufficient against NRB standard. It indicates that the lending capacity of SVBL is high.
- e. The highest risk of SVBL is in credit risk.

Neupane (2009), in his Master's Thesis, "*Lending Policy Analysis of Commercial Bank with Special reference to Everest Bank Limited*", has the main objective to find out the loan management position of Everest Bank Limited. The specific objectives of the study are;

- a. To evaluate the various financial ratios of the EBL.
- b. To determine the impact of deposit in liquidity and its effect on lending practices.
- c. To analyze trend of deposit utilization towards loan and advances and net profit.

The major findings of the study are;

- a. Cash and bank balance to current deposit of the bank shows the fluctuating trend during the study period. Similarly, cash and bank balance to interest sensitive ratio of EBL is also in fluctuating trend.
- b. Credit and advance to fixed deposit ratio of EBL is fluctuating trend. The mean ratio is 2.26 times in the study period. However, non-performing assets to total assets of EBL is in declining trend, whose mean ratio is 0.978%.
- c. The debt to assets ratio of EBL is excessively high or in other words they have excessively geared capital structure. On an average 93% of assets is financed through debt capital that is outsiders cost bearing fund.
- d. Return on loan and advances of EBL are also in fluctuating trend. The mean ratio is 2.2%. This shows the normal earning capacity of EBL.

2.5 Research Gap

Rastriya Baniya bank is the second commercial bank of Nepal and thus has significant contribution to increase the revenue of the government and to buttress the national economy. As a result, the smooth operation of RBB is crucial. For such, RBB should have sound earning capacity. Since, interest income from loan is the major source of income of each commercial bank, a bank should be perfect in managing loan. All of the above researches mainly concentrate on secondary data and thus ignore the primary data, which could enhance the banking performance. Thus to fulfill such gap, the present study embraces both the primary and secondary data. Further, the study makes relationship of loan and advances with other financial indicators and makes trend analysis of loan and advances and others for the next four fiscal year periods.

CHAPTER - III

RESEARCH METHODOLOGY

3.1 Research Design

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 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.

Being an academic research, the purpose of this research is to answer the queries raised and control the variances. Analytical and descriptive research design, a fact finding approach, is followed for accessing the loan management of RBB. Regression analysis and coefficient of correlation techniques are applied for determining the relationship between the figures of loan and net profit.

3.2 Population and Sample

There exist 31 commercial banks operating in Nepal, which are assumed to be the population of the study. But, is not possible to study all of these commercial banks within this study. So taking the total number of commercial banks as population of the study, only one commercial bank, namely Rastriya Banijya Bank (RBB) has been taken as sample.

3.3 Nature and Sources of Data

To fulfill the predetermined objectives that are set up for the study, both primary and secondary sources are included. The secondary data have been obtained from mainly the annual report of RBB. Further, brochures, Souvenir, and the official website have also been extensively used to collect the secondary data. However, the primary data have been collected through making

questionnaire containing 10 questions, and distributing it to the respondents. Apart from above mentioned sources, relevant data are collected from;

- a. Economic surveys of various years, published Ministry of Finance, Government of Nepal.
- b. Statistical records gathered from Central Bureau of Statistics.
- c. Banking and Financial Statistics published by Nepal Rastra Bank.
- d. Periodicals, bulletins, magazines and other published and unpublished reports of concerned authorities and research works.

3.4 Tools Used

For the processing of data collected, both the financial and statistical tools have been extremely used.

3.4.1 Financial Tools

Under this mainly the ratio analysis that is relevant to the loan management of the bank has been done.

a) Loan Investment to Loan Outstanding

This ratio measures the relationship between the loan investment per year and the total accumulated loan outstanding. A stable policy of loan investment considering the loan outstanding is crucial for sound loan management.

$$\text{Loan Investment to Loan Outstanding} = \frac{\text{Loan Investment}}{\text{Loan Outstanding}}$$

b) Loan Recovery to Loan Outstanding

This ratio measures the relationship between loan recovery and loan outstanding. The ratio reflects the efficiency of the bank in collecting the loan amount disbursed.

$$\text{Loan Recovery to Loan Outstanding} = \frac{\text{Loan Recovered}}{\text{Loan Outstanding}}$$

c) Growth Ratios

Under this, the growth of loan investment, loan outstanding and the loan recovery of RBB have been calculated. This ratio reflects the status of loan management of the bank.

$$\text{Growth Ratio} = \frac{\text{Current Value} - \text{Previous Value}}{\text{Previous Value}} \times 100$$

d) Non Performing Loan to Total Loan

NRB has directed all the commercial banks create loan loss provision against the doubtful and bad debts. But both of our concerned banks have not provided data on non-performing loan in balance sheet and profit & loss account. Non-performing loans to total loan and advances ratio shows the percentage of non-recovery loans in total loans and advances. This ratio is calculated as:

$$\text{NPL to Total Loan} = \frac{\text{Non Performing Loan}}{\text{Total Loan}}$$

e) Loan Loss Provision to Total Loan

Each bank has to keep the loan loss provision for loan and advances as per the direction of Nepal Rastra Bank. The loan loss provision to total loans and advances measures the aggregate percentage of loan loss provision kept by bank on loans and advances and thus eventually measures the security position.

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

f) Total Loan to Total Deposit

This ratio is calculated to find out how successfully the banks are utilizing their deposits on loan and advances for profit generating activities. Greater the ratio indicates the better utilization of total deposits. It is calculated as:

$$\text{Total Loan to Total Deposit ratio} = \frac{\text{Total Loan}}{\text{Total Deposit}}$$

3.4.2 Statistical Tools

The analysis could not have been done without using the statistical tools. The following statistical tools have been effectively utilized for data analysis.

a) Mean

Arithmetic mean or simply a mean of a set observations is the sum of all the observations divided by the number of observations. Arithmetic mean is also known as the arithmetic average.

Let $x_1, x_2, x_3, \dots, x_n$ be the n values of the variable then their arithmetic mean denoted by $\bar{x}$ is defined by,

$$\bar{x} = \frac{x_1 + x_2 + x_3 + \dots + x_n}{n}$$

Where, n is the number of observations.

b) Standard Deviation

The standard deviation is the absolute measure of dispersion in which the drawbacks present in other measures of dispersion are removed. It is said to be the best measure of dispersion as it satisfies most of the requisites of a good measure of dispersion.

$$\text{s.d.} = \sqrt{\frac{\sum (x - \bar{x})^2}{N}}$$

c) Coefficient of Variation

The coefficient of dispersion based on standard deviation multiplied by 100 is known as the coefficient of variation (C.V.). Less the C.V., more will be the uniformity and more the C.V., less will be uniformity. If $\bar{x}$ be the arithmetic mean and s.d the standard deviation of the distribution, then the C.V. is defined by,

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

d) Karl Pearson's Correlation Coefficient

Two values are said to have 'correlation', when they are so related that the change in the value of one variable is accompanied by the change in the value of the other. One of the widely used mathematical methods of calculating the correlation coefficient between two variables is Karl Pearson's correlation coefficient 'r'. It is calculated as;

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

e) Probable Error

The probable error denoted by P.E. is used to measure the reliability and test of significance of correlation coefficient. Significance of relationship has been tested by using the probable error (P.E.) and it is denoted by the following model:

$$\text{Probable Error (P. E.)} = 0.6745X \frac{1 - r^2}{\sqrt{n}}$$

Where, r = the value of correlation coefficient

n = number of pairs of observations

if $r < \text{P.E.}$, it is insignificant, i.e. there is no evidence of correlation

if $r > 6 \text{ P.E.}$, it is significant

if $\text{P.E.} < r < 6 \text{ P.E.}$, nothing can be concluded

f) Regression Lines

The regression line is the line that gives the best estimate of one variable for any given value of the other variable. The simple regression equation of dependent variable (Y) on the independent variable (X) is given by;

$$y = a + bx$$

We shall get the normal equation for estimating "a" and "b" as.

$$\sum X = Na + b \sum Y$$

$$\sum XY = a \sum Y + b \sum Y^2$$

Where,

X = the value of independent variable

Y = the value of dependent variable

a = Y -intercept

b = slope of the trend line/coefficient of regression

N = number of pairs of observations.

$a = Y - b X$

g) Trend Analysis

A widely and most commonly used method to describe the trend is the method of least square. Let the trend line between the dependent variable y and the independent variable x (i.e. time) be represented by;

$$Y_c = a + bx \dots\dots\dots (i)$$

Where,

a = y intercept or value of y when $x = 0$

b = slope of the trend line or amount of change that comes in y of a unit change in x .

To find the value of x and y , the following equations should be solved;

$$\sum y = na + b\sum x \dots\dots\dots (ii)$$

$$\sum xy = a\sum x + b\sum x^2 \dots\dots\dots (iii)$$

CHAPTER – IV

DATA PRESENTATION AND ANALYSIS

This section is the main part of the study and achieves the objectives set out in the first chapter. Further, both the statistical and financial tools stated in the third chapter are efficiently used in this chapter to accomplish the goal of the study. In this chapter, both the primary and secondary data collected have been analyzed and the findings have been drawn at the end of this section.

4.1 Secondary Data Analysis

In this part of the study, the secondary data that are related to the loan and extracted from mainly the annual reports of the bank have been analyzed. Different ratios that reflect the loan management of RBB has been introduced. Further, the statistical relationship between loan and advances and other major financial indicators have been analyzed. In addition, the values of loan and advances and other have been estimated in the forthcoming four fiscal years.

4.1.1 Loan Investment to Loan Outstanding

This ratio measures the relationship between loan investment with loan outstanding and shows by how much extent the loan outstanding is greater than the loan investment. The ratio also signals the trend of loan investment and loan outstanding. The loan investment to loan outstanding of RBB is presented in the Table 4.1.

Table 4.1
Loan Investment to Loan Outstanding

Previous Five Years				Current Five Years			
FY	LI	LO	Ratio	FY	LI	LO	Ratio
1999/00	999.97	34744.27	2.88	2004/05	3848.16	27000.93	14.25
2000/01	8590.17	27375.13	31.38	2005/06	1678.11	23246.51	7.22
2001/02	3227.86	27037.37	11.94	2006/07	3304.22	24871.36	13.29
2002/03	446.14	26608.83	1.68	2007/08	4152.28	27524.92	15.09
2003/04	930.97	25105.68	3.71	2008/09	9539.24	36042.93	26.47
Mean			10.32	Mean			15.26
S.D.			11.13	S.D.			6.25
C.V.%			107.94	C.V.%			40.94
		Overall Average			12.79		
		S.D.			9.36		
		C.V.%			73.20		

(Source: Appendix II)

The Table 4.1 showed the status of loan investment and loan outstanding of RBB in two five-fiscal year periods. In the previous five-fiscal years, the ratio of loan investment to loan outstanding was in fluctuating trend. This clearly indicated that the loan investment did not move in the same pace as the loan outstanding did. Clearly, the loan investment of the bank ranged from Rs. 446.14 millions in the fiscal year 2002/03 to Rs. 8590.17 millions in the fiscal year 2000/01 and loan outstanding ranged from Rs. 25105.68 millions in the fiscal year 2003/04 to Rs. 34744.27 millions in the fiscal year 1999/00 within the previous five-fiscal year periods. Unlike loan investment, the loan outstanding followed decreasing trend in the previous five-fiscal year periods, which was a good indication of loan recovery. Consequently, the ratio of loan investment to loan outstanding of the bank was 2.88%, 31.38%, 11.94%, 1.68% and 3.71% in the fiscal year 1999/00, 2000/01, 2001/02, 2002/03 and 2003/04 respectively. In the previous five-fiscal year periods, the average loan

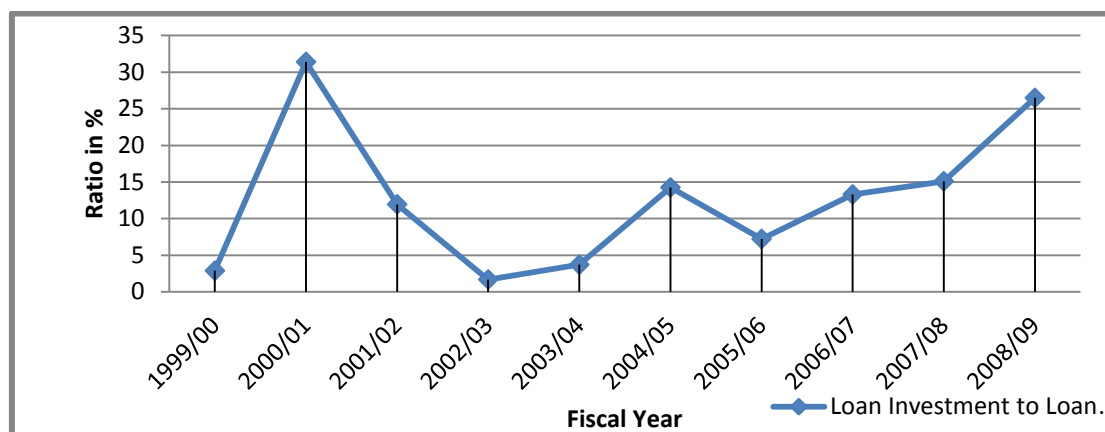
investment to loan outstanding was 10.32% and the coefficient of variation in the ratio was 107.94%, indicating higher inconsistency.

In contrast, the loan investment of RBB in the current five-year periods was found to be in increasing trend, except in the fiscal year 2005/06. Thus, the loan investment ranged from Rs. 1678.11 millions in the fiscal year 2005/06 to Rs. 9539.24 millions in the fiscal year 2008/09. However, the loan outstanding followed fluctuating trend and thus was highest, Rs. 36042.93 millions in the fiscal year 2008/09 within the current five-fiscal year periods. The ratio of loan investment to loan outstanding of RBB within these periods was also found to be in fluctuating trend. The ratio was 14.25%, 7.22%, 13.29%, 15.09% and 26.47% in the fiscal year 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The average ratio within these periods was 15.26% and the coefficient of variation in the ratio was 40.94%.

Comparing two periods, it can be concluded that RBB disbursed more loan in proportion to loan outstanding in the current five years periods than in last five year periods. However, in overall, RBB disbursed 12.79% of the total loan outstanding and the coefficient of variation in the ratio was 73.20%, which indicated higher inconsistency in the ratio. This seemed that RBB lacks appropriate loan investment policy. Thus, a sound credit policy is germane to RBB to prevent the credit risk.

Figure 4.1

Loan Investment to Loan Outstanding



4.1.2 Loan Recovery to Loan Outstanding

The loan recovery to loan investment depicts the amount of the recovery made by the bank out of the total investment made in each fiscal year. This ratio measures the banks' efficiency in collection at speed. The loan recovery to loan investment of RBB is presented in the Table 4.2.

Table 4.2

Loan Recovery to Loan Outstanding

Previous Five Years				Current Five Years			
FY	LR	LO	Ratio	FY	LR	LO	Ratio
1999/00	2045.23	34744.27	5.89	2004/05	1952.91	27000.93	7.23
2000/01	1221.03	27375.13	4.46	2005/06	1522.99	23246.51	6.55
2001/02	3565.62	27037.37	13.19	2006/07	1679.37	24871.36	6.75
2002/03	874.68	26608.83	3.29	2007/08	1498.72	27524.92	5.44
2003/04	1192.89	25105.68	4.75	2008/09	1021.23	36042.93	2.83
Mean			6.31	Mean			5.76
S.D.			3.53	S.D.			1.58
C.V.%			55.98	C.V.%			27.38
		Overall Average			6.04		
		S.D.			2.75		
		C.V.%			45.55		

(Source: Appendix II)

The Table 4.2 showed the efficiency of bank in recovering loan in proportion to loan outstanding within the two distinct periods. The table depicted that the loan recovered amount of RBB for the previous five year periods was in fluctuating trend. RBB recovered highest amount of Rs. 3565.62 millions in the fiscal year 2001/02 and lowest amount of Rs. 874.68 millions in the fiscal year 2002/03. Alike the loan recovered amount, the ratio of loan recovery to loan outstanding within the previous five year periods was also in fluctuating trend. The ratio was 5.89% in the fiscal year 1999/00, which decreased to 4.46% in the fiscal year 2000/01, then increased to 13.19% in the fiscal year 2001/02, again decreased to 3.29% in the fiscal year 2002/03, and finally increased to 4.75% in the fiscal year 2003/04. In average, the bank recovered 6.71% of the total loan outstanding within these five year periods, and the coefficient of variation in the ratio was 55.98%, indicating inconsistency.

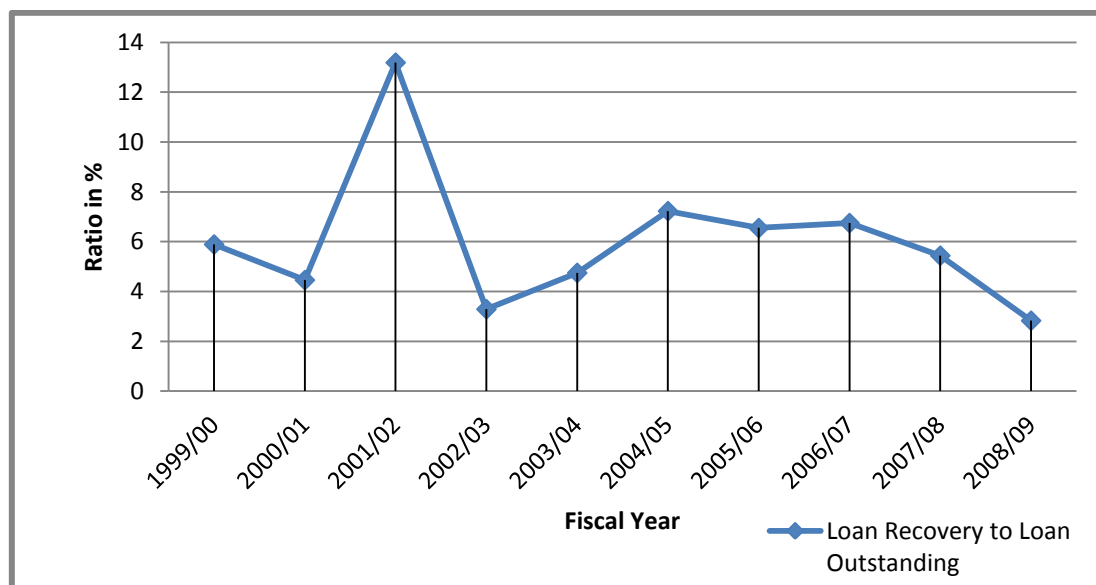
Similarly, the loan recovery amount of RBB in the current five year periods was in decreasing trend, except in the fiscal year 2006/07. RBB recovered Rs. 1952.91 millions, highest, in the fiscal year 1999/00 and Rs. 1021.23 millions, lowest, in the fiscal year 2008/09. Likewise, except in the fiscal year 2006/07, the ratio of loan recovery to loan outstanding of RBB within the current five year periods was in decreasing trend. The ratio was 7.23% in the fiscal year 2004/05, which decreased to 6.55% in the fiscal year 2005/06, then increased to 6.75% in the fiscal year 2006/07, again decreased to 5.44% in the fiscal year 2007/08 and finally reached to 2.83% in the fiscal year 2008/09. In average, the ratio was 5.76%, comparatively lower than the average of one decade, and the coefficient of variation in the ratio was 27.38%.

Comparing two periods, it can be concluded that the loan recovery position of RBB in proportion to loan outstanding was better in the previous five year periods than in current five year periods. However, the loan recovery ratio was not satisfactory. In overall, the bank collected only 6.04% of the total loan

outstanding in the ten year periods, which was quite low. Thus, it is inevitably necessary for the bank to formulate a sound recovery policy.

Figure 4.2

Loan Recovery to Loan Outstanding



4.1.3 Growth Analysis

To know the banks' efficiency in raising loan investment, raising loan recovery and lowering loan outstanding, the growth analysis have been done.

4.1.3.1 Loan Investment Growth

The higher the loan investment made by banks indicates higher interest earning capacity of the bank. So, the higher loan investment is considered better. The growth in loan investment made by RBB has been presented in the Table 4.3.

Table 4.3
Loan Investment Growth

Previous Five Years			Current Five Years		
FY	LI	Growth %	FY	LI	Growth %
1999/00	999.97	35.27	2004/05	3848.16	313.35
2000/01	8590.17	759.04	2005/06	1678.11	-56.39
2001/02	3227.86	-62.42	2006/07	3304.22	96.90
2002/03	446.14	-86.18	2007/08	4152.28	25.67
2003/04	930.97	108.67	2008/09	9539.24	129.73
Mean		150.88	Mean		101.85
S.D.		311.99	S.D.		123.59
C.V.%		206.79	C.V.%		121.35
		Overall Average		126.36	
		S.D.		238.56	
		C.V.%		188.78	

(Source: Appendix II)

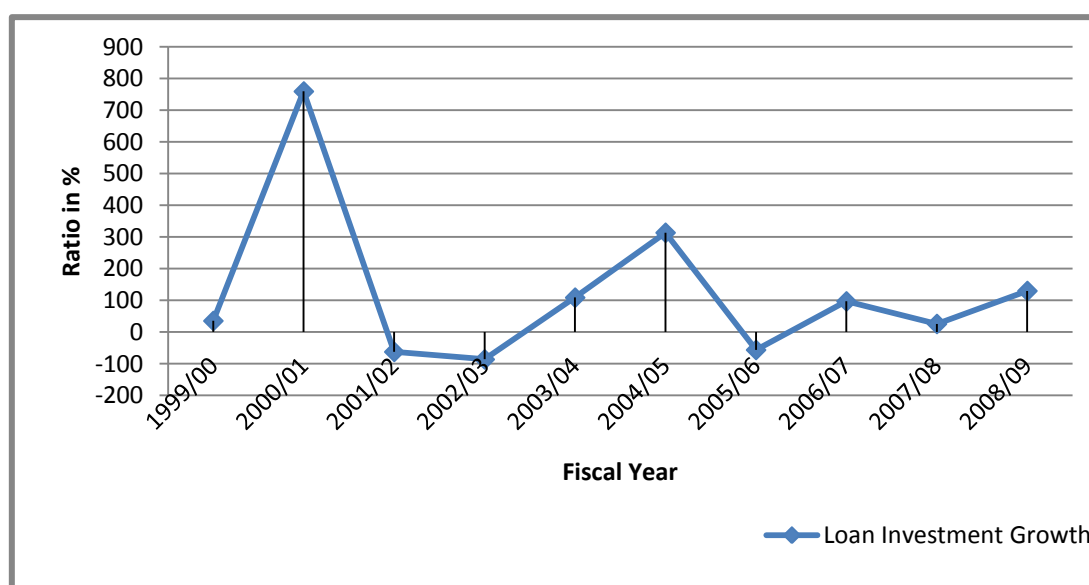
The Table 4.3 showed the loan disbursement growth in two distinct periods and in overall as well. The table depicted that the loan disbursement of RBB was initially Rs. 999.97 millions in the fiscal year 1999/00, which extremely increased by 759.04% in the fiscal year 2000/01 and thus reached to Rs. 8590.17 millions, and then decreased by 62.42% in the fiscal year 2001/02, amounting to Rs. 3227.86 millions, decreased by 86.18% in the fiscal year 2002/03, amounting to Rs. 446.14 millions, and finally increased by 108.67% in the fiscal year 2003/04, amounting to Rs. 930.97 millions, within the previous five year periods. In average, the loan investment of RBB for the previous five year periods rose by 150.88% and the coefficient of variation in the loan investment growth for that period was 206.79%, indicating great inconsistency.

Further, in the current five year periods, the loan investment of RBB followed increasing trend, except in the fiscal year 2005/06. The loan investment of RBB

was Rs. 3848.16 millions in the fiscal year 2004/05, which decreased by 56.39% in the fiscal year 2005/06, and thus amounted to Rs. 1678.11 millions, and then increased by 96.90% in the fiscal year 2006/07, amounting Rs. 3304.22 millions, again increased by 25.67% in the fiscal year 2007/08, amounting Rs. 4152.67 millions, and finally increased by 129.73% in the fiscal year 2008/09, amounting Rs. 9539.34 millions. Thus, the loan investment growth was highest in the fiscal year 2004/05 and lowest in the fiscal year 2005/06. In average, the loan investment of RBB grew by 101.85% within the current five year periods.

Comparing the two distinct periods, it can be concluded that the growth of loan investment was greater in previous five year periods than in current five year periods. In overall, the loan investment of bank grew by 126.36% within the ten year periods, and the coefficient of variation in the growth was 188.28%. It would have been better if the bank had considered the greater chances of earning high interest along with the increment in loan investment.

Figure 4.3
Loan Investment Growth



4.1.3.2 Loan Outstanding Growth

The higher loan outstanding means higher possibility of turning bank loan into bad debt and the inefficiency of bank in recovering loan in time. So, lower the outstanding lower will be the risk of bad debt. The loan outstanding growth of RBB is presented in Table 4.4.

Table 4.4
Loan Outstanding Growth

Previous Five Years			Current Five Years		
FY	LO	Growth %	FY	LO	Growth %
1999/00	34744.27	21.77	2004/05	27000.93	7.55
2000/01	27375.13	-21.21	2005/06	23246.51	-13.90
2001/02	27037.37	-1.23	2006/07	24871.36	6.99
2002/03	26608.83	-1.58	2007/08	27524.92	10.67
2003/04	25105.68	-5.65	2008/09	36042.93	30.95
Mean		-1.58	Mean		8.45
S.D.		13.76	S.D.		14.24
C.V.%		-870.00	C.V.%		168.51
		Overall Average		3.44	
		S.D.		14.87	
		C.V.%		432.90	

(Source: Appendix II)

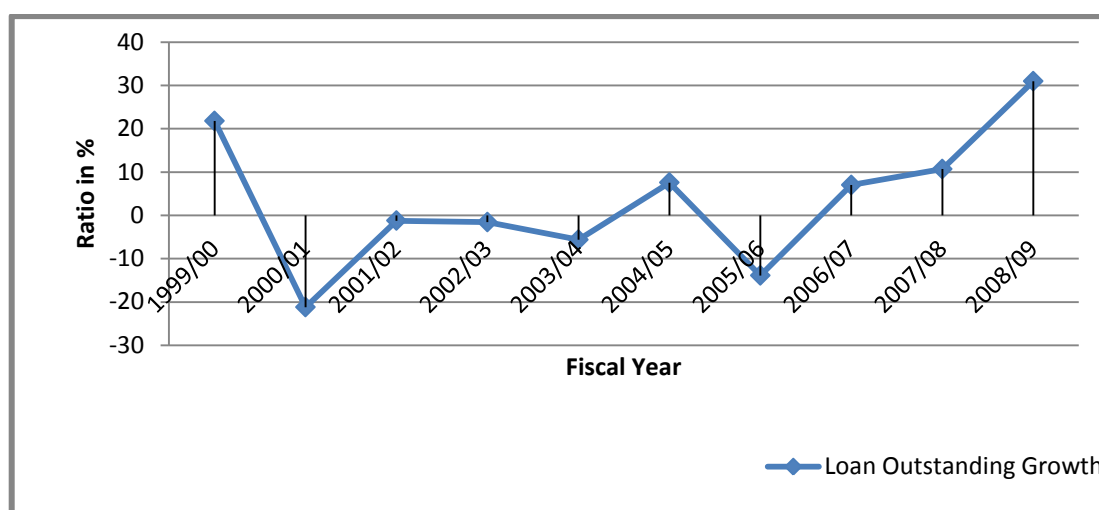
The Table 4.4 showed the growth of loan outstanding in RBB for the ten year periods. For the first five year periods, the loan outstanding growth of RBB was in decreasing trend, which is quite satisfactory. The loan outstanding of the bank was Rs. 34744.27 millions in the fiscal year 1999/00, which decreased by 21.21% in the fiscal year 2000/01, again decreased by 1.23% in the fiscal year 2001/02, 1.58% in the fiscal year 2002/03 and by 5.65% in the fiscal year 2003/04. The table depicted that the loan outstanding of RBB decreased by 1.58%, which is quite low although good, within the first five fiscal years, and the coefficient of variation in such decrement was 870.00%.

In contrast, the loan outstanding of RBB was in almost in increasing trend, except in the fiscal year 2005/06, within the current five year periods. The loan outstanding ranged from Rs. 27000.93 millions in the fiscal year 2004/05 to Rs.

36042.93 millions in the fiscal year 2008/09. The growth of loan outstanding in the current five year periods was 7.55%, -13.90%, 6.99%, 10.67% and 30.95% in the fiscal year 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. In average, the loan outstanding of RBB increased by 8.45%, indicating inefficiency of the bank in recovering loan, within the current five year periods, and the coefficient of variation in the increment was 168.51%.

Comparing the two distinct periods on the basis of loan outstanding growth, it can be concluded that the previous five year periods was superior to the current five year periods, since the bank was able to decrease the loan outstanding in that periods. However, the loan outstanding of the bank increased only by 3.44% within the ten year periods. Thus, the bank needs to have sound recovery policy to decrease the outstanding loan and increase the loan investment.

Figure 4.4
Loan Outstanding Growth



4.1.3.3 Loan Recovery Growth

The duty of bank does not end only by disbursing loan. The bank should do equal exercise in loan recovery and reduce the chances of bad debt. The higher loan recovery indicates higher efficiency on bank in loan management. The

growth in loan recovery of RBB taken for study for the ten year periods is presented in the Table 4.5.

Table 4.5
Loan Recovery Growth

Previous Five Years			Current Five Years		
FY	LR	Growth %	FY	LR	Growth %
1999/00	2045.23	-55.84	2004/05	1952.91	63.71
2000/01	1221.03	-40.30	2005/06	1522.99	-22.01
2001/02	3565.62	192.02	2006/07	1679.37	10.27
2002/03	874.68	-75.47	2007/08	1498.72	-10.76
2003/04	1192.89	36.38	2008/09	1021.23	-31.86
Mean		11.36	Mean		1.87
S.D.		97.97	S.D.		33.95
C.V.%		862.51	C.V.%		1815.59
		Overall Average		6.61	
		S.D.		73.47	
		C.V.%		1110.79	

(Source: Appendix II)

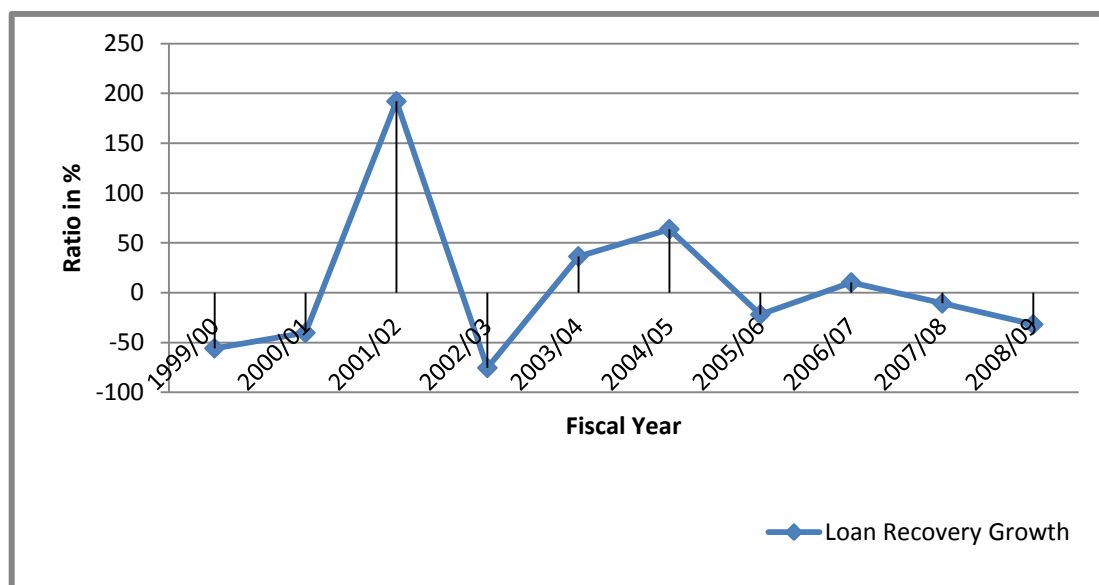
The Table 4.5 showed the efficiency of RBB in recovering the disbursed loan. For the first five year periods the loan recovery amount was highest, Rs. 3565.62 millions, in the fiscal year 2001/02, and lowest, Rs. 874.68 millions, in the fiscal year 2002/03. The growth rate of recovered loan amount was not in uniform. The loan recovery decreased by 40.30% in the fiscal year 2000/01, and then drastically increased by 192.02% in the fiscal year 2001/02, again decreased by 75.47% in the fiscal year 2002/03 and finally increased by 36.36% in the fiscal year 2003/04. In average, the loan recovery for the first five years of RBB grew by 11.36%, which is quite satisfactory, but the bank should also considered that in most of the year the loan recovery was lower than amount collected in previous year.

Similarly, the loan recovery amount for the current five year periods ranged from Rs. 1021.23 millions in the fiscal year 2008/09 to Rs. 1952.91 millions in the fiscal year 2004/05. Except in the fiscal year 2006/07, the loan recovery amount was in decreasing trend; as a result, the growth rate of loan recovery

was also in negative. The loan recovery growth was 63.71%, -22.01%, 10.27%, -10.76% and -31.86% in the fiscal year 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. Within these periods, the average collection growth was 1.87%, which was far lower than the previous five year periods.

Comparing the two distinct periods, it can be concluded that RBB was more success in recovering the disbursed loan in the first five year periods than in the current five year periods. However, in both the periods, the recovery growth was quite low. Consequently, the average growth rate of loan recovery for the ten year periods was 6.61% and the coefficient of variation was 1110.79%, indicating extreme inconsistency. Thus, it implies that RBB needs a strong collection policy.

Figure 4.5
Loan Recovery Growth



4.1.4 Non-Performing Loan Analysis

Bad debt and non-performing loan do not have same meaning. They have some fundamental differences in their meaning. Non-performing loan can be debt but debt can not be non-performing loan. Non-performing loan represents the loan that remained unpaid after loan due date. Greater the loan performing loan, the greater will be the credit risk.

4.1.4.1 Non Performing Loan to Total Loan

The non performing loan to total loan measures the credit risk of the bank. Higher the ratio indicates high coverage of non performing loan on total loan and thus indicates high credit risk, which may jeopardize the sustainability of the bank.

Table 4.6
Non Performing Loan to Total Loan

Previous Five Years				Current Five Years			
FY	NPL	LA	Ratio	FY	NPL	LA	Ratio
1999/00	13661.45	34744.27	39.32	2004/05	13689.47	27000.93	50.70
2000/01	12209.31	27375.13	44.60	2005/06	8622.13	23246.51	37.09
2001/02	14889.48	27037.37	55.07	2006/07	7120.67	24871.36	28.63
2002/03	16005.21	26608.83	60.15	2007/08	5953.64	27524.92	21.63
2003/04	14470.91	25105.68	57.64	2008/09	5651.53	36042.93	15.68
Mean			51.36	Mean			30.75
S.D.			8.01	S.D.			12.27
C.V.%			15.60	C.V.%			39.91
		Overall Average			41.05		
		S.D.			14.62		
		C.V.%			35.60		

(Source: Appendix II)

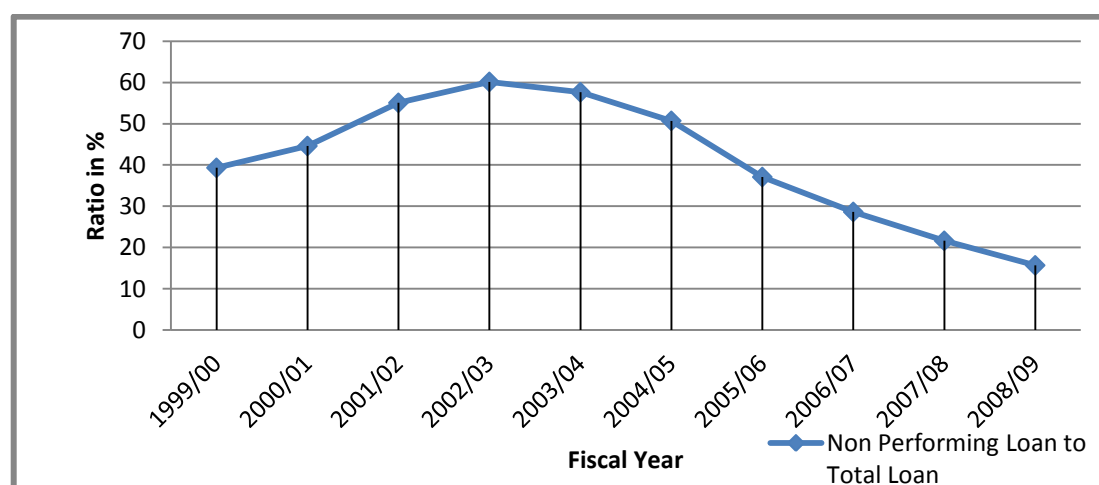
The Table 4.6 depicted the ratio of non performing loan to total loan to measure the loan situation of RBB. The table showed that the non-performing loan of RBB for the first five year periods was in fluctuating trend and thus ranged from Rs. 12209.31 millions in the fiscal year 2000/01 to Rs. 16005.21 millions in the fiscal year 2002/03. However, the ratio of non performing loan to total was in increasing trend for the first four years. The ratio was 39.32% in the fiscal year 1999/00, 44.60% in the fiscal year 2000/01, 55.07% in the fiscal year 2001/02, 60.15% in the fiscal year 2002/03 and 57.64% in the fiscal year 2003/04. From this it can be inferred that the portion of performing loan was in decreasing trend and thus the loan of RBB is aggravating. In average, the non

performing loan covered 51.36% of the total loan, which indicated greater risk in the loan.

In contrast, the ratio of non performing loan to total loan of for the current five year periods of RBB was in decreasing trend, which was quite good. The non performing loan, along with the ratio of non performing loan to total, also followed decreasing trend and thus decreased to Rs. 5651.53 millions in the fiscal year 2008/09 from Rs. 13689.47 millions in the fiscal year 2004/05. Further, the ratio of non performing loan to total loan of RBB was 50.70%, 37.09%, 28.63%, 21.63% and 15.68% in the fiscal year 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The decreasing trend of both the non performing amount and ratio indicated an enhancement in the lending procedures of RBB in the current five year periods. In average, the non performing loan represented only 30.75% of the total loan.

Comparing the two periods, it can be concluded that the lower portion of the loan turned to non performing loan in the current five year periods than in the previous five year periods. Hence, RBB ameliorated the composition of loan. In average, the non performing loan represented 41.05% of the total loan in the ten year periods, indicating that the total loan of RBB was dominated by performing loan.

Figure 4.6
Non Performing Loan to Total Loan



4.1.4.2 Loan Loss Provision to Total Loan and Advances Ratio

As per the NRB directives, each commercial bank has to keep 1% of the performing loan, 25% of the sub-standard loan, 50% of the doubtful loan and 100% of the loss loan as loan loss provision. This loan loss provision to total loan and advances measures the credit risk of the bank. The higher the ratio, the greater will be the credit risk.

Table 4.7

Loan Loss Provision to Total Loan and Advances Ratio

Previous Five Years				Current Five Years			
FY	LLP	LA	Ratio	FY	LLP	LA	Ratio
1999/00	6542.75	34744.27	18.83	2004/05	13570.00	27000.93	50.26
2000/01	7576.85	27375.13	27.68	2005/06	8612.96	23246.51	37.05
2001/02	13347.62	27037.37	49.37	2006/07	7542.63	24871.36	30.33
2002/03	14929.34	26608.83	56.11	2007/08	7709.00	27524.92	28.01
2003/04	14274.59	25105.68	56.86	2008/09	4435.97	36042.93	12.31
Mean			41.77	Mean			31.59
S.D.			15.59	S.D.			12.37
C.V. %			37.33	C.V. %			39.14
		Overall Average			36.68		
		S.D.			14.96		
		C.V. %			40.80		

(Source: Appendix II)

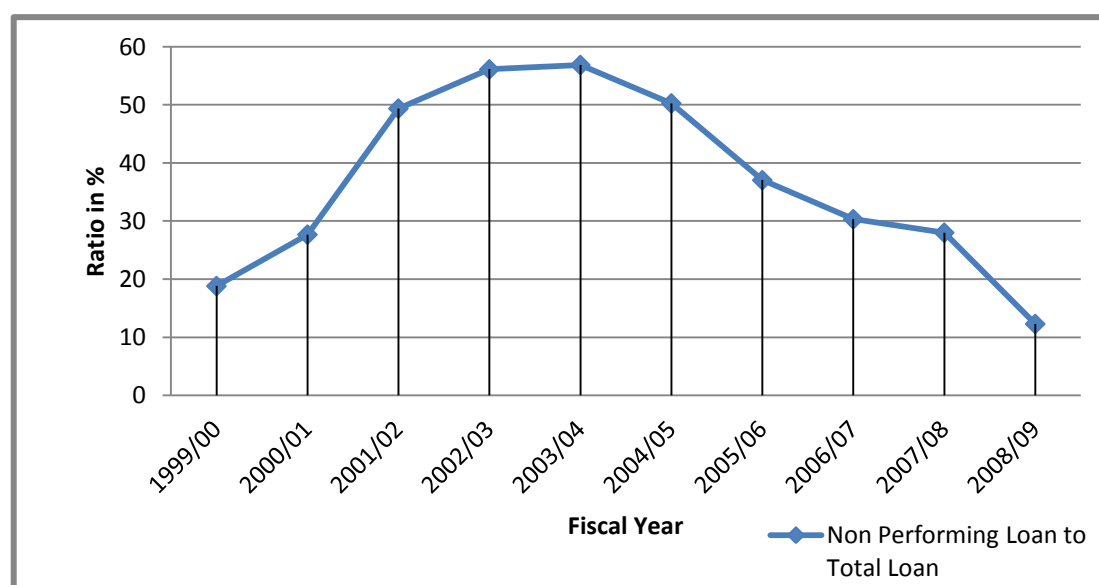
The Table 4.7 measured the credit risk of RBB. The table showed that the loan loss provision kept in proportion to total loan and advance within the first five years periods was in increasing trend. Clearly, the conversion of sub standard loan and doubtful loan to loss loan was in increment within this period. The loan loss provision to total loan of RBB was 18.83%, 27.68%, 49.37%, 56.11% and 56.86% in the fiscal year 1999/00, 2000/01, 2001/02, 2002/03 and 2003/04 respectively. In average, RBB kept 41.77% of the total loan as loan loss provision within the first five year periods. And the loan loss provision amount in this period ranged from Rs. 6542.75 millions in the fiscal year 1999/00 to Rs. 14929.34 millions in the fiscal year 2002/03.

In contrast, the loan loss provision to total loan in the current five year periods of RBB followed decreasing trend, which indicated the proportion of performing loan, sub standard loan and doubtful loan were in increasing trend, and thus lowering the chances of default loan. Further, the loan loss provision amount ranged from Rs. 13570.00 millions in the fiscal year 2004/05 to Rs. 4435.97 millions 2008/09. The loan loss provision to total loan was 50.26%, 37.05%, 30.33%, 28.01% and 12.31% in the fiscal year 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. And the average ratio within this period was 31.59%, and the coefficient of variation was 39.14%.

Comparing two periods, it can be concluded that the credit risk of RBB was lower in the current period in comparison to that in the previous periods. Yet, the average loan loss provision to total loan of RBB for the ten year periods was 36.68%, and the coefficient of variation in such period was 40.80%. It would be worthwhile, if RBB adopts sound credit policy to reduce the loss loan and to convert non performing loan to performing loan.

Figure 4.7

Loan Loss Provision to Total Loan and Advances Ratio



4.1.5 Deposit Mobilization on Loan and Advances

Loan and advances is considered as the major source of income of the bank. The greater the bank invests the funds in loan and advances, the higher will be the chance of earning interest, if the credit risk is low. Thus, to examine the mobilization rate of collected deposit in loan and advances the ratio has been calculated.

Table 4.8
Loan and Advances to Total Deposit

Previous Five Years				Current Five Years			
FY	LA	TD	Ratio	FY	LA	TD	Ratio
1999/00	34744.27	38575.14	90.07	2004/05	27000.93	43016.06	62.77
2000/01	27375.13	40773.66	67.14	2005/06	23246.51	46195.48	50.32
2001/02	27037.37	38993.29	69.34	2006/07	24871.36	50464.13	49.29
2002/03	26608.83	39402.27	67.53	2007/08	27524.92	57970.85	47.48
2003/04	25105.68	40866.77	61.43	2008/09	36042.93	68095.70	52.93
Mean			71.10	Mean			62.77
S.D.			9.85	S.D.			50.32
C.V.%			13.85	C.V.%			49.29
		Overall Average			61.83		
		S.D.			12.21		
		C.V.%			19.75		

(Source: Appendix II)

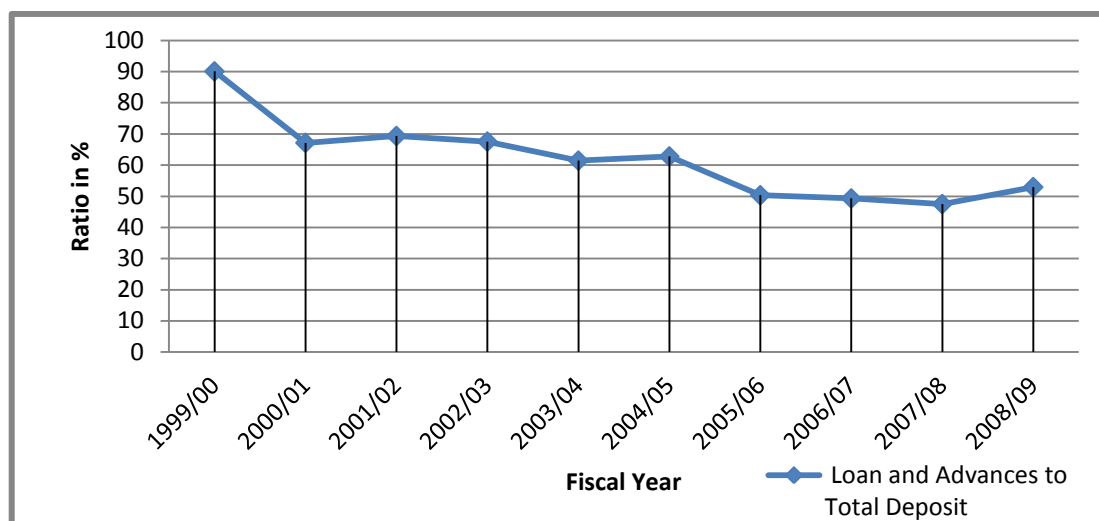
The Table 4.8 measured the mobilization of total deposit in loan and advances. The table showed that for the first five years period, the loan and advances was in decreasing trend and the total deposit collection was in increasing trend, except in the fiscal year 2000/01. The deposit collection amount ranged from Rs. 38575.14 millions in the fiscal year 1999/00 to Rs. 40866.77 millions in the fiscal year 2003/04. However, the mobilization of deposit in loan and advances of the bank had remained volatile. The total loan and advances to total deposit of RBB in such period was 90.07%, 67.14%, 69.34%, 67.53% and 61.43% in the fiscal year 1999/00, 2000/01, 2001/02, 2002/03 and 2003/04 respectively. In average, RBB mobilized 71.10% of the total collected deposit in granting

loan and advances. Also, the coefficient of variation in the ratio in the first five year period was 13.85%, indicating quite uniformity in the ratio.

However, the mobilization rate of total deposit in loan and advances decreased for the first four years of the current five year periods, although the deposit collection amount was in increasing trend, ranging from Rs. 43016.06 millions in the fiscal year 2004/05 to Rs. 68095.70 millions in the fiscal year 2008/09. The mobilization ratio was 62.77% in the fiscal year 2004/05, 50.32% in the fiscal year 2005/06, 49.29% in the fiscal year 2006/07, 47.48% in the fiscal year 2007/08 and 52.93% in the fiscal year 2008/09. The lower ratio compared to the previous fiscal year indicated that the bank gave more consideration to other investment sectors. However, the coverage of loan and advances on total deposit was significant. As a result, RBB mobilized 62.77% of the total deposit in disbursing loan.

Comparing to two distinct periods, it can be concluded that the deposit mobilization rate of RBB in loan and advances was more in previous five year period than in the current five year period. Further in average, RBB utilized 61.83% of the total deposit in granting loans, and the coefficient of variation in the ratio was only 19.75%. Thus, loan and advances was the major use of deposit collection than other investment.

Figure 4.8
Loan and Advances to Total Deposit



4.1.6 Statistical Analysis

In this part of the study, the simple correlation and regression analysis, and the trend value of variables, which reflect the loan management of the bank, have been determined.

4.1.6.1 Correlation Analysis

To investigate the synchronization of loan & advances with net profit, with total deposit, with total investment, and with non performing loan, the Karl Pearson's correlation coefficient (r) has been determined.

4.1.6.1.1 Correlation Analysis between Net Profit & Loan and advances

To determine the relationship between net profit and loan and advances, the correlation between them has been calculated. Further, the relationship derived has been tested by using probable error.

Table 4.9
Correlation Analysis between Net profit & Loan & Adv.

r	r^2	P.E.	6 P.E.	Remarks
0.0259	0.0007	0.2132	1.2789	Insignificant

(Source: Appendix III)

The Table 4.9 showed that the relationship between net profit after tax and loan and advances was positive. The correlation coefficient between these two variables was 0.0259. Similarly, the coefficient of determination was 0.0007, which indicated that 0.07% change in the net profit was explained by the change in loan and advances, which was very low. Further, the calculated probable error in the relation was 0.2132. Since, the correlation coefficient between net profit and total loan was lower than the calculated 6 P.E., [i.e. r (0.0259) < 6 P.E. (1.2789)], the relationship between net profit and total loan was statistically insignificant and thus it was not necessary that net profit should increase with the increase in loan and advances and vice versa.

4.1.6.1.2 Correlation Analysis between Loan & Advances & Total Deposit

A bank needs to have good synchronization between loan and advances and total deposit to effectively mobilize the fund collected. To measure the degree of relationship between these two variables, the correlation coefficient has been determined.

Table 4.10

Correlation Analysis between Loan & Advances and Total Deposit

r	r²	P.E.	6 P.E.	Remarks
0.3515	0.1235	0.1869	1.1217	Insignificant

(Source: Appendix III)

The Table 4.10 showed that there was low positive relationship between loan and advances and total deposit of RBB, since the correlation coefficient between these two variables was 0.3515. Further, the coefficient of determination indicated that 12.35% variation in loan and advances was caused by change in total deposit. In addition, the calculated value of probable error and 6 P.E. were 0.1869 and 1.1217 respectively. However, the lower value of 'r' than the 6 P.E. ($r = 0.3515 < 6 \text{ P.E.} = 1.1217$) indicated that the relationship between total deposit and loan and advances was statistically insignificant. Hence, there were other variables that had positive relationship with loan and advances rather than deposit.

4.1.6.1.3 Correlation Analysis between Loan & Advances and Investment

A bank needs good investment policy and lending policy to reap greater amount of profit. Thus, to test whether these two variables are interrelated, the correlation between them has been tested.

Table 4.11

Correlation Analysis between Loan & Advances and Total Investment

r	r²	P.E.	6 P.E.	Remarks
0.1473	0.0217	0.2087	1.2520	Insignificant

(Source: Appendix III)

The Table 4.11 presented the relationship between loan and advances and total investment. The correlation coefficient of 0.1473 indicated that there was low positive relationship between these two variables. Since the value of 'r' was lower than the 6 P.E. ($r = 0.1473 < 6 \text{ P.E.} = 1.2520$), the relationship between these two variables was statistically insignificant. Thus, loan and advances was not dependent on investment.

4.1.6.1.4 Correlation Analysis between Non Performing Loan and Loan & Advances

Lower the non performing loan is considered better for the bank and to have sound earning capacity. To test whether there exist any relation between non performing loan and loan and advances, the correlation coefficient has been calculated and tested through probable error.

Table 4.12

Correlation Analysis between Non Performing Loan and Loan & Advances

r	r²	P.E.	6 P.E.	Remarks
-0.1569	0.0246	0.2080	1.2483	Insignificant

(Source: Appendix III)

Similarly, the Table 4.12 showed that non performing loan had inverse relationship with loan and advances, and hence NPL decreases/increases with the increase/decrease of loan and advances. The correlation coefficient between

these two variables was -0.1569. However, since the absolute value of 'r' was lower than the 6 P.E. ($|r| = 0.1569 < 6 \text{ P.E.} = 1.2483$), the relationship between these two variables was insignificant.

4.1.6.2 Regression Analysis

The regression analysis computes by what amount the dependent variable will fluctuate on per unit changes on the independent variable. Under this analysis, the regression line of net profit on loan and advances, loan and advances on total deposit, loan and advances on total investment, and non performing assets on loan and advances have been calculated.

4.1.6.2.1 Regression Analysis of Net Profit on Loan & Advances

Let net profit of RBB be the dependent variable on loan and advances disbursed, independent variable. Then the regression equation calculated by assuming this relation is presented in the table below.

Table 4.13

Regression Analysis of Net profit on Loan & Advances

a	b	Regression Equation
-1794.43	-0.02	NPAT = -1794.43 - 0.02 LA

(Source: Appendix III)

The Table 4.13 shows the relationship of net profit on loan and advances. The table depicts that the net profit has negative relationship with the total loan, which clearly indicates the poor management of RBB in loan, and thus there is uncertainty in interest amount from the loan disbursed and hence greater chances of default loan, which ultimately deduct the net profit of the bank. The regression line shows that if other thing, -1794.43, remains constant, the net profit of the bank decreases by Rs. 0.02 with per rupee increment in loan and advances.

4.1.6.2.2 Regression Analysis of Loan and Advances on Total Deposit

Considering loan and advances as the dependent variable on total deposit, independent variable, the regression equation calculated between these two variables is presented in the table below.

Table 4.14

Regression Analysis of Loan & Advances on Total Deposit

a	b	Regression Equation
21570.69	0.14	$LA = 21570.69 + 0.14 TD$

(Source: Appendix III)

The Table 4.14 represents the relationship between loan and advances and total deposit. The regression line of loan and advances on total deposit indicates that with per rupee increment in total deposit, the loan and advances of RBB increases by Rs. 0.14. Thus, loan and advances has positive relationship with the total deposit collection of the bank. Further, it can be said that loan and advances is one of the major uses of total deposit of RBB.

4.1.6.2.3 Regression Analysis of Loan and advances on Investment

Let the disbursement of loan and advances depends upon the investment policy, independent variable, of the bank. Then the regression equation of loan and advances on total investment of RBB is presented below;

Table 4.15

Regression Analysis between Loan & Advances on Total Investment

a	b	Regression Equation
26861.01	0.13	$LA = 26861.01 + 0.13 TI$

(Source: Appendix III)

The Table 4.15 presents the relationship between loan and advances and total investment. The regression line clarified that with per rupee increment in total investment led to Rs. 0.13 increase in loan and advances, if the other variable, Rs. 26861.01, remains constant. Thus, loan and advances has positive relationship with total investment, and thus increases/decreases with the increase/decrease in total investment.

4.1.6.2.4 Regression Analysis of NPL on Loan & Advances

Assuming non performing loan is dependent on the loan and advances disbursed, the regression line of non performing loan on loan and advances has been calculated, which is presented in the below table;

Table 4.16

Regression Analysis between Non Performing Loan and Loan & Advances

a	b	Regression Equation
15423.75	-0.15	$NPL = 15423.75 - 0.15 LA$

(Source: Appendix III)

Similarly, the Table 4.16 shows that non performing loan had negative relationship with loan and advances, and hence NPL decreases/increases with the increase/decrease of loan and advances. The regression line indicated that with per rupee increase in loan and advances, the NPL decreases by Rs. 0.15, if the variable, 15423.75, remains stable.

4.1.6.3 Trend Analysis

To estimate the value of loan and advances, deposit, investment, non performing loan and net profit in the forthcoming four fiscal years, i.e. in the fiscal year 2009/10, 2010/11, 2011/12, and 2012/13, the trend analysis has been done. The loan and advances, deposit, investment, non performing loan and net profit have been considered dependent variables on the time. Then the regression line and predicted value calculated have been shown in the below tables.

4.1.6.3.1 Trend Analysis of Loan and Advances

To estimate the value of loan and advances in the next four fiscal year periods, the loan and advances has been considered as the dependent variable (Y) on the time period (X), independent variable. Then the trend value calculated using the trend analysis has been presented in table below.

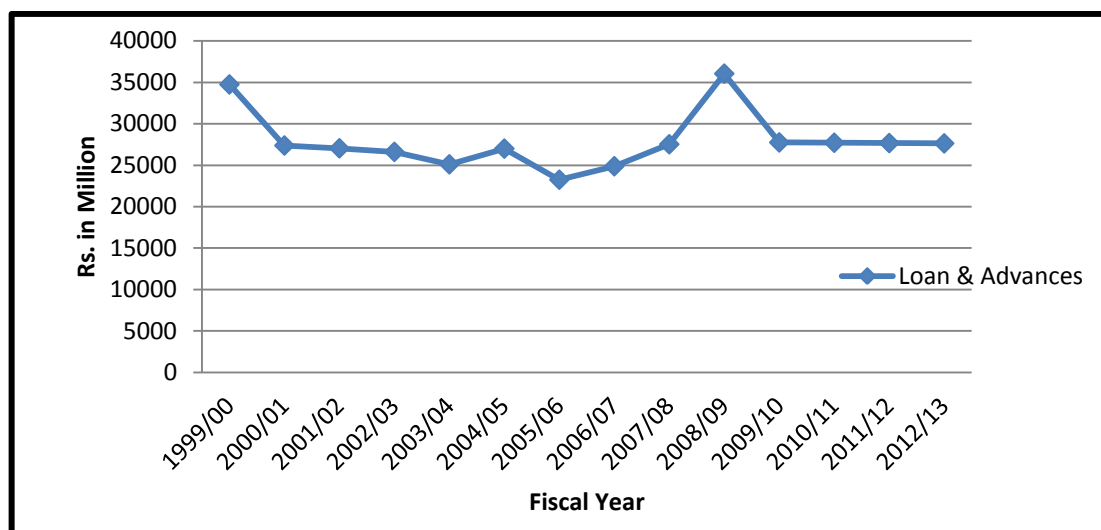
Table 4.17
Trend Analysis of Loan and Advances

FY	Loan & Advances
1999/00	34744.27
2000/01	27375.13
2001/02	27037.37
2002/03	26608.83
2003/04	25105.68
2004/05	27000.93
2005/06	23246.51
2006/07	24871.36
2007/08	27524.92
2008/09	36042.93
2009/10	27746.28
2010/11	27708.19
2011/12	27670.10
2012/13	27632.01

(Source: Appendix – IV)

The Table 4.17 has estimated the value of loan and advances for the next four fiscal years. The table depicts that the loan and advances for the fiscal year 2009/10, 2010/11, 2011/12 and 2012/13 will be Rs. 27746.28 millions, Rs. 27708.19 millions, Rs. 27670.10 millions and Rs. 27632.01 millions respectively. The trend value of loan advances on time period, shown in the table, indicates that in each year, the loan and advances of RBB decreases by Rs. 38.09 millions in the forthcoming four years. Hence, loan and advances has negative relationship with time period.

Figure 4.9
Trend Analysis of Loan and Advances



4.1.6.3.2 Trend Analysis of Total Deposit

Let Y be the total deposit, dependent variable, and X be the time period, independent variable. Then the trend value of total deposit, using such relation, is presented in the table below.

Table 4.18
Trend Analysis of Total Deposit

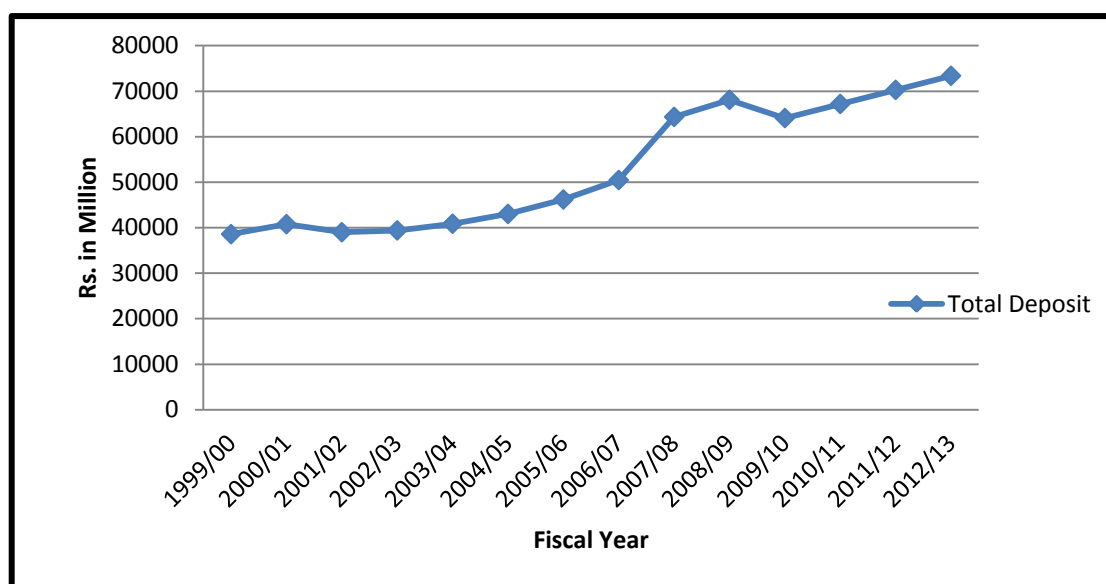
FY	Total Deposit
1999/00	38575.14
2000/01	40773.66
2001/02	38993.29
2002/03	39402.27
2003/04	40866.77
2004/05	43016.06
2005/06	46195.48
2006/07	50464.13
2007/08	64340.95
2008/09	68095.70
2009/10	64090.32
2010/11	67184.49
2011/12	70278.67
2012/13	73372.85

(Source: Appendix – IV)

The Table 4.18 clarifies that total deposit of RBB has positive relationship with the time period in the forthcoming four fiscal years, which is a good indication for RBB. The total deposit of RBB increases by Rs. 3094.18 millions per year in the future. The estimated value of total deposit of RBB will be Rs. 64090.32 millions, Rs. 67184.49 millions, Rs. 70278.67 millions and Rs. 73372.85 millions in the fiscal year 2009/10, 2010/11, 2011/12 and 2012/13 respectively.

Figure 4.10

Trend Analysis of Total Deposit



4.1.6.3.3 Trend Analysis of Total Investment

To calculate the trend value of total investment, the investment has been considered as the dependent variable on time period, independent variable. The calculated trend value of total investment has been presented below.

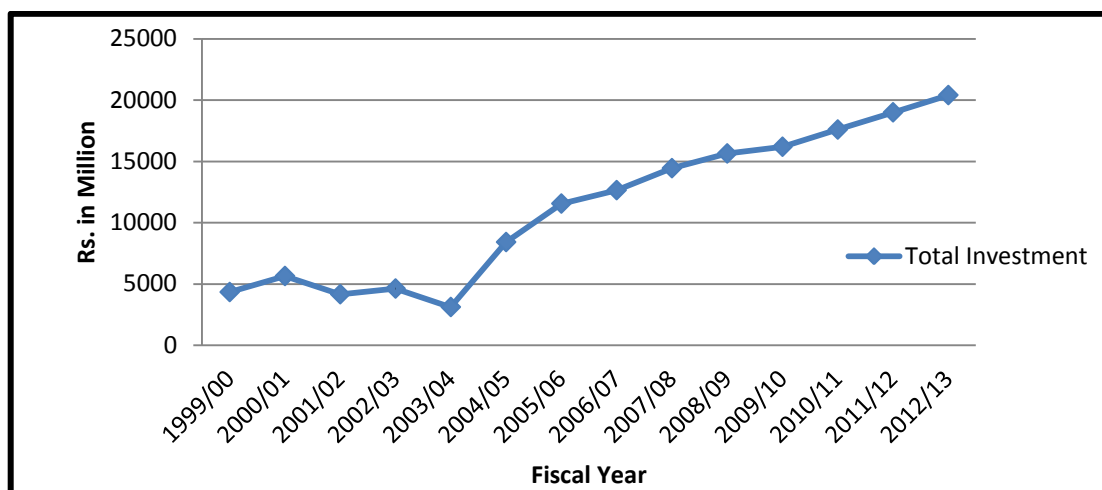
Table 4.19
Trend Analysis of Total Investment

FY	Total Investment
1999/00	4336.75
2000/01	5646.44
2001/02	4159.47
2002/03	4623.13
2003/04	3117.02
2004/05	8415.88
2005/06	11555.36
2006/07	12650.20
2007/08	14443.38
2008/09	15643.05
2009/10	16188.55
2010/11	17593.91
2011/12	18999.27
2012/13	20404.63

(Source: Appendix – IV)

Alike total deposit, the investment of RBB will also increase in the forthcoming years. The investment of RBB will increase by Rs. 1405.36 millions per year in the forthcoming four fiscal years. Thus, investment will have direct relationship with total deposit. The trend value of investment for the fiscal year 2009/10 will be Rs. 16188.55 millions, the fiscal year 2010/11 will be Rs. 17593.91 millions, the fiscal year 2011/12 Rs. 18999.27 millions, and the fiscal year 2012/13 will be Rs. 20404.63 millions.

Figure 4.11
Trend Analysis of Total Investment



4.1.6.3.4 Trend Analysis of Non Performing Loan

Lower the non performing loan reflects better loan management in the bank. Thus, to forecast whether the non performing loan will decrease in the four forthcoming years, the non performing loan has been considered as dependent variable on time.

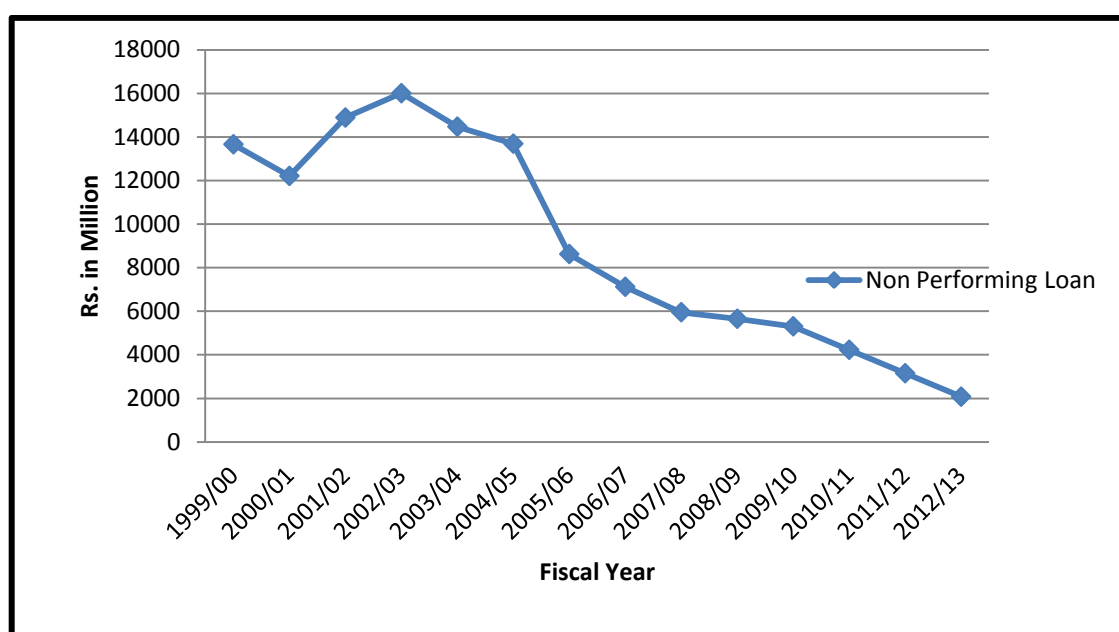
Table 4.20
Trend Analysis of Non Performing Loan

FY	Non Performing Loan
1999/00	13661.45
2000/01	12209.31
2001/02	14889.48
2002/03	16005.21
2003/04	14470.91
2004/05	13689.47
2005/06	8622.13
2006/07	7120.67
2007/08	5953.64
2008/09	5651.53
2009/10	5305.59
2010/11	4228.90
2011/12	3152.21
2012/13	2075.52

(Source: Appendix – IV)

Similarly, alike loan and advances, the non performing loan of RBB will also decrease in the forthcoming years. The non performing loan of RBB decreases by Rs. 1076.69 millions per year in the future. The table shows that the forecasted value of non performing loan will be Rs. 5305.59 millions in the fiscal year 2009/10, Rs. 4228.90 millions in the fiscal year 2010/11, Rs. 3152.21 millions in the fiscal year 2011/12, and Rs. 2075.52 millions in the fiscal year 2012/13.

Figure 4.12
Trend Analysis of Non Performing Loan



4.1.6.3.5 Trend Analysis of Net Profit after Tax

Higher the net profit is favorable for any institution. So, to forecast whether, the net profit of RBB will increase in the forthcoming four years, the net profit has been considered as the dependent variable on time period. The calculated trend value of net profit is presented in the table below.

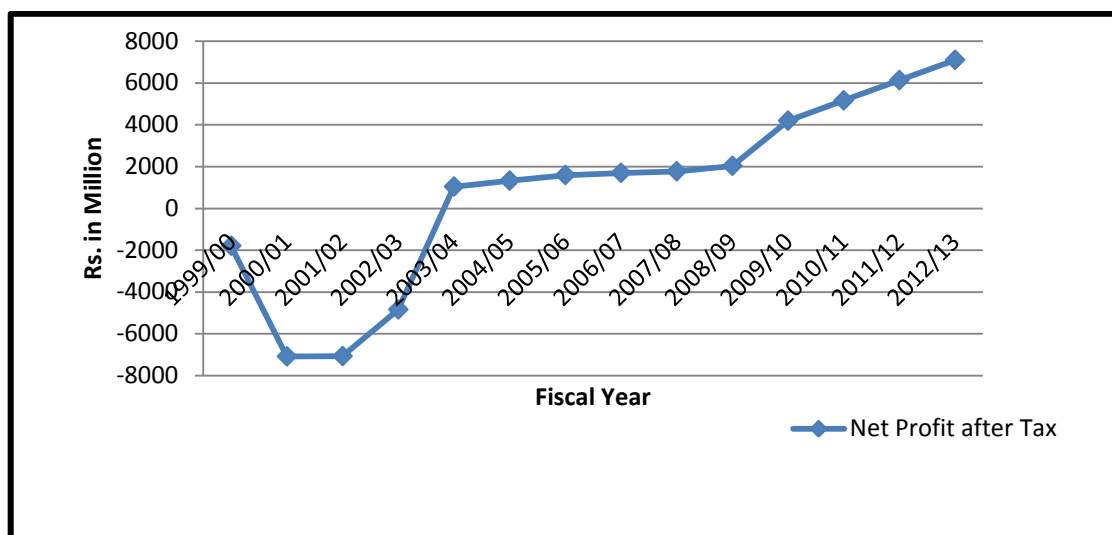
Table 4.21
Trend Analysis of Net Profit after Tax

FY	Net Profit after Tax
1999/00	-1791.46
2000/01	-7083.25
2001/02	-7068.25
2002/03	-4839.78
2003/04	1040.10
2004/05	1322.89
2005/06	1591.49
2006/07	1697.09
2007/08	1770.55
2008/09	2032.23
2009/10	4193.60
2010/11	5162.04
2011/12	6130.48
2012/13	7098.93

(Source: Appendix – IV)

Further, the net profit of RBB will have positive relationship with the time period, which means that net profit increases in each fiscal year by Rs. 968.44 millions in the forthcoming four fiscal years. Consequently, the estimated value of net profit in the fiscal year 2009/10 will be Rs. 4193.60 millions, in the fiscal year 2010/11 will be Rs. 5162.04 millions, in the fiscal year 2011/12 will be Rs. 6130.48 millions, and in the fiscal year 2012/13 will be Rs. 7098.93 millions.

Figure 4.13
Trend Analysis of Net Profit after Tax



4.2 Primary Data Analysis

To examine the loan management situation, the primary data has also been undertaken. For the primary data collection, mainly the questionnaire containing 10 questions has been performed. The 30 respondents: 10 investors, 10 employees of banks, and 10 borrowers, have been chosen for the questionnaire purpose. The Investors are chosen randomly from the NEPSE floor, whereas the banks employees and Borrower are chosen by visiting the sampled banks.

4.2.1 Loan Management Efficiency

Granting loan is the major function of the bank and loan is considered as the major source of interest income. Thus, efficiency in managing loan is crux for the survival of bank. To know whether the RBB is efficient in loan management, the respondents were asked on this matter.

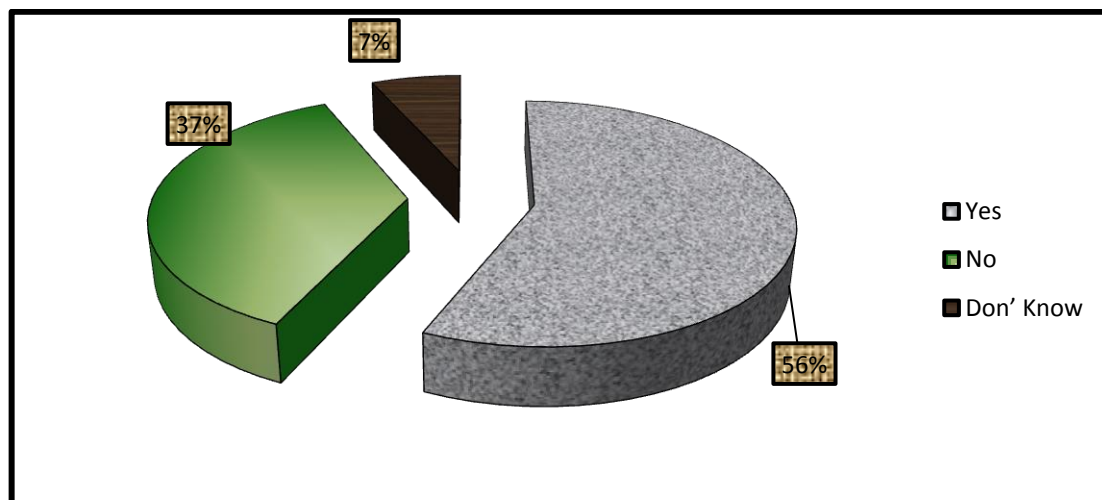
Table 4.22
Efficiency in Loan Management

Answer	Investor		Employee		Borrower		Total	
	No.	%	No.	%	No.	%	No.	%
Yes	6	60	7	70	4	40	17	56
No	4	40	2	20	5	50	11	37
Don' Know	0	0	1	10	1	10	2	7
Total	10	100	10	100	10	100	30	100

(Source: Field Survey, 2011)

The Table 4.22 reveals that the majority of the respondents, i.e. 56% (17 out of 30), has opined that the commercial banks are efficient in loan management, while 37% of the respondents has said that the banks are not efficient in managing loan and 7% remained has said don't know. Looking each category, the majority of the Investors, i.e. 60% (6 out of 10), and bank employee, i.e. 70% (7 out of 10), has stated that the banks are efficient in managing credit, while the majority of borrower, 50% (5 out of 10), has opined that the banks are not efficient in managing credit. Hence, overlooking the overall majority, it can be concluded that the RBB is efficient in managing credit. However, it will be better, if the bank traces out the dissatisfaction of borrower in the management of loan by bank.

Figure 4.14
Efficiency in Loan Management



4.2.2 Loan Floatation Basis

To examine the most important basis that should be considered while disbursing loan, the respondents have been asked to express their view. The responses obtained from them have been presented in the Table 4.23.

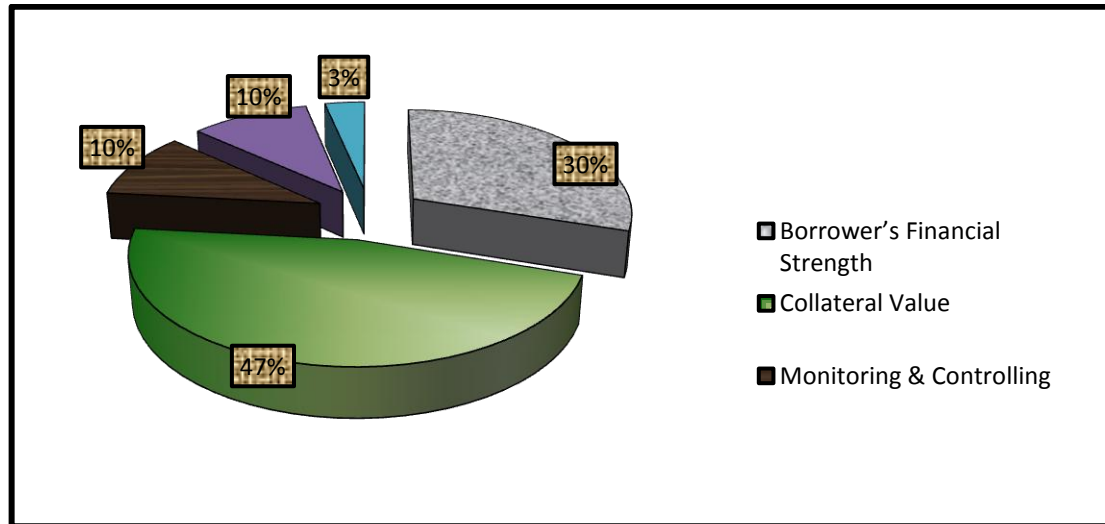
Table 4.23
Loan Floatation Basis

Basis	Investor		Employee		Borrower		Total	
	No.	%	No.	%	No.	%	No.	%
Borrower's Financial Strength	2	20	4	40	3	30	9	30
Collateral Value	4	40	5	50	5	50	14	47
Monitoring & Controlling	2	20	0	0	1	10	3	10
Nature of Guarantor	1	10	1	10	1	10	3	10
Portfolio Management	1	10	0	0	0	0	1	3
Total	10	100	10	100	10	100	30	100

(Source: Field Survey, 2011)

The Table 4.23 shows that the majority of the respondents have stated that the collateral value should be given more consideration while disbursing loan. Out of the 30 respondents, 14 respondents (47%), have supported this option. Besides collateral value, 30% of the respondents, 9 out of 30, have opined that evaluation borrower's financial strength should be the main basis while floating loan. Similarly, 10% of the respondents (3 out of 30), 10% of the respondents (3 out of 30) and 3% of the respondents (1 out of 30) have affirmed that nature of guarantor, monitoring and controlling and portfolio of loan management respectively should be the main basis for loan floatation.

Figure 4.15
Loan Floatation Basis



4.2.3 Harassment in Paper Document

Before granting loan, the bank has to arrange various documents to ensure the payment back of principal and interest amount of loan granted. So to know whether the paper document maintain is harassing, the respondents are asked on this regard. The responses obtained from them are presented in the Table 4.24.

Table 4.24
Harassment in Paper Document

Answer	Investor		Employee		Borrower		Total	
	No.	%	No.	%	No.	%	No.	%
Yes	3	30	2	20	7	70	12	40
No	5	50	6	60	2	20	13	43
Don' Know	2	20	2	20	1	10	5	17
Total	10	100	10	100	10	100	30	100

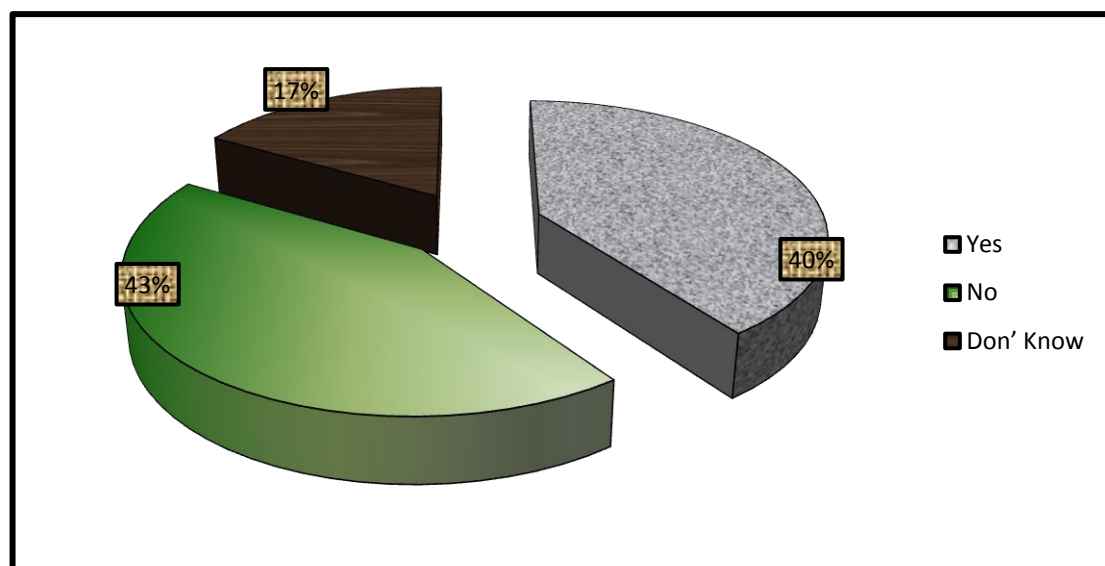
(Source: Field Survey, 2011)

The Table 4.24 shows that the majority of the respondents, 43% (13 out of 30), has stated that there is no harassment in paper document maintained by bank

while granting loan, while 40% of the respondents (12 out of 30) has affirmed that the paper documentation is harassing and 17% of the respondents (5 out of 30) has remained neutral. Gazing each category, the majority of Investors, i.e. 50% (5 out of 10), and bank's employees, 60% (6 out of 10), have said that the paper documentation is not harassing, while the majority of the Borrower, 70% (7 out of 10), has said that the paper documentation is harassing. Considering the overall responses, it can be concluded that the paper documentation maintained by commercial banks before granting loan is not harassing. However, the banks should not ignore the oppose opinion of Borrower and should make the paper documentation comfortable.

Figure 4.16

Harassment in Paper Document



4.2.4 Satisfaction in Mortgage Value

To ensure the payment of loan by the Borrower, the bank keeps mortgage after the valuing it. So to know whether the valuation done by bank is satisfactory, the respondents are asked on this matter. The respondents obtained from them are presented in the Table 4.25.

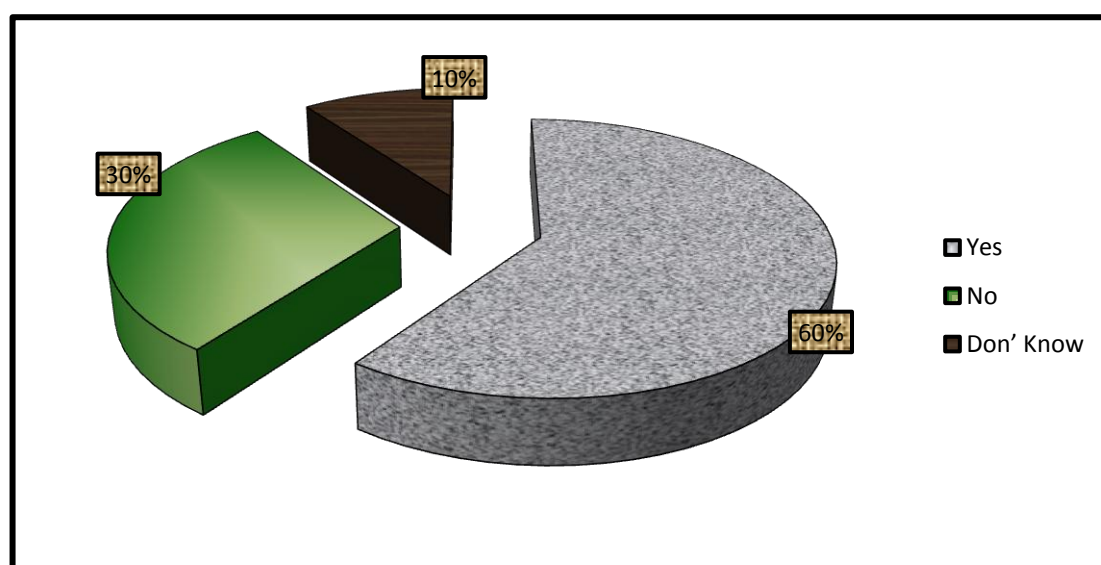
Table 4.25
Satisfaction in Mortgage Value

Answer	Investor		Employee		Borrower		Total	
	No.	%	No.	%	No.	%	No.	%
Yes	4	40	6	60	8	80	18	60
No	4	40	3	30	2	20	9	30
Don' Know	2	20	1	10	0	0	3	10
Total	10	100	10	100	10	100	30	100

(Source: Field Survey, 2011)

The Table 4.25 reveals that 40%, 40% and 20% of the Investor states that the mortgage valuation done by commercial banks is satisfactory, not satisfactory and don't know respectively. Similarly, 60% of the bank employees say that the valuation is satisfactory, 30% has said the valuation is not satisfactory and 10% has remained neutral. Likewise, 80% and 20% of the borrower has said that the valuation is satisfactory and not satisfactory respectively. In overall, 60% of the total respondents have state that the valuation is satisfactory, while 30% stated that the valuation is not satisfactory and 10% remained neutral. Considering the overall majority, it can be concluded that the valuation of mortgage value done by bank before disbursing loan is satisfactory.

Figure 4.17
Satisfaction in Mortgage Value



4.2.5 Involvement in Valuation

To examine from whom the valuation of mortgage should be done before granting loan, the respondents are asked on this matter. The responses obtained from each category and in total have been presented in the Table 4.26.

Table 4.26
Involvement in Valuation

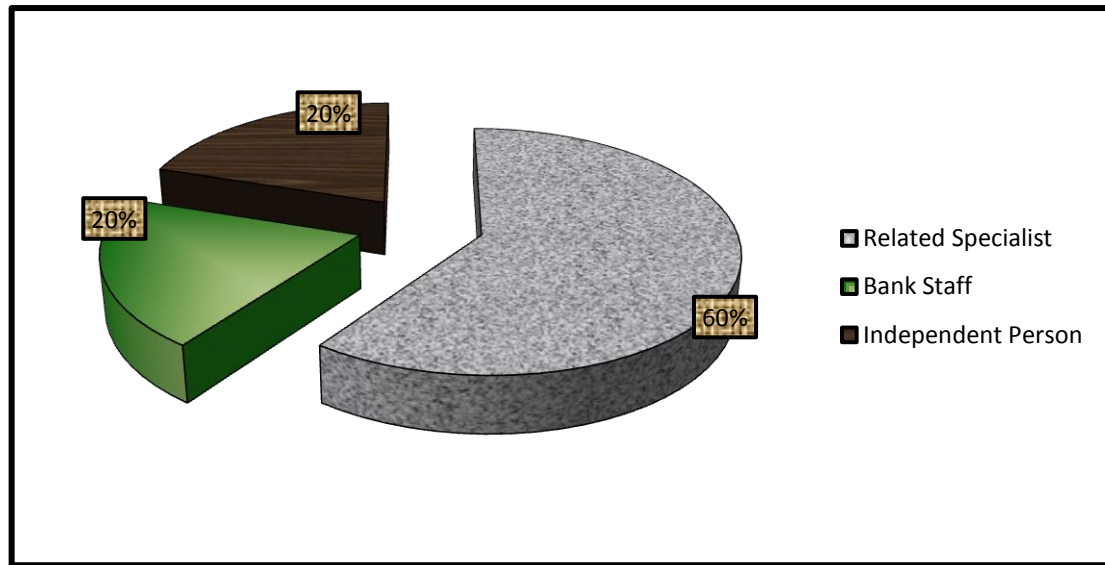
Answer	Investor		Employee		Borrower		Total	
	No.	%	No.	%	No.	%	No.	%
Related Specialist	8	80	4	40	6	60	18	60
Bank Staff	0	0	6	60	0	0	6	20
Independent Person	2	20	0	0	4	40	6	20
Total	10	100	10	100	10	100	30	100

(Source: Field Survey, 2011)

The Table 4.26 depicts that the majority of the Investors, 80%, has stated that the valuation should be done by the related specialist, while 20% of the Investors has said that the valuation should be done by the independent person appointed by the mutual agreement between bank and borrower. Similarly, 60% of the bank employee has stated that the valuation should be done by the bank staff and 40% has said that the valuation should be done by related specialist. Likewise, 60% and 40% of the borrower has opined that the mortgage valuation should be done by related specialist and the independent person respectively.

In overall, 60% (18 out of 30), 20% (6 out of 30) and 20% (6 out of 30) of the respondents has said that the mortgage valuation should be done by related specialist, bank staff and independent person respectively. Considering the overall majority, it can be concluded that the valuation of mortgage would be satisfactory, if it has been done by related specialist.

Figure 4.18
Involvement in Valuation



4.2.6 Time to Disburse Loan

The bank takes certain time for loan approval after it receives the application form. Thus, to know how many days will be the best time to disburse credit, the respondents are asked on this matter. The responses obtained from them are presented in the Table 4.27.

Table 4.27
Time to Disburse Loan

Answer	Investor		Employee		Borrower		Total	
	No.	%	No.	%	No.	%	No.	%
5-10 days	3	30	2	20	4	40	9	30
10-20 days	6	60	7	70	6	60	19	63
Above 20 days	1	10	1	10	0	0	2	7
Total	10	100	10	100	10	100	30	100

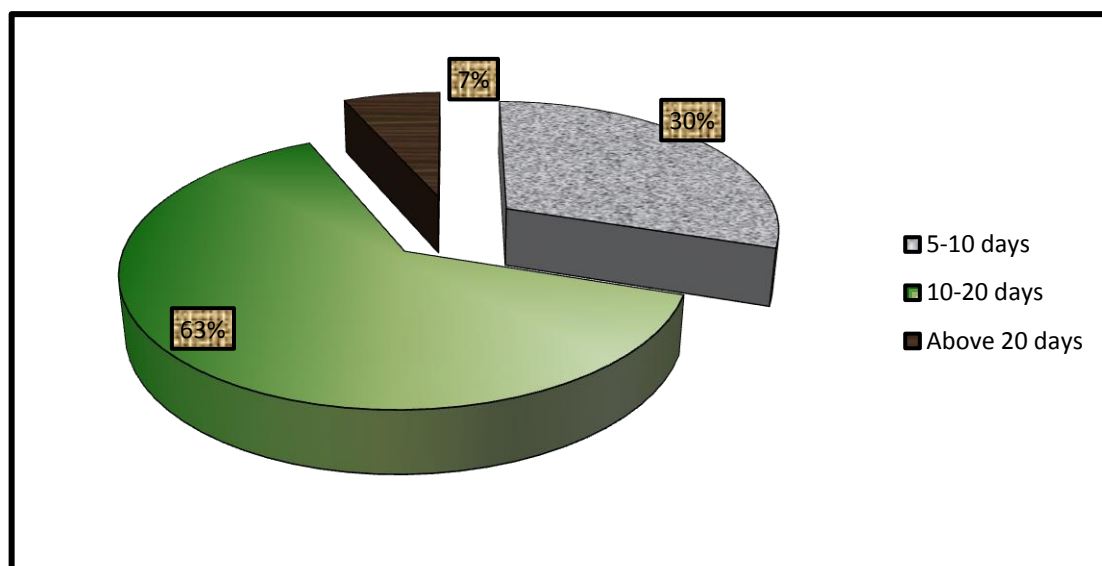
(Source: Field Survey, 2011)

The Table 4.27 reveals that the majority of the Investors, i.e. 60%, has stated that 10-20 days after the application received by the bank would be the appropriate time to disburse loan, while 30% and 10% of the Investors has opined 5-10 days and above 20 days as the appropriate time. Similarly, 20%,

70% and 10% of the bank employees has indicated 5-10 days, 10-20 days and above 20 days as the appropriate time to disburse loan after the receipt of application. Likewise, 40% and 60% of the Borrower has opined 5-10 days and 10-20 days as the appropriate time to disburse loan.

In overall, 30%, 63% and 7% of the total respondents has opined 5-10 days, 10-20 days and above 20 days respectively to be the appropriate time to disburse loan after the receipt of application. Hence, considering the overall majority of each group and overall, it can be concluded that 10-20 days would be the best time to disburse loan after receiving the application.

Figure 4.19
Time to Disburse Loan



4.2.7 Degree of Effect of NPA on Banking Industry

To know the degree of effect that NPA has on banking industry, the respondents are asked to express their view. The responses obtained from them have been presented in the Table 4.28.

Table 4.28**Degree of Effect of NPA on Banking Industry**

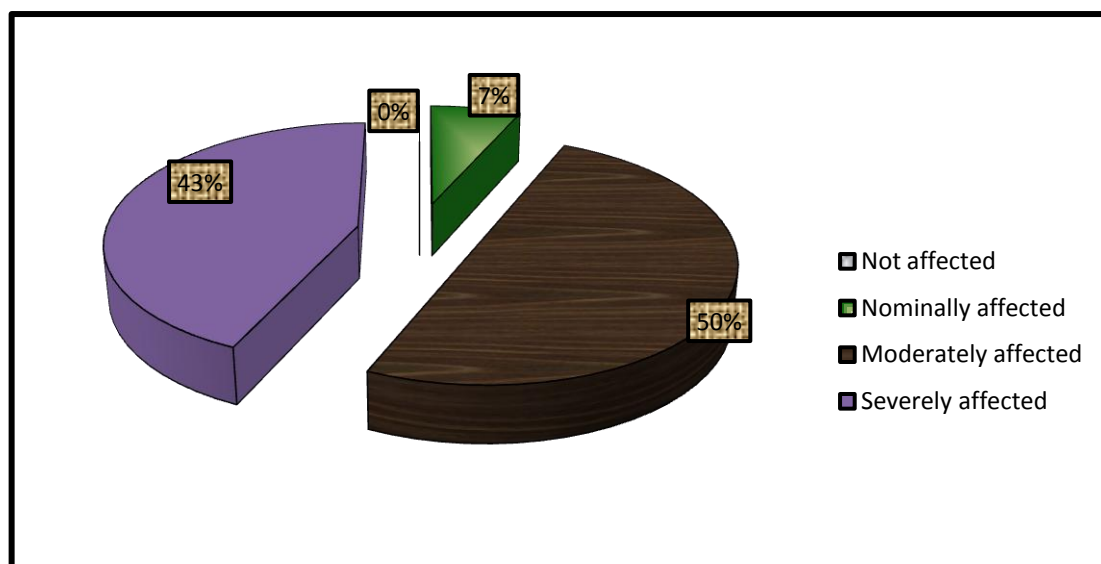
Basis	Investor		Employee		Borrower		Total	
	No.	%	No.	%	No.	%	No.	%
Not affected	0	0	0	0	0	0	0	0
Nominally affected	0	0	1	10	1	10	2	7
Moderately affected	6	60	6	60	3	30	15	50
Severely affected	4	40	3	30	6	60	13	43
Total	10	100	10	100	10	100	30	100

(Source: Opinion Survey, 2011)

The Table 4.28 demonstrates that 50% of the respondents, 15 out of 30, have stated that the banking industry has been moderately affected by the problem of NPA. Similarly, 43% of the respondents, 13 out of 30, have said that the problem of NPA has severe effect on the banking industry. Also, 7% of the respondents, 2 out of 30, have stated that the banking industry had been nominally affected by the problem of NPA. Looking each category, the majority of the investors, 6 out of 10 and the majority of the employees, 6 out of 10, have stated that banking industry has been moderately affected by NPA. However, the majority of the borrower, 6 out of 10, stated that the banking industry has been severely affected by the problem of NPA. Finally, considering the overall majority, 15 out of 30, it can be concluded that NPA has moderate effect on banking industry.

Figure 4.20

Degree of Effect of NPA on Banking Industry



4.2.8 Best Time to Follow up after Due date

To examine the best time within which the bank should follow up for recovery after due date, the respondents have been asked on this regard. The responses obtained from them have been presented in the Table 4.29.

Table 4.29

Best Time to Follow up after Due date

Basis	Investor		Employee		Borrower		Total	
	No.	%	No.	%	No.	%	No.	%
Within a week	2	20	3	30	1	10	6	20
Within two weeks	5	50	6	60	2	20	13	43
Within a month	3	30	1	10	5	50	9	30
After one month onwards	0	0	0	0	2	20	2	7
Total	10	100	10	100	10	100	30	100

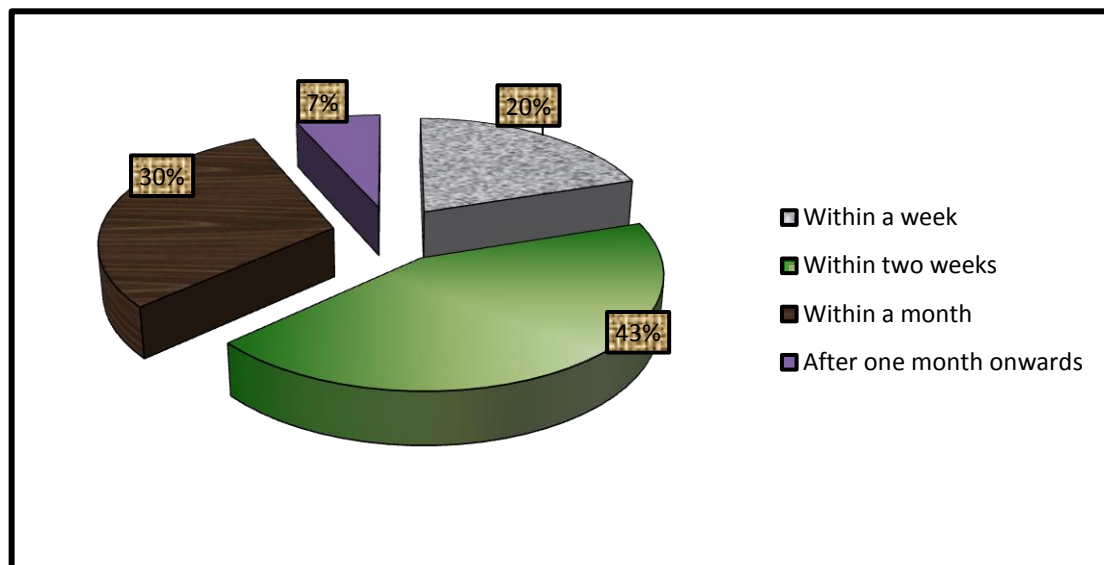
(Source: Opinion Survey, 2011)

The Table 4.29 demonstrates that 43% of the respondents, 13 out of 30, are in the view that banks should follow up for the recovery within two weeks after due date. Similarly, 30% of the respondents, 9 out of 30, have opined that within a month after due date will be the best time that the bank should start for

recovery. Also, 20% of the respondents, 6 out of 30 and 7% of the respondents, 2 out of 30, opined that within a week and after one month onward respectively will be the best time for follow up. Looking each category, the majority of investors, 5 out of 10 and the majority of employees, 6 out of 10, have supported within two weeks, whereas the majority of borrowers, 5 out of 10, have supported within a month for follow up after due date. Eventually, considering the overall majority, it can be concluded that within two weeks after the matured date of loan will be the best time for bank to follow up for recovery process.

Figure 4.21

Best Time to Follow up after Due date



4.2.9 Most Influencing Factor in Loan disbursement

To investigate what factor is the most influencing in granting credit, the respondents are asked on this matter. The responses obtained from them are summarized in the table in the rank form.

Table 4.30

Most Influencing Factor in Loan disbursement

Influencer	Basis	Rank					Total	Weight	Mean Wt.	Overall Rank
		1	2	3	4	5				
Paper Document	Investor	1	0	2	3	4	10	39	3.90	5
	Employee	1	2	1	3	3	10	35	3.50	4
	Borrower	0	1	2	4	3	10	39	3.90	4
	Total	2	3	5	10	10	30	113	3.77	4
Time Period	Investor	1	1	0	5	3	10	38	3.80	4
	Employee	2	2	2	1	3	10	31	3.10	3
	Borrower	0	1	4	3	2	10	36	3.60	3
	Total	3	4	6	9	8	30	105	3.50	3
Employee Behavior	Investor	0	2	3	2	3	10	36	3.60	3
	Employee	1	0	3	2	4	10	38	3.80	5
	Borrower	1	0	2	2	5	10	40	4.00	5
	Total	2	2	8	6	12	30	114	3.80	5
Interest Rate	Investor	5	3	2	0	0	10	17	1.70	1
	Employee	4	2	2	2	0	10	22	2.20	1
	Borrower	5	5	0	0	0	10	15	1.50	1
	Total	14	10	4	2	0	30	54	1.80	1
Collateral Value	Investor	3	4	3	0	0	10	20	2.00	2
	Employee	2	4	2	2	0	10	24	2.40	2
	Borrower	4	3	2	1	0	10	20	2.00	2
	Total	9	11	7	3	0	30	64	2.13	2

(Source: Field Survey, 2011)

The Table 4.30 shows that the interest rate charged on the loan amount is the most influencing factor while granting loans. The respondents have ranked 1 for interest rate chargeable, 2 for the collateral value, 3 for time period taken for granting credit, 4 for paper documentation required, and 5 for the behavior of bank's employee to the customer. In overall, the majority of the respondents, 14 out of 30, have opined that the interest rate is the most influencing factor in loan disbursement. Thus, it will be worthwhile if bank charges the appropriate interest rate for effective Loan management.

4.2.10 Suggestions for Effective Loan Management

At the end of the questionnaire, the respondents are asked to give their valuable suggestion for the effective Loan management. The responses obtained from them, in the rank form, have been presented in the Table 4.31.

Table 4.31
Suggestions for Effective Loan Management

Remedy	Basis	Rank				Total	Weight	Mean Wt.	Overall Rank
		1	2	3	4				
Careful Evaluation	Investor	4	3	3	0	10	19	1.90	1
	Employee	3	5	2	0	10	19	1.90	1
	Borrower	5	5	0	0	10	15	1.50	1
	Total	12	13	5	0	30	53	1.77	1
Appropriate Interest	Investor	3	4	3	0	10	20	2.00	2
	Employee	3	4	3	0	10	20	2.00	2
	Borrower	4	4	2	0	10	18	1.80	2
	Total	10	12	8	0	30	58	1.93	2
Consumer Awareness	Investor	0	1	3	6	10	35	3.50	4
	Employee	0	0	3	7	10	37	3.70	4
	Borrower	0	0	3	7	10	37	3.70	4
	Total	0	1	9	20	30	109	3.63	4
Timely Collection	Investor	3	2	1	4	10	26	2.60	3
	Employee	4	1	2	3	10	24	2.40	3
	Borrower	1	1	5	3	10	30	3.00	3
	Total	8	4	8	10	30	80	2.67	3

(Source: Field Survey, 2011)

The Table 4.31 depicts that the respondents ranked 1 for careful evaluation of loan proposal, 2 for appropriate interest rate to be charged, 3 for collection of loan at regular time interval and 4 for consumer awareness, as the suggestion for effective Loan management of the bank. Out of 30 respondents, 12 ranked 1 for careful evaluation. So, it can be concluded that the bank can have sound management of credit, if it evaluates the Loan proposal carefully. Also, the bank interest rate should not be high, as a result the Borrower feel burden while paying interest amount.

4.3 Major Findings of the Study

After careful analysis of both the secondary and primary data available, the following major findings have been drawn;

Findings from Secondary Data Analysis

1. There was irregularity in loan investment of the bank, as a result the loan outstanding of the bank was also not consistent. Therefore, the ratio of loan investment to loan outstanding of the bank remained fluctuated in each year. In average, the ratio was 12.79%, which indicated large amount of loan to be recoverable.
2. Similarly, the loan recovery amount was also in fluctuating trend, as a result large amount of loan disbursed remained to be recoverable. In average, only 6.04% of the total loan outstanding had been recovered. It seemed that the bank needs strong loan recovery policy.
3. Loan and advances used to be the major uses of the collected deposit in the initial period. But in the later years, the bank diverted its most of the deposit in other investment. As a result, only 52.93% of the deposit was disbursed as loan in the fiscal year 2008/09.
4. The growth rate of loan investment of the banks was irregular and even decreased in most of the year. In average, the loan investment rose by 126.36%. Similarly, the total outstanding loan and advances of the bank decreased in some years and increased in other years. Eventually, the outstanding loan grew by 3.44% in average. Although, there was irregularity in the recovery of outstanding loan, the bank recovered 6.61% of the total outstanding loan in average. Hence, the growth rate of investment was comparatively higher than the growth rate of recovery, as a result the loan outstanding had been increased.
5. The bank was able to decrease the presence of non performing loan in total loan and advances. The non performing loan represented only 15.68% of the total loan in the fiscal year 2008/09. This indicated the

greater concern of the bank in improving its assets structure by decreasing the credit risk.

6. Along with the non performing loan, the loan loss provision kept the bank in relation to the total loan had been also decreased in the recent years. In fiscal year 2008/09, the ratio was only 12.31%, which indicated that the presence of loss loan, and doubtful loan was minimal in this year.
7. The relationship between net profit and loan and advances was statistically insignificant and thus the increment/decrement in loan and advances did not always increase/decrease the net profit. The correlation coefficient calculated between them was 0.0007, which was far lower than the calculated 6 P.E.
8. Similarly, the relationship between loan and advances and total deposit of the bank was statistically insignificant, and hence the increment/decrement in total deposit did not affect the loan disbursement policy of the bank. The correlation coefficient between these two variables was 0.1235.
9. Also, the relationship between loan and advances and total investment, and non performing loan and loan and advances were insignificant. Hence, investment in other sector had no effect on the disbursement of loan, and the growth of non performing loan was not totally dependent on the growth of loan outstanding.
10. The trend analysis depicted good financial position of the bank in future. Since, the loan and advances of the bank will be decreased, the total deposit will be increased, the other investment will be increased, the non performing loan will be decreased and the net profit after tax will be increased. The trend value indicated that loan and advances decreases by Rs. 38.09 millions, total deposit increases by Rs. 3094.18 millions, total investment increases by Rs. 1405.36 millions, non performing loan decreases by Rs. 1076.69 millions, and net profit increases by Rs. 968.44 millions in each forthcoming fiscal year.

Findings from Primary Data Analysis

1. As per the opinion survey, RBB is efficient in loan management. About 56% of the respondents supported this opinion. Also, 43% of the respondents have said that there is no harassment in the paper document requirement by bank while disbursing loan.
2. The bank needs to have sound evaluation of the mortgage property kept as security while disbursing loan. 47% of the respondents are in the view that the collateral evaluation should be the main basis to be considered while disbursing loan.
3. Further the majority of the respondents, 60%, are satisfied in the mortgage valuation done by bank. Also, same percentage, 60%, has stated that related specialist should be involved in mortgage valuation rather than bank staff and independent person.
4. The majority of the respondents, 63%, have opined that 10-20 days will be the appropriate time to disburse loan after the bank receives application.
5. Similarly, 50% of the respondents, 15 out of 30, have stated that the banking industry has been moderately affected by the problem of NPA. And 41% of the respondents suggested within two weeks after the due date will be the best time to follow up for loan recovery
6. In ranking the most influencing factor in loan disbursement, interest rate chargeable got rank 1, while collateral value got rank 2. Thus, interest rate of the bank is the most influencing determinants of loan. Eventually, the respondents have suggested that careful evaluation of the loan proposal before granting loan.

CHAPTER – V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

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. Thus, effective management of the loan and the credit function is fundamental to a bank's safety and soundness.

The study has the main objective of analyzing the loan management of Rastriya Banijya Bank, government owned bank. Besides it, the study also try to evaluate the loan investment and deposit mobilization of RBB, analyze the non performing loan in term of growth rate of loan outstanding, loan recovery, loan investment and loss provision made. Further the other objective includes the measurement of loan and advances with major financial indicators like net profit, total deposit, investment, and non performing. In addition, the objective incorporates to analyze the trend values of different variables and also try to collect the opinions of people regarding the efficiency of RBB in loan management.

To achieve the aforementioned objectives, only one commercial bank, out of population of 31 commercial banks, has been selected as sample. Also, both

primary and secondary data have been collected and analyzed to achieve the objectives. The primary data have been collected through distributing questionnaire to investors, employees and borrowers of RBB, whereas the secondary data have been collected mainly through the credit department and the annual reports of the bank, covering ten year periods, i.e. from the fiscal year 1999/00 to 2008/09.

Eventually, both financial and statistical tools have been extensively used to interpret the collected data. The financial tools include loan investment to loan outstanding, loan recovery to loan outstanding, growth ratios, non performing loan to total loan, loan loss provision to total loan and total loan to total deposit. And the statistical tools include mean, standard deviation, coefficient of variation, correlation coefficient, probable error, regression and trend analysis.

5.2 Conclusion

On the basis of secondary data analysis and the major findings drawn in the fourth chapter, it can be concluded that RBB lacks appropriate loan investment policy, since the loan investment represented only the small percentage of the loan outstanding. Also, the loan recovery policy of RBB has been aggravated during the periods. Thus, an efficient loan policy is crux for the enhancement of the performance of the bank. Further, the inconsistency in the growth rate of loan outstanding, loan investment and loan recovery also sought a sound loan management policy in bank. Although the chance of turning loan into default is lower in the recent periods than in previous, RBB should make effort to prevent the loan from becoming loss loan. In addition, it can be concluded that almost three-fifth of the deposit have been invested in granting loan and advances to earn interest income. Thus, loan and advances was the major use of deposit in RBB.

The statistical analysis aid to conclude that RBB lacks strong synchronization between loan & advances and net profit, loan & advances and non performing loan, loan & advances and total deposit, and loan & advances and total investment, since the relationship between them was statistically insignificant. However, on the basis of trend analysis, it can be considered that the loan and advances in the forthcoming year will decrease, the collection of deposit amount will increase, the total investment amount will increase, the non performing loan will decrease and the net profit will increase. Hence, a good financial performance of the bank can be expected in the future.

On the basis of primary data analysis, it can be concluded the bank is efficient in managing loan, and the process of getting loan from RBB is not difficult and thus there is no paper harassment. Further, it can be stated that collateral evaluation should be the main basis to be considered while disbursing loan. Also, it can be assumed that one will be satisfied in the mortgage valuation done by bank. In addition, the bank has not been extremely affected by the problem of NPA and to decrease the credit risk, the bank should follow up the recovery policy just within two weeks after the due date. Finally, interest rate is the most influencing factor in loan disbursement in RBB and careful evaluation of the loan proposal is crux for the bank.

Addressing the objectives of the study, it can be concluded that the mobilization rate of collected deposit in loan and advances is in decreasing trend. Further, there has been improvement in the recent periods in decreasing the non performing loan of the bank and the loss provision made to meet the credit risk is also greater in the recent periods. Also, the relationship of loan and advances with net profit, deposit, investment and non performing loan is not strong. Expect the non performing loan, the trend value of loan and advances, deposit, investment and net profit will increase in future. However, the opinion survey aid to conclude that RBB is efficient in loan management.

5.3 Recommendations

On the basis of major findings drawn in the fourth chapter and the conclusion drawn in this chapter, the following recommendations have been provided for the enhancement of loan management of RBB;

- Short term loan must be largely distributed. This will help to utilize small and local resources.
- Actual loan investment and collection is always lower than the targeted investment. Therefore, the bank should maintain the investment and collection according to the target, so if necessary, it should restructure in loan investment, outstanding and collection as well as all aspect of these three purposes.
- Loan investment is largely effected by recovery status. So, management should always adopt such a policy that lure the customers to pay loan before due date. Liberal action and subsidy can be schemed for this. Similarly, the outstanding loan must be in a decreasing trend.
- Supervision and inspection related to loan must be unbiased, strict and efficient.
- The banks should always seek out answers to two questions. First, how could bank make “normal” loans insuring that they are making “good” loans? Second, how could it get its money back on loans that have turned bad? Clearly, weaknesses at either stage could explain both past loan failures and present reluctance to lend.
- Non-performing loan of RBB must be at least on marginal level. Similarly, RBB must segregate more proportion of loan to its commercial banking sector by dropping unnecessary program and project.
- One method that more banks might usefully adopt is systematic review of loan losses and the incorporation of lessons learned into the training of new loan officers. RBB should consider this fact to improve its productivity.

- The heavy reliance on collateral imposes high costs on borrowers and lenders. Therefore, for collateral to work properly, RBB must be able to perfect the collateral and to dispose of quickly.
- Reputation can be effective in ensuring that borrowers fulfill their contracts. However, there is a general lack of credit reporting institutions to share information about credit-worthiness. Therefore, RBB should try to get information regarding borrower's reputation from various sources like family, friends and others who are in touch of borrowers.
- Poor recovery is the result of weak supervision, high interest and other charges laid by the bank, political interference and poor liquidity of the borrowers. So, it is recommended that the recovery policy and procedure must be exercised strictly. Strict supervision must be made for issuing the memorandum letter; supervisor must visit at the lending field whether the borrowers utilize the total loan amount for concerned purpose or not. Supervisor must motivate the borrower to utilize the full amount of loan on particular purpose. Political interference and pressure must be neglected. And the commitment and service charge must be reduced.
- In case of borrowers, who are able but do not repay their due loans, the bank should examine the borrowers past repayment record and corrective action must be taken immediately. In the case of borrowers, who are really unable to repay their loans, repayment schedule must be rearranged after scrutinizing the exact cause of inability.
- RBB is government-owned banks. As a result, the credibility of this bank on the comparison of private banks is more on customers. It would be better if the bank recognizes this strength and perform effectively to have better prospect in the future.
- Fraud against banks is common, but typically it should not be ignored and should try to punish; prosecutors were apparently not interested in

such cases. Therefore, Bankers and prosecutors must make the prosecution of bank fraud a priority.

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Websites

- <http://www.nrb.org.np>
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APPENDIX - I

Questionnaire

Dear Sir/Madam,

I am conducting a research on “*Loan Management in Commercial Bank (A Case Study of Rastriya Banijya Bank Limited)*”, in partial fulfillment for the requirement of Degree of Master of Business Studies (MBS). I request you to fill up this questionnaire from your side, which can be great help for me to conduct the research in this topic. I would be grateful to you for the contribution of your valuable time and effort.

Name : _____

Occupation (Tick One):

- ☐ Investors
- ☐ Employee
- ☐ Borrower

(Please tick the best option for Question No. 1 to 8)

1. Do you think that the commercial banks of Nepal are efficient in Credit Management?
i) Yes ii) No iii) Don't Know

2. What should be the basis for floating loan?
[] Financial strength of borrower
[] Collateral value
[] Monitoring and Control System
[] Guarantor
[] Portfolio Management

3. Is the paper document maintained by commercial banks to disburse loan is harassing?
i) Yes ii) No iii) Don't Know

4. In your opinion, is the valuation done by the commercial banks for mortgage value is satisfactory?
i) Yes ii) No iii) Don't Know

5. Who should be involved for in valuing the property that is kept as collateral against loan?
- i) Related Specialist ii) Bank Staff iii) Independent Person
6. In your opinion, how many days should the bank take to disburse loan from the date of application received?
- i) 5-10 days ii) 10-20 days iii) Above 20 days
7. To what extent today's banking industry is affected by the problem of Non Performing Loan?
- [] Not affected [] Nominally affected
[] Moderately affected [] Severely affected
8. If the borrower is having with overdue outstanding, the bank should start follow up;
- [] Within a week [] Within two weeks
[] Within one month [] After one month onwards

(Please rank 1, 2, 3....., for Question No. 9 to 10)

9. In your opinion which of the following is the main influencing factor in loan disbursement (Rank 1 for the most)?
- | | |
|-------------------------|--------------------------|
| i) Paper Document | ☐ |
| ii) Time Period | ☐ |
| iii) Employee Behavior | ☐ |
| iv) Interest Rate | ☐ |
| v) Collateral Valuation | ☐ |
10. What do you suggest the commercial bank for the effective credit management?
- | | |
|-------------------------------|--------------------------|
| i) Careful Evaluation | ☐ |
| ii) Appropriate Interest Rate | ☐ |
| iii) Awareness on Consumer | ☐ |
| iv) Timely Collection | ☐ |

Thank You.

APPENDIX - II

Calculation of Major Ratios

Year	LI	LO	Ratio	LR	LO	Ratio	LI	Growth %
1999/00	999.97	34744.27	2.88	2045.23	34744.27	5.89	999.97	35.27
2000/01	8590.17	27375.13	31.38	1221.03	27375.13	4.46	8590.17	759.04
2001/02	3227.86	27037.37	11.94	3565.62	27037.37	13.19	3227.86	-62.42
2002/03	446.14	26608.83	1.68	874.68	26608.83	3.29	446.14	-86.18
2003/04	930.97	25105.68	3.71	1192.89	25105.68	4.75	930.97	108.67
2004/05	3848.16	27000.93	14.25	1952.91	27000.93	7.23	3848.16	313.35
2005/06	1678.11	23246.51	7.22	1522.99	23246.51	6.55	1678.11	-56.39
2006/07	3304.22	24871.36	13.29	1679.37	24871.36	6.75	3304.22	96.9
2007/08	4152.28	27524.92	15.09	1498.72	27524.92	5.44	4152.28	25.67
2008/09	9539.24	36042.93	26.47	1021.23	36042.93	2.83	9539.24	129.73
Mean			12.79			6.04		126.36
S.D.			9.36			2.75		238.56
C.V.%			73.2			45.55		188.78
Year	LO	Growth %	LR	Growth %	NPL	LA	Ratio	
1999/00	34744.27	21.77	2045.23	-55.84	13661.45	34744.3	39.32	
2000/01	27375.13	-21.21	1221.03	-40.3	12209.31	27375.1	44.6	
2001/02	27037.37	-1.23	3565.62	192.02	14889.48	27037.4	55.07	
2002/03	26608.83	-1.58	874.68	-75.47	16005.21	26608.8	60.15	
2003/04	25105.68	-5.65	1192.89	36.38	14470.91	25105.7	57.64	
2004/05	27000.93	7.55	1952.91	63.71	13689.47	27000.9	50.7	
2005/06	23246.51	-13.9	1522.99	-22.01	8622.13	23246.5	37.09	
2006/07	24871.36	6.99	1679.37	10.27	7120.67	24871.4	28.63	
2007/08	27524.92	10.67	1498.72	-10.76	5953.64	27524.9	21.63	
2008/09	36042.93	30.95	1021.23	-31.86	5651.53	36042.9	15.68	
Mean		3.44		6.61			41.05	
S.D.		14.87		73.47			14.62	
C.V.%		432.9		1110.79			35.6	
Year	LLP	LA	Ratio	LA	TD	Ratio		
1999/00	6542.75	34744.27	18.83	34744.27	38575.14	90.07		
2000/01	7576.85	27375.13	27.68	27375.13	40773.66	67.14		
2001/02	13347.62	27037.37	49.37	27037.37	38993.29	69.34		
2002/03	14929.34	26608.83	56.11	26608.83	39402.27	67.53		
2003/04	14274.59	25105.68	56.86	25105.68	40866.77	61.43		
2004/05	13570	27000.93	50.26	27000.93	43016.06	62.77		
2005/06	8612.96	23246.51	37.05	23246.51	46195.48	50.32		
2006/07	7542.63	24871.36	30.33	24871.36	50464.13	49.29		
2007/08	7709	27524.92	28.01	27524.92	57970.85	47.48		
2008/09	4435.97	36042.93	12.31	36042.93	68095.7	52.93		
Mean			36.68			61.83		
S.D.			14.96			12.21		
C.V.%			40.8			19.75		

Note: The data have been extracted from the annual reports of the bank, and the mean, standard deviation & C.V. have been calculated by using the Microsoft Excel Formulae.

APPENDIX - III

A) Calculation of Correlation Coefficient and Regression Line of Net Profit on Loan & Adv.

Year	Loan X	NPAT Y	$\bar{x} = X - \bar{X}$	$\bar{y} = Y - \bar{Y}$	x^2	y^2	xy
1999/00	34744.27	-1791.46	6788.477	-658.62	46083419.98	433781.62	-4471033.51
2000/01	27375.13	-7083.25	-580.663	-5950.41	337169.52	35407391.07	3455183.50
2001/02	27037.37	-7068.25	-918.42	-5935.41	843500.81	35229103.74	5451217.98
2002/03	26608.83	-4839.78	-1346.96	-3706.94	1814309.32	13741411.58	4993112.37
2003/04	25105.68	1040.1	-2850.11	2172.94	8123144.11	4721663.90	-6193121.69
2004/05	27000.93	1322.89	-954.86	2455.73	911763.35	6030604.92	-2344884.76
2005/06	23246.51	1591.49	-4709.28	2724.33	22177346.37	7421968.50	-12829636.25
2006/07	24871.36	1697.09	-3084.43	2829.93	9513726.93	8008498.15	-8728726.40
2007/08	27524.92	1770.55	-430.87	2903.39	185651.54	8429667.69	-1250991.93
2008/09	36042.93	2032.23	8087.14	3165.07	65401784.86	10017661.77	25596346.62
Total	279557.93	-11328.39			155391816.80	129441752.93	3677465.93

i) Calculation of Mean

$$\text{Mean: } \bar{X} = \frac{\sum X}{5} = 27955.79 \quad \bar{Y} = \frac{\sum Y}{5} = -1132.84$$

ii) Calculation of Correlation Coefficient between Net Profit and Loan

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = \frac{3677465.93}{141824501} = 0.0259$$

iii) Calculation of Standard Deviation (σ)

$$\begin{aligned} \text{For Loan } \sigma_x &= \sqrt{\frac{\sum (x - \bar{x})^2}{N}} = \sqrt{\frac{155391817}{10}} \\ &= 3941.98 \end{aligned}$$

$$\begin{aligned} \text{For Net Profit } \sigma_y &= \sqrt{\frac{\sum (y - \bar{y})^2}{N}} = \sqrt{\frac{129441753}{10}} \\ &= 3597.80 \end{aligned}$$

iv) Simple Regression Equation of Net Profit on Loan of RBB

$$\begin{aligned} Y - \bar{Y} &= \frac{r \times \sigma_y (\bar{X} - \bar{X})}{\sigma_x} \\ \text{or, } Y + 1132.84 &= \frac{0.0259 \times 3597.80 (X - 27955.79)}{3941.98} \end{aligned}$$

$$\text{or, } Y + 1132.84 = 0.02 X - 661.60$$

$$\text{or, } Y = -1794.43 - 0.02 X$$

v) Calculation of Probable Error

$$P.E. = \frac{0.6745 \times (1 - r^2)}{\sqrt{N}} = \frac{0.6745 \times (1 - 0.0259^2)}{\sqrt{10}} = 0.2132$$

$$\therefore 6 P.E. = 6 \times 0.2132 = 1.2789$$

B) Calculation of Correlation Coefficient and Regression Line of Loan & Adv. on Total Deposit

Year	TD X	LA Y	$\bar{x} = X - \bar{X}$	$\bar{y} = Y - \bar{Y}$	x^2	y^2	xy
1999/00	38575.14	34744.27	-8497.205	6788.48	72202492.81	46083419.98	-57683080.71
2000/01	40773.66	27375.13	-6298.685	-580.66	39673432.73	337169.52	3657413.33
2001/02	38993.29	27037.37	-8079.06	-918.42	65271129.69	843500.81	7419989.93
2002/03	39402.27	26608.83	-7670.08	-1346.96	58830050.51	1814309.32	10331307.23
2003/04	40866.77	25105.68	-6205.58	-2850.11	38509161.08	8123144.11	17686589.98
2004/05	43016.06	27000.93	-4056.29	-954.86	16453448.00	911763.35	3873196.46
2005/06	46195.48	23246.51	-876.86	-4709.28	768892.23	22177346.37	4129405.44
2006/07	50464.13	24871.36	3391.79	-3084.43	11504205.49	9513726.93	-10461733.58
2007/08	64340.95	27524.92	17268.61	-430.87	298204718.65	185651.54	-7440575.64
2008/09	68095.70	36042.93	21023.36	8087.14	441981455.46	65401784.86	170018752.08
Total	470723.45	279557.93			1043398986.64	155391816.80	141531264.53

i) Calculation of Mean

$$\begin{array}{lcl} \text{For Total Deposit} & & \text{For Loan \& Adv.} \\ \text{Mean } \bar{X} = \frac{\sum X}{5} = & 47072.35 & \bar{Y} = \frac{\sum Y}{5} = 27955.79 \end{array}$$

ii) Calculation of Correlation Coefficient between Loan & Adv. and Total Deposit

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = \frac{141531264.53}{402660731} = 0.3515$$

iii) Calculation of Standard Deviation (σ)

$$\begin{aligned} \text{For TD} \\ \sigma_x &= \sqrt{\frac{\sum (x - \bar{x})^2}{N}} = \sqrt{\frac{1043398987}{10}} \\ &= 10214.69 \end{aligned}$$

$$\begin{aligned} \text{For LA} \\ \sigma_y &= \sqrt{\frac{\sum (y - \bar{y})^2}{N}} = \sqrt{\frac{155391817}{10}} \\ &= 3941.98 \end{aligned}$$

iv) Simple Regression Equation of Loan & Adv. on Total Deposit of RBB

$$\begin{aligned} \bar{Y} - \bar{Y} &= \frac{r \times \sigma_y (\bar{X} - \bar{X})}{\sigma_x} \\ \text{or, } Y - 27955.79 &= \frac{0.3515 \times 3597.80 (X - 47072.35)}{10214.69} \end{aligned}$$

$$\text{or, } Y - 27955.79 = 0.14 X - 6385.10$$

$$\text{or, } Y = 21570.69 + 0.14 X$$

v) Calculation of Probable Error

$$P.E. = \frac{0.6745 \times (1 - r^2)}{\sqrt{N}} = \frac{0.6745 \times (1 - 0.3515^2)}{\sqrt{10}} = 0.1869$$

$$\therefore 6 P.E. = 6 \times 0.1869 = 1.1217$$

C) Calculation of Correlation Coefficient and Regression Line of Loan & Adv. on Total Investment

Year	TI X	LA Y	$\bar{x} = X - \bar{X}$	$\bar{y} = Y - \bar{Y}$	x^2	y^2	xy
1999/00	4336.75	34744.27	-4122.318	6788.48	16993505.69	46083419.98	-27984260.93
2000/01	5646.44	27375.13	-2812.628	-580.66	7910876.27	337169.52	1633189.01
2001/02	4159.47	27037.37	-4299.60	-918.42	18486542.96	843500.81	3948849.69
2002/03	4623.13	26608.83	-3835.94	-1346.96	14714420.34	1814309.32	5166866.56
2003/04	3117.02	25105.68	-5342.05	-2850.11	28537476.83	8123144.11	15225440.45
2004/05	8415.88	27000.93	-43.19	-954.86	1865.20	911763.35	41238.62
2005/06	11555.36	23246.51	3096.29	-4709.28	9587024.15	22177346.37	-14581315.28
2006/07	12650.20	24871.36	4191.13	-3084.43	17565587.44	9513726.93	-12927265.85
2007/08	14443.38	27524.92	5984.31	-430.87	35811990.11	185651.54	-2578478.46
2008/09	15643.05	36042.93	7183.98	8087.14	51609597.38	65401784.86	58097846.64
Total	84590.68	279557.93			201218886.38	155391816.80	26042110.46

i) Calculation of Mean

$$\text{Mean: } \bar{X} = \frac{\sum X}{5} = 8459.07 \quad \text{For Loan \& Adv. } \bar{Y} = \frac{\sum Y}{5} = 27955.79$$

ii) Calculation of Correlation Coefficient between Loan & Adv. and Total Investment

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = \frac{26042110.46}{\sqrt{201218886.38} \sqrt{155391816.80}} = 0.1473$$

iii) Calculation of Standard Deviation (6)

$$\begin{aligned} \text{For TI} \\ \sigma_x &= \sqrt{\frac{\sum (x - \bar{x})^2}{N}} = \sqrt{\frac{201218886}{10}} \\ &= 4485.74 \end{aligned}$$

$$\begin{aligned} \text{For LA} \\ \sigma_y &= \sqrt{\frac{\sum (y - \bar{y})^2}{N}} = \sqrt{\frac{155391817}{10}} \\ &= 3941.98 \end{aligned}$$

iv) Simple Regression Equation of Loan & Adv. on Total Investment of RBB

$$\begin{aligned} \bar{Y} - \bar{Y} &= \frac{r \times \sigma_y (\bar{X} - \bar{X})}{\sigma_x} \\ \text{or, } Y - 27955.79 &= \frac{0.1473 \times 3941.98 (X - 8459.07)}{4485.74} \end{aligned}$$

$$\text{or, } Y - 27955.79 = 0.13 X - 1094.79$$

$$\text{or, } Y = 26861.01 + 0.13 X$$

v) Calculation of Probable Error

$$P.E. = \frac{0.6745 \times (1 - r^2)}{\sqrt{N}} = \frac{0.6745 \times (1 - 0.1473^2)}{\sqrt{10}} = 0.2087$$

$$\therefore 6 P.E. = 6 \times 0.2087 = 1.2520$$

D) Calculation of Correlation Coefficient and Regression Line of NPL on LA

Year	LA X	NPL Y	$\bar{x} = X - \bar{X}$	$\bar{y} = Y - \bar{Y}$	x^2	y^2	xy
1999/00	34744.27	13661.45	6788.477	2434.07	46083419.98	5924696.28	16523627.53
2000/01	27375.13	12209.31	-580.663	981.93	337169.52	964186.33	-570170.36
2001/02	27037.37	14889.48	-918.42	3662.10	843500.81	13410975.68	-3363356.78
2002/03	26608.83	16005.21	-1346.96	4777.83	1814309.32	22827658.55	-6435560.10
2003/04	25105.68	14470.91	-2850.11	3243.53	8123144.11	10520486.21	-9244426.73
2004/05	27000.93	13689.47	-954.86	2462.09	911763.35	6061886.68	-2350958.55
2005/06	23246.51	8622.13	-4709.28	-2605.25	22177346.37	6787328.08	12268860.01
2006/07	24871.36	7120.67	-3084.43	-4106.71	9513726.93	16865067.85	12666872.15
2007/08	27524.92	5953.64	-430.87	-5273.74	185651.54	27812334.64	2272312.22
2008/09	36042.93	5651.53	8087.14	-5575.85	65401784.86	31090093.19	-45092655.56
Total	279557.93	112273.80			155391816.80	142264713.48	-23325456.17

i) Calculation of Mean

$$\text{For LA} \quad \bar{X} = \frac{\sum X}{5} = 27955.79 \quad \text{For NPL} \quad \bar{Y} = \frac{\sum Y}{5} = 11227.38$$

ii) Calculation of Correlation Coefficient between LA and NPL

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = \frac{-23325456.17}{148683463} = -0.1569$$

iii) Calculation of Standard Deviation (σ)

$$\begin{aligned} \text{For LA} \quad \sigma_x &= \sqrt{\frac{\sum (x - \bar{x})^2}{N}} = \sqrt{\frac{155391817}{10}} \\ &= 3941.98 \end{aligned}$$

$$\begin{aligned} \text{For NPL} \quad \sigma_y &= \sqrt{\frac{\sum (y - \bar{y})^2}{N}} = \sqrt{\frac{142264713}{10}} \\ &= 3771.80 \end{aligned}$$

iv) Simple Regression Equation of NPL on LA of RBB

$$\begin{aligned} \bar{Y} - \bar{Y} &= \frac{r \times \sigma_y (\bar{X} - \bar{X})}{\sigma_x} \\ \text{or, } Y - 11227.38 &= - \frac{0.1569 \times 3771.80 (X - 27955.79)}{3941.98} \end{aligned}$$

$$\text{or, } Y - 11227.38 = -0.15 X + 4196.37$$

$$\text{or, } Y = 15423.75 - 0.15 X$$

v) Calculation of Probable Error

$$P.E. = \frac{0.6745 \times (1 - r^2)}{\sqrt{N}} = \frac{0.6745 \times \{1 - (-0.1569^2)\}}{\sqrt{10}} = 0.2080$$

$$\therefore 6 P.E. = 6 \times 0.2080 = 1.2483$$

APPENDIX - IV

A) Calculation of Trend value of Loan & Advances of RBB

Year	Year X	LA Y	$x = X - \bar{X}$	$y = Y - \bar{Y}$	x^2	y^2	xy
1999/00	1	34744.27	-4.5	6788.48	20.25	46083419.98	-30548.15
2000/01	2	27375.13	-3.5	-580.66	12.25	337169.52	2032.32
2001/02	3	27037.37	-2.50	-918.42	6.25	843500.81	2296.06
2002/03	4	26608.83	-1.50	-1346.96	2.25	1814309.32	2020.44
2003/04	5	25105.68	-0.50	-2850.11	0.25	8123144.11	1425.06
2004/05	6	27000.93	0.50	-954.86	0.25	911763.35	-477.43
2005/06	7	23246.51	1.50	-4709.28	2.25	22177346.37	-7063.92
2006/07	8	24871.36	2.50	-3084.43	6.25	9513726.93	-7711.08
2007/08	9	27524.92	3.50	-430.87	12.25	185651.54	-1508.06
2008/09	10	36042.93	4.50	8087.14	20.25	65401784.86	36392.12
Total	55	279557.93			82.50	155391816.80	-3142.645

i) Calculation of Mean

$$\begin{array}{ll} \text{For Year} & \text{For Loan and Advances} \\ \text{Mean } \bar{X} = \frac{\sum X}{5} = 5.50 & \bar{Y} = \frac{\sum Y}{5} = 27955.79 \end{array}$$

ii) Calculation of Correlation Coefficient between Year and Loan & Advances

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = \frac{-3142.645}{\sqrt{82.50} \sqrt{155391816.80}} = -0.0278$$

iii) Calculation of Standard Deviation (σ)

$$\begin{array}{ll} \text{For Year} & \text{For LA} \\ \sigma_x = \sqrt{\frac{\sum (x-\bar{x})^2}{N}} = \sqrt{\frac{82.50}{10}} & \sigma_y = \sqrt{\frac{\sum (y-\bar{y})^2}{N}} = \sqrt{\frac{155391817}{10}} \\ = 2.87 & = 3941.98 \end{array}$$

iv) Simple Regression Equation of Loan & Advances on Year of RBB

$$\begin{aligned} Y - \bar{Y} &= \frac{r \times \sigma_y}{\sigma_x} (X - \bar{X}) \\ \text{or, } Y - 27955.79 &= - \frac{0.0278 \times 3941.98}{2.87} (X - 5.50) \end{aligned}$$

$$\text{or, } Y - 27955.79 = - 38.09 X + 209.51$$

$$\text{or, } Y = 28165.30 - 38.09 X$$

v) Calculation of trend value of loan & adv.

FY	a	b	x	Y = a + bx
2009/10	28165.30	-38.09	11	27746.28
2010/11	28165.30	-38.09	12	27708.19
2011/12	28165.30	-38.09	13	27670.10
2012/13	28165.30	-38.09	14	27632.01

B) Calculation of Trend value of Total Deposit of RBB

Year	Year X	TD Y	$x = X - \bar{X}$	$y = Y - \bar{Y}$	x^2	y^2	xy
1999/00	1	38575.14	-4.5	-8497.21	20.25	72202492.81	38237.42
2000/01	2	40773.66	-3.5	-6298.69	12.25	39673432.73	22045.40
2001/02	3	38993.29	-2.50	-8079.06	6.25	65271129.69	20197.64
2002/03	4	39402.27	-1.50	-7670.08	2.25	58830050.51	11505.11
2003/04	5	40866.77	-0.50	-6205.58	0.25	38509161.08	3102.79
2004/05	6	43016.06	0.50	-4056.29	0.25	16453448.00	-2028.14
2005/06	7	46195.48	1.50	-876.86	2.25	768892.23	-1315.30
2006/07	8	50464.13	2.50	3391.79	6.25	11504205.49	8479.46
2007/08	9	64340.95	3.50	17268.61	12.25	298204718.65	60440.12
2008/09	10	68095.70	4.50	21023.36	20.25	441981455.46	94605.10
Total	55	470723.45			82.50	1043398986.64	255269.595

i) Calculation of Mean

$$\text{Mean: } \bar{X} = \frac{\sum X}{5} = 5.50 \quad \text{For Total Deposit } \bar{Y} = \frac{\sum Y}{5} = 47072.35$$

ii) Calculation of Correlation Coefficient between Year and Total Deposit

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = \frac{255269.595}{\sqrt{82.50} \sqrt{1043398986.64}} = 0.8701$$

iii) Calculation of Standard Deviation (σ)

$$\begin{aligned} \text{For Year } \sigma_x &= \sqrt{\frac{\sum (x-\bar{x})^2}{N}} = \sqrt{\frac{82.50}{10}} \\ &= 2.87 \end{aligned}$$

$$\begin{aligned} \text{For TD } \sigma_y &= \sqrt{\frac{\sum (y-\bar{y})^2}{N}} = \sqrt{\frac{1043398987}{10}} \\ &= 10214.69 \end{aligned}$$

iv) Simple Regression Equation of Total Deposit on Year of RBB

$$\begin{aligned} \bar{Y} - \bar{Y} &= \frac{r \times \sigma_y (\bar{X} - \bar{X})}{\sigma_x} \\ \text{or, } Y - 47072.35 &= \frac{0.8701 \times 10214.69 (X - 5.50)}{2.87} \end{aligned}$$

$$\text{or, } Y - 47072.35 = 3094.18 X - 17017.97$$

$$\text{or, } Y = 30054.37 + 3094.18 X$$

v) Calculation of trend value of Total Deposit

FY	a	b	x	Y = a + bx
2009/10	30054.37	3094.18	11	64090.32
2010/11	30054.37	3094.18	12	67184.49
2011/12	30054.37	3094.18	13	70278.67
2012/13	30054.37	3094.18	14	73372.85

C) Calculation of Trend value of Total Investment of RBB

Year	Year X	TD Y	$x = X - \bar{X}$	$y = Y - \bar{Y}$	x^2	y^2	xy
1999/00	1	4336.75	-4.5	-4122.32	20.25	16993505.69	18550.43
2000/01	2	5646.44	-3.5	-2812.63	12.25	7910876.27	9844.20
2001/02	3	4159.47	-2.50	-4299.60	6.25	18486542.96	10749.00
2002/03	4	4623.13	-1.50	-3835.94	2.25	14714420.34	5753.91
2003/04	5	3117.02	-0.50	-5342.05	0.25	28537476.83	2671.02
2004/05	6	8415.88	0.50	-43.19	0.25	1865.20	-21.59
2005/06	7	11555.36	1.50	3096.29	2.25	9587024.15	4644.44
2006/07	8	12650.20	2.50	4191.13	6.25	17565587.44	10477.83
2007/08	9	14443.38	3.50	5984.31	12.25	35811990.11	20945.09
2008/09	10	15643.05	4.50	7183.98	20.25	51609597.38	32327.92
Total	55	84590.68			82.50	201218886.38	115942.24

i) Calculation of Mean

$$\begin{array}{lcl} \text{For Year} & & \text{For Total Investment} \\ \text{Mean } \bar{X} = \sum X/5 & = & 5.50 \quad \bar{Y} = \sum Y/5 = 8459.07 \end{array}$$

ii) Calculation of Correlation Coefficient between Year and Total Investment

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = \frac{115942.24}{\sqrt{82.50} \sqrt{201218886.38}} = 0.8999$$

iii) Calculation of Standard Deviation (σ)

$$\begin{aligned} \text{For Year } \sigma_x &= \sqrt{\frac{\sum (x-\bar{x})^2}{N}} = \sqrt{\frac{82.50}{10}} \\ &= 2.87 \end{aligned}$$

$$\begin{aligned} \text{For TI } \sigma_y &= \sqrt{\frac{\sum (y-\bar{y})^2}{N}} = \sqrt{\frac{201218886}{10}} \\ &= 4485.74 \end{aligned}$$

iv) Simple Regression Equation of Total Investment on Year of RBB

$$\begin{aligned} Y - \bar{Y} &= \frac{r \times \sigma_y}{\sigma_x} (X - \bar{X}) \\ \text{or, } Y - 8459.07 &= \frac{0.8999 \times 4485.74}{2.87} (X - 5.50) \end{aligned}$$

$$\text{or, } Y - 8459.07 = 1405.36 X - 7729.48$$

$$\text{or, } Y = 729.59 + 1405.36 X$$

v) Calculation of trend value of Total Investment

FY	a	b	x	Y = a + bx
2009/10	729.59	1405.36	11	16188.55
2010/11	729.59	1405.36	12	17593.91
2011/12	729.59	1405.36	13	18999.27
2012/13	729.59	1405.36	14	20404.63

D) Calculation of Trend value of Non Performing Loan of RBB

Year	Year X	NPL Y	$\bar{x} = X - \bar{X}$	$\bar{y} = Y - \bar{Y}$	x^2	y^2	xy
1999/00	1	13661.45	-4.5	2434.07	20.25	5924696.28	-10953.31
2000/01	2	12209.31	-3.5	981.93	12.25	964186.33	-3436.75
2001/02	3	14889.48	-2.50	3662.10	6.25	13410975.68	-9155.25
2002/03	4	16005.21	-1.50	4777.83	2.25	22827658.55	-7166.74
2003/04	5	14470.91	-0.50	3243.53	0.25	10520486.21	-1621.76
2004/05	6	13689.47	0.50	2462.09	0.25	6061886.68	1231.04
2005/06	7	8622.13	1.50	-2605.25	2.25	6787328.08	-3907.88
2006/07	8	7120.67	2.50	-4106.71	6.25	16865067.85	-10266.78
2007/08	9	5953.64	3.50	-5273.74	12.25	27812334.64	-18458.09
2008/09	10	5651.53	4.50	-5575.85	20.25	31090093.19	-25091.32
Total	55	112273.80			82.50	142264713.48	-88826.8455

i) Calculation of Mean

$$\text{Mean For Year } \bar{X} = \frac{\sum X}{5} = 5.50 \quad \text{For NPL } \bar{Y} = \frac{\sum Y}{5} = 11227.38$$

ii) Calculation of Correlation Coefficient between Year and NPL

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = \frac{-88826.846}{108336.69} = -0.8199$$

iii) Calculation of Standard Deviation (σ)

$$\begin{aligned} \text{For Year } \sigma_x &= \sqrt{\frac{\sum (x - \bar{x})^2}{N}} = \sqrt{\frac{82.50}{10}} \\ &= 2.87 \end{aligned}$$

$$\begin{aligned} \text{For NPL } \sigma_y &= \sqrt{\frac{\sum (y - \bar{y})^2}{N}} = \sqrt{\frac{142264713}{10}} \\ &= 3771.80 \end{aligned}$$

iv) Simple Regression Equation of NPL on Year of RBB

$$\begin{aligned} Y - \bar{Y} &= \frac{r \times \sigma_y (\bar{X} - \bar{X})}{\sigma_x} \\ \text{or, } Y - 8459.07 &= \frac{-0.8199 \times 3771.80 (X - 5.50)}{2.87} \end{aligned}$$

$$\text{or, } Y - 8459.07 = -1076.69 X + 5921.79$$

$$\text{or, } Y = 17149.17 - 1076.69 X$$

v) Calculation of trend value of NPL

FY	a	b	x	Y = a + bx
2009/10	17149.17	-1076.69	11	5305.59
2010/11	17149.17	-1076.69	12	4228.90
2011/12	17149.17	-1076.69	13	3152.21
2012/13	17149.17	-1076.69	14	2075.52

E) Calculation of Trend value of Net Profit of RBB

Year	Year X	NPAT Y	$\bar{x} = X - \bar{X}$	$\bar{y} = Y - \bar{Y}$	x^2	y^2	xy
1999/00	1	-1791.46	-4.5	-658.62	20.25	433781.62	2963.79
2000/01	2	-7083.25	-3.5	-5950.41	12.25	35407391.07	20826.44
2001/02	3	-7068.25	-2.50	-5935.41	6.25	35229103.74	14838.53
2002/03	4	-4839.78	-1.50	-3706.94	2.25	13741411.58	5560.41
2003/04	5	1040.10	-0.50	2172.94	0.25	4721663.90	-1086.47
2004/05	6	1322.89	0.50	2455.73	0.25	6030604.92	1227.86
2005/06	7	1591.49	1.50	2724.33	2.25	7421968.50	4086.49
2006/07	8	1697.09	2.50	2829.93	6.25	8008498.15	7074.82
2007/08	9	1770.55	3.50	2903.39	12.25	8429667.69	10161.86
2008/09	10	2032.23	4.50	3165.07	20.25	10017661.77	14242.81
Total	55	-11328.39			82.50	129441752.93	79896.555

i) Calculation of Mean

$$\text{Mean: } \bar{X} = \frac{\sum X}{5} = 5.50 \quad \bar{Y} = \frac{\sum Y}{5} = -1132.84$$

ii) Calculation of Correlation Coefficient between Year and NPAT

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = \frac{79896.555}{103338.98} = 0.7732$$

iii) Calculation of Standard Deviation (σ)

$$\begin{aligned} \sigma_x &= \sqrt{\frac{\sum (x - \bar{x})^2}{N}} = \sqrt{\frac{82.50}{10}} \\ &= 2.87 \end{aligned}$$

$$\begin{aligned} \sigma_y &= \sqrt{\frac{\sum (y - \bar{y})^2}{N}} = \sqrt{\frac{129441753}{10}} \\ &= 3597.80 \end{aligned}$$

iv) Simple Regression Equation of NPAT on Year of RBB

$$\begin{aligned} Y - \bar{Y} &= \frac{r \times \sigma_y (\bar{X} - \bar{X})}{\sigma_x} \\ \text{or, } Y + 1132.84 &= \frac{0.7732 \times 3597.80 (X - 5.50)}{2.87} \end{aligned}$$

$$\text{or, } Y + 1132.84 = 968.44 X - 5326.44$$

$$\text{or, } Y = -6459.28 + 968.44 X$$

v) Calculation of trend value of NPAT

FY	a	b	x	Y = a + bx
2009/10	-6459.28	968.44	11	4193.60
2010/11	-6459.28	968.44	12	5162.04
2011/12	-6459.28	968.44	13	6130.48
2012/13	-6459.28	968.44	14	7098.93

