## CHAPTER - I <br> INTRODUCTION

### 1.1 Background of the Study

Economic development is the key source of development of any country and it is only possible when the country adapt the process of industrialization. Industrialization, globalization and liberalization are the main things that should be followed by every country to make economic upliftment and that results in the establishment of financial institution. There is slow economic development process in Nepal as it had adopted liberalization lately. So the Nepal is counted as least developed country. For passed out the country toward the industrialization, there will be need of huge amount of fund. This means the country have to invest a large amount of capital in the productive sectors. For this, financial institutions play a crucial role in the process of economic development because they help in the capital formation and mobilization. Financial institutions include all those financial intermediaries which accumulate the scattered funds from the public in the form of deposit and utilize them in productive sectors by giving to investors as loans or credit. The term financial intermediary simple means a business that interact with two types of individuals and institutions in the economy: 1) deficit-spending individual and institution, whose current receipt of expenditure exceed their current receipt of income and who need to raise the funds through borrowing, and 2) surplus-spending individual and institutions, whose current receipt of income exceed the current receipt of expenditure and want to invest. Banks perform the indispensable task on intermediating between these two groups, offering convenient financial services to surplus-spending individuals and institution in order to attract fund and loaning those funds to deficit-spending individuals and institutions. With liberalization in the financial markets, the risk associated with bank's operations have become complex and large, requiring strategic management.

Among the financial institution, banking sector has a vital role in national economy as they are the helpful sources for mobilizing the country's financial resources and provide the credit to business and service sectors. Bank can be defined as "financial store house" where the surplus units deposit their money and deficit units take the money on certain criteria. It can also be said that the bank is a financial reservoir of
resources for the economic development. According to Oxford Dictionary of Business, $2{ }^{\text {nd }}$ Edition, bank is defined as " $A$ commercial institution licensed as a taker of deposit. Banks are concerned mainly with making and receiving payments on behalf of their customers, accepting deposits and making short- term loans to private individuals, companies, and other organizations." There are so many functions which the bank has been performing like as money creation and generation, deposit collection, credit extension, cheque transaction credit card issuance, import letter of credit, issue of drafts, etc. Out of all the above mentioned functions, the main function of every bank is to collect the deposit from public by giving some interest on deposited money and disburse the collected funds as loan and advances for a certain period of time.

Commercial banks are those financial institutions which have important role in the economic progress of the least developing countries like Nepal. Commercial banks are the largest source of finance and its business is largely confined to business institutions. Though the commercial banks were established with the concept of supplying short term credit and working capital needs of the industries, they started to provide long-term loans for up-to 10 years by the provision made in commercial bank act 1974. There are various constraint that the commercial banks facing, despite of that number of establishment has been increasing constantly. In Nepal almost all the financial institutions have to be registered to the Central bank of Nepal, i.e. Nepal Rastra bank. According to central bank, commercial banks are categorized as " A " level banking system. The functions of the commercial banks are also to collect deposit from public, to invest the deposit in productive purpose and to recover the invested funds within the determined period. Commercial banks are also performing the services as joint ventures, in which the fund are invested by two parties, local investors and other foreign investors. These ventures also provide the same functions as of the commercial banks.

In ancient history, goldsmiths and merchants conveyed the banking function as they used to store people gold and valuables for keeping safe and a receipt gave to depositors. When depositor wanted the valuables back, the receipt should be presented. For this service, depositor had had to pay some amount as his service charge. Now the modern banking is also based on same concept but with advance
services under specific strategies. Under the rules and regulation of main central bank, other banks have to operate its activities for providing best services. In recent days, modern banking system has undergone through various significant changes with free market operation, diversified product and advance technologies like e-banking, SMS banking, etc.

The History of banking system in Nepal in the form of money lending can be traced back in the reigning period of Gunakama Dev, the king of Kathmandu. Tankadhari a special class of people was established to deal with the lending activities of money toward the end of fourteen century at the Ruling period of King Jaysthiti Malla. During period of Rannodip Singh Prime Minister of Nepal, one financial institution was established to give loan facilities to the government staff and afforded loan facilities to the public in general in the term of 5\% interest but Tejarath did not accept money from public.

The modern banking was germinated with establishment of Nepal Bank Ltd. in 1994 BS as the first bank of Nepal. As the central bank, Nepal Rastra Bank was established to enhance the banking sector by setting various rules and regulations. Then, various banks have been establishing from the period to spread banking services to both urban and rural area. In 1980AD, government has introduced financial Reforms to facilitate the private investment in the financial sector. In same way, various commercial banks, development banks, insurance companies, co-operatives and finance companies are opened to enhance the financial services to the public. Agricultural Development Bank also made reform on its operation by providing commercial activities through public limited company.

As we know, loan disbursement and collection is one of the main functions of every commercial bank and it may be collectively entitled as "loan management". Loans are the risky as well as profitable asset which the bank grants to the person for the temporary use. And management is the way to handle anything for the better use. So loan management can be defined as the management of granted loan in a better manner. Loan management, generally, focused on the management of loan distribution and collection procedures. Loan management is concerned with the activities of lending and recovering the credit so that the bank will not face the
problem of fund as the funds are provide from the public deposition. As for maintaining liquidity position of the bank, there should be the proper management of the loan distribution and collection, as the liquidity depends upon the disbursement of the loan.

### 1.2 An overview of Agricultural Development Bank Limited

With the main objective of providing institutional credit for enhancing the productivity of the agricultural sector in the country, the Agricultural Development Bank, Nepal was established in 1968 under ADBN Act 1967, as a successor to the cooperative bank. The Land Reform Saving Cooperation was merged with ADBN in 1973. Subsequent amendments to the Act empowered the bank to extend credit to small farmers under group liability and expand the scope of financing to promote cottage industries. The amendments also permitted the bank to engage in commercial banking activities for the mobilization of domestic resources.

Agricultural Development Bank Limited (ADBL) is an autonomous organization largely owned by government of Nepal. The bank has been working as a premier rural credit institution since the last three decades, contributing a more than $67 \%$ of institutional credit supply to the country. Hence, rural finance is the principle operational area of ADBL. Besides, it has also been executing Small Farmer Development Program, the major poverty alleviation program launched in the country. Furthermore, the bank has also been involved in commercial banking operations since 1984.

The enactment of Bank and Financial Institution Ordinance (BAFIO) in February 2004 abolished all Acts related to financial institutions including the ADBN Act, 1967. In the line with the BAFIO, ADBL has been incorporated as a public limited company on July 14, 2005. Thus, ADBL operates as a "A" category financial institution under the legal framework of BAFIO and the Company Act, 1996. (www.adbl.gov.np)

### 1.2.1 Corporate Vision, Mission and Objective

Vision: to be the pre-eminent bank, providing services throughout Nepal.

Mission: to deliver comprehensive banking and financial services, capitalizing its extensive network in rural areas.

Objective: to provide quality banking and financial services to clients adopting market driven strategy delivering sustained and competitive return on investment.

### 1.2.2 Basis Operational Areas

## Agricultural and Rural Finance

The bank provides credit services broadly on short, medium and long term basis to individual, cooperatives and corporate bodies. Short term loans are provided for the period of maximum 2 years for the activities such as production, working capital, marketing and non-farm activities. Medium-term loans are extended for the period of 2 to 7 years for the irrigation, farm mechanization, agro-cottage industries and agribusiness including livestock. Long -term loans are provided for the period of more than 7 years for the purposes like warehouse, cold storage and horticultural crops having long gestation period. In addition to providing rural and agricultural credit, the bank accepts saving from borrowers in the form of Client Security Fund. Moreover, the bank is also involved in technology promotion particularly in the field of surface and ground water irrigation, micro-hydro and alternative energy including biogas as well as solar power.

## Commercial Banking

With the primary objective of mobilizing urban resources to the rural sector the bank is undertaking commercial banking operation since 1985. The activities of commercial banking operation broadly include deposit collection lending operation. Besides, services related to guarantee and fund transfer through draft, fax, inward bill collection, outward bill collection etc. are also provided to client. Deposit services are made available for demand deposit (current account), saving and term deposit. In lending operation, the bank has concentrated on commerce, industry, overdraft (general and industrial), contract, hire-purchase (construction and transportation), service loan (tourism, health, secretarial services etc), demand loan, educational loan, house loan, project loan and agricultural loan.

## Micro-finance

## Small Farmer Development Program (SFDP):

The SFDP was initiated in 1975 with the objective of improving socio-economic condition of the rural poor by bringing them into the mainstream of development process. Group approach is the fundamental basis for program implementation. Households having per capita family income of less than or equal to Rs. 2500 and /or a land holding size up to 0.5 hector are categorized as small farm families for providing financial and non-financial services through SFDP.

Credit is provided for different purposes related to production, marketing, and other income/employment generating activities. To develop saving habit among small farmers, group saving and its mobilization is also being undertaken as an integral component. As complimentary input to credit and saving services, the target groups of the program are also trend in different areas such as group management and its functioning, saving mobilization, income generating activities etc. moreover, social and community development activities are also being undertaken for the welfare of rural people.

## Institutional Development Program and SFCLs:

In view of the few shortcomings of SFDP, an alternative approach of empowering the target groups was initiated within SFDP framework through institutional development program (IDP). Under this approach, small farmers are encouraged to build up autonomous and viable institutions owned, managed and controlled by them. Such autonomous body is named as small farmer cooperative limited (SFCL) which is registered under cooperative act. The initial result 0f SFCLs are noted to be positive particularly in the areas of financial viability, leadership development, participation and internal resource mobilization and expansion as well as diversification of program activities.

## Small Farmer Development Bank:

To provide qualitative and effective financial and non-financial services exclusively to SFCLs, ADBN establish small farmer development bank limited (SFDBL) as its subsidiary development bank in 2002, SFDBL is owned by the government, ADBN, to commercial banks and SFCLs. However as per the plan ,the shares presently owned
by ADBN and the government will be gradually off loaded to SFCLs. ADBN has envisaged that after next five year, SFCLs will own majority of shares of SFDBL. Consequently, this institution will be in a position to control the management of this apex level bank.

### 1.3 Focus of the Study

As we all know bank constitutes an important part in the development of national economy. Banks or financial institutions work as the catalyst in the process of economic growth of the country. The main motive of commercial banks is to make profit by providing quality service to customers. There are various commercial banks which are operating under the joint investment of two or more than two parties. This research study has been carried out in one of the commercial bank, i.e. Agricultural Development Bank Limited.

Agricultural development bank limited established as development bank, later convert its operation as commercial bank, has been playing a helpful role in the economic development of Nepal. Banks hold the deposit of many persons, government establishment and business units and grant loan and advances to the industries, people and companies that results to increase the productivity of nation. This means fund collection and the mobilization in the productive sector is one of the main function of any commercial banks.

The research study is specified on the loan management of the commercial bank excluding the other aspect of bank transaction. The study focuses on evaluating deposit utilization of bank in terms of loan and advance and its contribution in the profitability of the bank. The important aspect of the study is to highlight the trend of the deposit collection, loan investment and its recovery within the specific time. In general means, the research study has been carried out to analyze the loan management through the use of appropriate statistical and financial tools.

### 1.4 Statement of the Problem

After the restoration of democracy and world wide evolution of globalization and liberalization, Nepal has introduced the liberal economic system even though there are many problems confronting to the Nepalese economy. This application of liberal
economic system enhances the establishment of commercial banks as well as joint venture banks in Nepal. Although the banking per person is low in Nepal, the number of establishment of commercial banks has been increasing day by day.

Commercial banks, as mentioned before, have a vital role in the economic upliftment. Commercial bank is the bank which deals in exchanging the currency, accepting deposits giving loans and performing commercial transactions. Therefore commercial bank acts as pool between savers and investors of the fund. Banks must also maintain the adequate cash and bank balance to meet the day by day management of resources, i.e. liquidity position of the bank. Although banks are profit generating business organization, customers' expectations are also taken under consideration.

Although every bank has wide range of services covering the different strata of society, deposit collection, loan disbursement and collection has considered as main function to be performed by banks. The bank has to follow a number of directives set by the central bank in all the activities, despite of this the bank has been facing various problems like as lack of good lending opportunities, poor information systems, political instability, security problem, increasing level of non-performing assets etc. So, to overcome out of such problem the bank has to adopt the proper techniques of loan management which help the bank in maintaining the liquidity position and improve its performance. And the study on the loan management of commercial banks would be highly beneficial for pointing out the strengths and weakness.

This research paper attempts to shows the effective application of loan management within the conceptual framework of loan disbursement and collection procedure. Besides, the present study intends to explore the following basis research questions, seeks to bridge the present gap of potential borrowers and banking institutions.

- What amount of total loan disbursed in respect to the total deposits?
- How the different loans are disbursed under different heading?
- What percentage of performing and non-performing loans is held in respect the total loan?
- What would be the position of total loan collected as comparison to the total disbursed loan?
- What impact can be analyzed on the basis of total deposit, total loan disbursement and loan collection?


### 1.5 Objectives of the Study

Undoubtedly, the commercial banks are established with the objective of collecting scattered resources of nation and mobilizing it in the economic growth. The main aim of the study is to find out the effectiveness and sincerity in disbursing and recovering the loan within the NRB directives. In total, it can be said that the management of loan in terms of disbursement and recovery is main objective of the study.

The research study under the topic "Loan management of the Agricultural Development Bank Limited" is concentrated on following objectives:

- To examine the total amount of loan disbursed with respect to total deposit within selected time period.
- To examine the loan disbursed under various heading.
- To measure the percentage of performing and non-performing loan to total loan
- To analyze the total loan recovery with respect the total loan disbursed and outstanding loan.
- To provide the recommendation and suggestions to the organization under study on the basis of the findings.


### 1.6 Significance of the Study

Nepal is going to enter into the global competition, after getting the membership World Trade Organization (WTO). So the commercial banks of Nepal also have to face the competition in terms of the better customer services and the have to adopt the suitable strategies to face out these competitions. The proper decision making in case of loan management would help to find out the financial position of the organization and also to increase the efficiency and profitability of the bank. Today people are becoming more conscious about their money in terms of either savings or
investments; they always look for the better utilization their money as everyone wants to get profit. The significance of the study is as follows:

- This study can be useful for the all those person who show the interest on banking sector as researcher, jobseeker, investor, borrower, depositor, etc.
- The study will help to figure out the financial conditions and may provide the useful information to the organization under study.
- The findings of the study may be significant for the bank to overcome its weakness and apply corrective measures regarding to loan disbursement and collection.
- Although the study includes only the issue of loan management, this study is significant for those researchers who want to make more findings on this topic.


### 1.7 Limitations of the Study

This research study has been done for the academic purpose, so it is conducted within the certain limitations which minimize the study area of the research. Followings are the limitations which confront to the research work;

- The study covers the data of five fiscal years only, i.e. FY 2004/05 to FY 2008/09.
- The study has been carried out only on loan disbursement and collection of the bank under study excluding all the other aspect of the bank.
- There are 26 commercial bank that providing the services to the public in Nepal, but the study has been done on the only one commercial bank, i.e. Agricultural Development Bank Limited
- The study is made on the basis of collected secondary data as well as primary data as possible. And hence the findings may depend on the reliability of information and data provided by bank
- Limited time and resources availability is another limitation of the research study to make specific findings.


### 1.8 Organization of the Study

Every research work has been organized in a systematic way so that the study completed thoroughly. In this study also, the entire study can be organized into the five chapters as indicated follows:

## Chapter-I: Introduction

The first chapter of this study includes the detail introduction about the Nepalese economy, development of banking in Nepal and detail profile of the proposed bank i.e. Agricultural Development Bank Limited along with objectives, limitations, statement of the problem, significance, focus and organization of the study.

## Chapter-II : Review of Literature

The second chapter of this study includes all the published and unpublished books, articles, dissertations related to the loan management, which has been reviewed for the research study.

## Chapter-III: Research Methodology

This chapter deals with the research methodology which has to be followed for describing the study. It includes research design, population \& sample, data collection technique and statistical \& financial tools.

## Chapter-IV: Data Presentation and Analysis

In this chapter the detail analysis of data related to deposit collection, loan disbursement \& recovery has to be performed.

## Chapter-V: Summary, Conclusion \& Recommendations

It is the last chapter of the study in which the research finding summary, conclusion and recommendations related to study are presented.

Similarly, the bibliography, appendix and glossary have been included at the end of the chapter

## CHAPTER - II <br> REVIEW OF LITERATURE

Without clear concept on subject matter the study cannot be taken in a smooth and right way. So for the conceptual foundation of research we need to have review various literatures related to the study. It provides essential guideline for generating and refining tout research ideas. There are various studies held on the field of commercial bank in various aspect related to the loan management. To avoid the duplication of any other research work various relevant studies related to the loan management have been reviewed below to make justice toward the research work.

### 2.1 Conceptual Review

Banks and other financial institutions have a vital role in the economic development of a country bank, as its name suggest, is major source of mobilizing and utilizing the financial resources of the country. In other words, banks are the financial reservoir of the country's economic development because they accumulate the scattered savings in the form of deposit and utilize them in the needy and productive sector of the country. This helps in making the idle fund readily available for the national economic development through various resources. "The banking sector is largely responsible for collecting household savings in term of different types of deposit and regulating it in the society by lending in different sector of economy. By lending their resources in small-scale industries under intensive banking program has enabled the banks to share in the economic growth of the country."(Rose, 2002: 2)

Mobilization of domestic saving has been considered as the prime objective of monetary policy of any country and usually banks works on the basis of same objective. So banking industry has acquired a key position in mobilizing resources for financial and social development of the country. "Bank assists both the flow of goods and services from the products to the customer and the financial activities of the government. Banking provides the country with a monetary system of payment and it is important part of financial system, which makes loans to maintain and increase the level of consumption and production in the economy."(American Institute of banking, 1972: 162)

All together there are 26 commercial banks, 61 development banks and78 financial companies till 2009, they all have got their own rules and regulations and own vision but ultimately they are serving nation to build huge financial resources and mobilizing it in the best possible way. The banking sector remained still for a long period time but as the time passed on, many developments had occurred. In the present scenario, Nepal banking system is evolving itself as a powerful instrument of planning and economic growth of all developed and underdeveloped sector. The scope and scale of banking have undergone substantial change in response to the saving and credit needs of people.

### 2.1.1 Concept of Commercial Bank

In separating the word commercial bank into commerce and bank, Commerce indicate the financial transactions related to selling and buying activities of goods and services and bank stands for those intermediaries which accept deposit and grant loans and advances. Altogether those banks which perform their activities in commercial point of view are commercial banks. This means, commercial banks provide all the banking functions such as accepting deposit advancing loan and credit, issuing guarantee, bonds, letter of credit etc. Commercial bank's main target is to encourage the saving habit of people and to mobilize the deposited amount in various sectors such as trade, commerce, industry and other sectors as like. Commercial Bank Act 1974 of Nepal has defined commercial bank as "an organization which exchanges money, deposit money, accepts deposits, grants loan and perform commercial banking functions and which is not a bank meant for co-operative, agriculture, industries or such specific purpose." (Bank and Financial Ordinance 2005)

Commercial banks are major component in the financial system. They work as the intermediary between depositors and lenders and facilitate in overall development of the economy. So it can be said that commercial bank came into existence mainly with the objective of collecting the idle fund, mobilizing them into productive sector and causing overall economic activities. A sound banking system is important because of the key roles it plays in the economy such as intermediation, credit allocation, maintaining financial discipline among borrowers, making financial resources flow etc.

Commercial banks act as intermediaries between those who have money (i.e. saver and depositors) and those who need money (i.e. borrower). As financial intermediaries, commercial banks enhance the economic efficiency and economic growth by allocating capital to its best possible uses. Commercial banks use deposits to make loans to borrowers. However, banks make every type of loans that is legally permissible and by doing so they gained expertise in evaluating and monitoring the risk associated with lending. Thus financial intermediation between depositors and borrowers is crucial to the growth and stability of the economy. In another sense, economic growth depends on a large value of saving and effective and profitable uses. By offering depositors financial instrument that have desirable risk/return characteristics, commercial encourages savings and utilizes funds in socially productive and profitable uses by effectively screening credit requests.

### 2.1.2 Concept of Loan and Advances

Loan is the amount of money lent by the creditor to the borrower either on the basis of security or without security. According to the Oxford Advanced Learners Dictionary, "loan is sum of money lent by a bank". Loans and advances are considered as the important items on the asset side of the balance sheet of commercial banks. Banks earn interest on loans and advances which is one of the major source of income for the bank. So loan is the amount of money which is lent to the borrower in the condition of repaying it back with interest. To spread the depositor's fund to the borrowers, bank has to analyses properly and takes adequate collateral for the safety purpose. Bank deposits can cross beyond a desired level but the level of loan and advances should not cross it. Fund borrowed from banks are much cheaper and safer than that of unorganized moneylenders, but there is some fear in general public that due to increasing demand of loan, banks and financial institutions may give more preference in collateral while granting loan. Since banks collect deposits from public and disburse the collected public's funds s loan and advances for certain predetermined period, so they should handle loan as asset of public properly and effectively. Providing the loan is risky business activity of the bank, so the bank has to prepare a proper loan portfolio, otherwise it will not only add bad debts but also profitability adversely. In the process of providing loans and advances, there usually exists a risk named as credit risk, which may cause bank failure. Although banks fail for many reasons, the single most important reason is bad loans. However, an unforeseen
change in economic conditions and other factors such as interest rate shocks, changes in tax laws and so on have resulted in the credit problem. So banks have to make proper evaluation and monitoring during the lending process.

Now a day, banks are performing various loan facilities such as overdraft, import loan, auto loan, term loan, personal loan, working capital loan, etc. But in theoretical view, loan can be classified into three categories, named as follow;

- Short term loan (lent for 1 to 2 years)
- Medium term loan (lent for 2 to 5 years)
- Long term loan(lent for more than 5 years)

Every loans and advances has its maturity period or expiry date and the borrowers must repay the loans by the maturity period but due various reasons, there is no certainty that all the loans are recovered within maturity date. So every loan provided by the bank has to be monitored and reviewed time to time. Under the prescribed time format by the central bank, commercial banks have review their portfolio and grade them on the based on the risk and other relevant factor which help bank to monitor the quality of their loan portfolio and to take remedial action. Most of the countries have laid down the practice of loan classification according to time period of loan payment default. In Nepal also, the central bank, i.e. Nepal Rastra Bank has put some directives in front of commercial banks. According to them, loans are categorized into four headings by recovery period as follows:

| Classification of Loans | Period of loan recovery | Loan Loss Provision |
| :--- | :---: | :---: |
| Pass Loan | Not crossed limit or up to 3 <br> months only | $1 \%$ |
| Substandard Loan | Crossed 3 to 6 months | $25 \%$ |
| Doubtful Loan | Crossed 6 to12 months | $50 \%$ |
| Bad Loan | Crossed 12 months | $100 \%$ |
| Sour |  |  |

(Source: NRB Directives, 2007)
Again the above categorization is unified under two headings i.e. performing loan and non-performing loan. Pass loans are known as performing loans and other three substandard, doubtful and bad loans are named as non-performing loans. Nonperforming loans could create negative impact on the bank's profitability both through a loss of interest and write off the principle amount of loan. So the bank has
to allocate some funds as loan loss provision to tackle the risk associated with nonperforming loans. Bankers know that lending is a risky business and that some loan will not be repaid. Therefore, they set aside a reserve for expected losses, usually 1 to 2 percent of total loan. If the losses exceeds the amount set aside, the excess amount of losses are deducted from bank capital. If the losses are large enough to eliminate most of the bank's capital, the bank will fail unless additional capital is added

### 2.1.3 Management of Loans

Loan means the lent amount of money which is repaid and management means planning, monitoring and controlling. Once a loan is on the books of the bank, it must be managed actively to ensure that it is repaid. Loan management is one of the important responsibilities of the lending officer. Good loan management can rarely overcome poor judgment in extending credit, but many good loans become problem loans because lending officers did not pay attention to the warnings that arose over the life of the loan. In total loan management is planning, organizing and controlling the activities associated with loan at the time of disbursement and collection in a proper way. In loan management, planning denotes the consideration of risk and return to meet profit along with division of loan, organizing means putting goals and objectives into action through definition and processes with support functions and controlling means making and monitoring loan as per deadlines supported by corrective action to be taken in granting loan if necessary.
"Effective management of the loan and the credit function is fundamental to a bank's safety and soundness. Loan management is the process by which risks that are inherent in the credit process are managed and controlled. Because review of the loan management process is so important, it is primary supervisory activity. Assessing loan management involves evaluating the steps bank management takes to identify and controlled risk through out the credit process. The assessment focus on what management does identify issue before them become problem." (Rose; 2002:47)

All the activities followed by the bank for the disbursement and collection of loan are known as loan management. The two simultaneous running aspects are:

### 2.1.3.1 Loan Disbursement

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

In Banking sector all transaction and unavoidable loan disbursement policy and its working methods or procedure is regarded very important. The policy of loan flow, documents of loan flow, renewable loan, the conditions of loan flow, documents of loan flow, the provision of loan security, the procession of the payment of the capital and its interest and others such procedures which plays a great role in healthy competitive activities.

### 2.1.3.2 Loan Collection

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

Designation of repayment of the loan is also an art to the bankers. The appropriate selection of the repayment method according to nature of loan is also a challenging part of lending. Loan is defined as the amount expected to be repaid with interest. In each loan, modalities for repayments is mentioned which is affected by the nature of
debt. In case of long-term loan payment is received in the form of installment (principle +interest) as per pre-fixed schedule. There are loans in which interest and principle is paid in lump sum. In some cases, interest is paid periodically and full debt at maturity.

### 2.1.4 Security and Margin Policy

ADBL has accepted the collateral within the area the kingdom of Nepal. But collateral which is valid and acceptable to the bank is valued by the authority. Loan sanctioned granted by deduction the margin as follows:

Table 2.1
Security and Margin policy

| SN | Type of collateral | Margin deducted \% | Loan \% |
| :---: | :--- | :---: | :---: |
| 1 | Land | 40 | 60 |
| 2 | Building/go-down/cold storage | 40 | 60 |
| 3 | Machinery/equipment | 50 | 50 |

(Source: Loan Department, ADBL)

### 2.1.5 Loan Policy:

The loan policy is the primary means by which senior management and the board guide lending activities. Lending policy is one facet of the overall spectrum of policies that guide a bank's operations. Good policy is a product of the intelligent application of sound principles to changing combination of factors and circumstances. Although the policy primarily imposes standards, it also is a statement of the bank's basic credit philosophy. It provides a framework for achieving asset quality and earning objectives; sets risk tolerance level and guide the bank's lending activities in the manner consistent with the bank's strategic decision. Loan policy sets standards for portfolio composition individual, credit decisions, fair lending and compliance management. Loan policies vary in length, organization, degree of detail, breadth of topics, i.e. there is no ideal format. Frequently, the bank's general lending policy will be supplemented by more detailed underwriting standards, guidelines, and procedures. Within the same banking company, certain aspects of the policy may vary because of factor such geographic location, economic conditions, personal or portfolio objective. Without effective and proper loan policy, no bank can accomplish its predetermined
goals and objectives. The sound loan policy of a bank is based of following principles as;

- Principle of safety funds
- Principle of liquidity
- Principle of security
- Principle of purpose of loan
- Principle of profitability
- Principle of spread
- Principle of national interest


### 2.1.6 Loan Approval Process

The loan approval process is the first step toward good loan quality. When individual loan are underwritten with sound loan principles, the credit quality is much more likely to be sound. Although good loan sometimes go bad, so the foremost means to control loan quality is a solid loan approval process. However there is not any particular system of loan approval, but every loan approval process should introduce sufficient control to ensure acceptable credit quality. The process should be compatible with the bank's credit culture, its risk profile and the capabilities of its lenders. An effective loan approval process establishes minimum requirement for the information and analysis upon which a credit decision is based. It provide guidance on the document needed to approve new credit, new credit, increase credit to existing borrower and change terms in previously approved credits.

Loan approving authority approves only after being convinced that the loan will be recovered along with interest. There may not be same procedures for all kind of loan i.e. the process of accepting loan for individual and industrial purpose may be differs from each other. If the wrong loan proposal is approved on the basis of haunches that may cause great loss to the lending institution. So loan approval process is done with great care. There are many processes involved to approve the loans which have been appended below:

1. Application fulfillment
2. Conducting interview for loan purpose, loan amount, repayment sources and schedules, etc.
3. Credit analysis based on 5Cs of credit, i.e. character, capacity, condition, collateral, and capital.
4. Forecast and risk rating system
5. Return of project
6. Liquidation of project
7. Credit worthiness of borrower and its debt structure
8. Preparation of credit report

After examine the content of approval form, the approving authorities decide to make approval/rejection decision of loan facilities.

### 2.1.7 Necessary Documents While Receiving Loan from ADBL

The following documents are needed while receiving the loan from ADBL

- Copies of ownership certificate of land or building, receipt of land revenue and citizenship of Nepal citizen
- Blue print of land or building
- Firm registration certificate
- Acceptance of owners while taking the collateral of other person
- Credit information form other related financial institutions
- Cost estimate of the project
- Quotation of the machinery while procuring it for the project
- Copies of passport size of client
- Scheme and feasibility study report etc.


### 2.1.8 Ability to Take Loan

To take loan from ADBL, borrowers must have following eligibility:

- Must be a Nepalese citizen, If the applicant is cooperative or corporation body, it must be registered in the related government office.
- Must have necessary knowledge, experience and skilled to operate enterprise.
- Must be socially and financially characteristics nature.
- Must be appears in repayment of principal or interest or any existing loan for region behind their reasonable region.
- Must be willing to meet the equity contribution for the project as required by ADBL rules and regulations.


### 2.2 Review of Related Studies:

### 2.2.1 Review of Books

R.Z, Aliber has stated in his book, "The International Money Game" that the sound lending policy is influenced by factors like safety, liquidity, profitability, security, loan purpose and diversification. (Aliber, 1973:151)

In the book "A Hand Book to Banking", the writers have explained that loan and advances dominate the asset side of balance sheet of any bank. Similarly, earnings from such loan and advances occupy a major space in income statement of the bank. It is very important to be noted the most of the bank failure in the world are due to the shrinkage in the value of loan and advances. So, loan is known as risky assets. Risk of non-payment of loan is known as credit risk. Loans that repay principle and interest to the bank from the cash flow it generates are performing assets. Though loans are risky assets, a bank invest most of its resources in granting loan and advances.

Further showing their view on credit policy of the commercial bank, they have expressed that the factors like deposit mix, competition, statutory directives and quality of lending affect a bank's credit policy. So these factors should be considered during establishment of credit policy. A sound credit policy should be based on the objectives having good assets, contributing to the economic development, also giving guidance to the lending officers and establishing a standard for control. (Dahal \& Dahal, 1999: 66-68)

In the book "Banking Theory and Practice", the authors states the problem of nonperforming assets in the banking sector. They opined that deterioration in the quality of loan portfolio is another important matter that should receive the immediate attention of the bank. Political and interference in credit decision making may be pointed out as a factor that has contributed to the deterioration in the quality of loan portfolio. They also indicate that the level and accumulation of non-performing assets is direct result of deterioration in the quality of loan portfolio. So the provision should
be made by the banks for non-performing assets out of their profit. (Shekher \& Shekher, 1999: 366-367).

In the book named "A text book of Banking", the authors have held the view that a large part of loan granted by bank is covered in the shape of deposits. Hence the loan causes an increase in the total amount of deposits. They also expressed the opinion that the liquidity is the important aspect which must be taken in the consideration during the application of funds. So the bank should distribute resources between various forms of assets in such a way as to get a sound balance between liquidity and profitability of the bank. (RadhaSwamy\& Vasudeven, 1979: 231)

In the book "Banking and Development" the author has recommended that the bank has been playing important role for agricultural development to increase agroproduction. The bank introduced reform program has focused the priority to make farmer more laborious and take loan with refundable. While restructuring loans, over due and chronic loans have been renewed giving financial discount on capital and invested amount. (Pant, 1971: 73)

Theodore N. Beckman (1962) has explained that the need to borrow is greater today than ever before partially because of the independence of people upon complex money and credit economy that is subject to many uncertainties and partly as a result of desire for constantly rising standard of living. He has also explained loan collection as the weaker the credit granting function is the greater function the task on the collection end of business, he has emphasized that the credit granting and collection functions are not only interdependent but also interwoven.

Reed, Cotter, Gill and Smith (1980) have focused on the importance of loan in banking sector. They believed that loans are the most important asset held by the banks and bank lending provides the bulk of bank income. Lending is not only important to bank but also to the community that the bank serves. That's why the bank policies must be worked out carefully after considering many factors.
H.D, Crosse (1963) has stated in his book, "Management policies for commercial banks" that the lending is the essence of commercial banking and consequently the
formulation and implementation of sound lending policies are among the most important responsibility of bank director and management. Well conceived lending policies and careful lending practices are essential if a bank is to perform its credit creating function effectively and minimize the risk inherent in any extension of credit. Crosse further adds all banks should have consider the various factors associated with lending before formulating the sound lending policy such as size of loan portfolio, character of loan payment, creditworthiness of borrower and asset pledged to security borrowings and interest rate policy.

### 2.2.2 Review of Articles

An article written by Yogendra Regmi entitled as "The Negative Impact Bore by Selling Collateral for Loan Recovery" in NRB annual publication has stated that it is important for bank to know the necessity of loan. Before accepting the loan proposal, the bank should analyses the loan demander's intentions, capacity of loan utilization and loan payment, awareness of interest payment, possession of cash flow statement, and submission of necessary papers along with loan schedules etc. Banks have to decide whether or not to grant loan by analyzing the risk associated with loan. And also bank have to seek legal ways if loan cannot be recovered in time. The author has mentioned the several reasons behind the failure in loan recovery, such as, lack of quality investment procedures, standard collateral evaluation system, political pressure in loan disbursement, lack of proper law and implementation, centralization of loan etc.

Further he has added that right person, firm and project have to be chosen by evaluating the collateral. Political interference has to be controlled and professionalism should be introduced in lending process. Proper inspection of the project progress should be conducted in interval basis and proper action should be taken as per the report of the inspection. For the proper utilization of the collateral, additional help should be taken from the administration and the bank should be actively converting such collateral into cash.

He has also suggested that while extending the loan, the bank should scrutinize the genuine and need of loan. Bank should emphasize on the repayment of loan rather than accumulating the non-banking assets by accessing the actual problem of loan
takers and rescheduling of the loan. Has advised that with the collective effort of customers, bank, government and central bank as constructive roles, the unnecessary hurdles can be avoided in the process of loan recovery and standard norms set by regulating body can be applied to make proper loan utilization. Finally, the employees and the management of the bank should also be honest in their duties and responsibilities. (Regmi, 2004:118-123)

Ramesh Lal Shrestha, in his article "A study on Deposit and Credit of Commercial Bank in Nepal" has concluded that credit deposit ratio would be $51.30 \%$, other thing remain same. In Nepal that percentage was lowest under the period of review. Therefore, he has suggested strongly that joint venture banks should try to give more credit entering new field as far as possible otherwise they might not be able to absorb even the total expenses. (Shrestha, 1998: 15)

In another article written by Radhakrishna Poudyal, entitled as "F acts of Bank Credit in Nepalese M oney M arket" , gives his view about loan management stating that bank need to earn enough revenue by sustaining their huge overhead cost, for which they offer maximum possible facilities to their potential clients. Loan management includes credit policy of respective financial institution, its loan approval process, documentation, and stipulation of the disbursement, procedure of disbursement, project appraisal system, additional collateral, loan monitoring and follow up etc. This process begins after the project is conceptualized and the application lodged. But the application may or may not reveal the required information to the bank. So technicalities of credit appraisal demands that every aspect of the project is examined value of mortgage evaluated.

He has further added that as the bank reveal the information after approval of the loan, the bank strive for the early disbursement because revenue is generated from the very date of disbursement. That's why earlier the disbursement, the better. Similarly, it becomes necessary for the bank to reasonably plan the installment of disbursement. (Poudyal, 2004:32)

In the article "Issues in ADBL Reform" the writer has presented his views that there are some issues that need to be taken care of while carrying out the reform programs.

These issues broadly classified into external or structural and internal or operational like as shifting and replication of all bank head offices from the present regional offices to other viable and business centre which will automatically help in reducing the overstaffing and posting problem in all offices and help them to achieve sound working condition. It is very helpful for loan disbursement and collection department of the bank. Due to this, the staff can get direct connection with client of the bank in the market which will help in management of loan. (Bista, 2001:24)

In the article "Importance of loan information center and its activities" the writer has forwarded his view that there raised some malpractices in credit investment between the banks along with the increment in the establishment of banks and financial institutions. For e.g., misuse of loan due to lack of continual monitoring and supervision of projects, lack of following rules and procedures in loan processing, borrowing loan from various banks frequently by single borrower, lack of coordination between banks and financial institution, etc. Due to all these problems, the condition of non-performing loan arises and as a result of which negative impact is shown in financial capability of banks and economy of the country. Hence keeping these things in consideration, loan information center was established with the active participation of Nepal Rastra Bank in Jestha 1, 2046. Loan information center under Nepal Bankers' Association is regarded as loan information center established by bank until next provision.

The writer has put forward the views that the loan information center has not worked as effectively applied in real field as expected, so he has suggested all banks and financial institutions to make full utilization of information obtained from the center following the directives of NRB so that the activities of the center can be made effective. (Pradhan, 2004: 190-194)

### 2.2.3 Review of Dissertations

There are various researches held on lending or loan practices of commercial bank. In past years, many researches had done study on lending practices of commercial banks and also on loan collection and disbursement of commercial banks. Here, some of the similar dissertations written in past have been reviewed which are close to the topic under study;

Gautam (2006), in her study "Loan Disbursement and Collection of Lumbini Bank Limited" has focused on loan recovery of the commercial bank with main objectives as follows;

- To compare the total amount of loan disbursed with total deposit within the selected period.
- To analyze the different types of loan disbursed.
- To measure the percentage of performing and non-performing loan on total loan.
- To study the status of loan recovery.

Findings and recommendation:
She has found that the loan disbursement and collection pattern of the bank has been improving in recent in respect to past years. In her study fluctuating trend of the loan recovery has been seen due to mismanagement of nonperforming loan. Her major findings are as;

- Out of total deposit collection, $82.7 \%$ in average is disbursed as loan during seven year period
- Out of total loan disbursed, $73.86 \%$ in average is recovered.
- Nonperforming loan increased by $15 \%$ in the year 2062 in comparison to 2061 and still increasing.

She has recommended that the bank should give attention to the reason behind the fluctuation so that the bank can overcome the problem. The write has put forward that the bank's management have to introduce the strategy that concentrate on the recovery of non-performing loan. In the term of writer, although the bank has fulfilled the criteria of central bank, i.e. Nepal Rastra Bank in respect of lending to deprived sector, the percentage of loan extended is quite low, hence she has suggested to increase the percentage of lending in dispossessed sector so that it will help to support the economic growth of the country. In final word, the writer has recommended that the bank should not only concentrate on providing credit to business sector.

Pyakurel (2006), has made a study on "Loan Disbursement and Recovery of Nepal Bank Limited" with the objectives;

- To see loan disbursement process of Nepal Bank Limited.
- To analyze the condition of loan recovery.
- To see the efficiency of new management on recovery of loan.

Findings and recommendations:
For this trend analysis, ratio analysis and correlation and regression analysis have been used. Trend for five years is studied and interpreted. Loan disbursement trend shows that it is decreasing every year. He says that what ever the disbursement process is, profit is not decreasing .The priority sector loan into agriculture sector, cottage industry, service sector, hire purchase and deprived sector loan. Although he presents the date of disbursement, collection and outstanding figures are excluded.

- The presents disbursement and recovery of NBL is normal.
- It is able to recover due loan unexpected.
- By the conflict bank reduce many branches and it can not disburse additional loan in priority sector.
- The new management of NBL is not only effective for collecting over due loan, it is effective in managing every essential factors of bank.
- The bank faces a lot of fraud by bad employee in case of loan disbursement, recovery and expenses.

His recommendation is related with supervision and inspection. His view is that the system must be strict, effective and efficient. Loan should be provided with technical facility. Policy should formulated taking into consideration of geographical features and infrastructure development of the country.

Khadgi (2006), in her thesis, "Study of Investment Policy Analysis of NABIL Bank Limited" has evaluated the investment practices of bank has the following objectives;

- To study the resources mobilization and investment policy of NABIL Bank Ltd.
- To find out the relationship between deposit and investment trends of the bank.
- To evaluate profitability, risk, liquidity and asset management of the bank.
- To find out the current and the future investing strategy of NABIL Bank Ltd.
- To provide suggestions to improve investment policy and performance of NABIL Bank based on the findings of the study.

Findings and recommendations:
The writer has performed the various analyses of the financial indicators of the bank like as liquidity, profitability, risk, growth, etc. After making various financial and correlation analysis, she has made a conclusion that the bank has to make an improvement in the fund mobilization by utilizing the resources in productive sector on the basis on following findings;

- The entire liquidity ratio along with CRR has consistent increasing trend, showing the satisfactory liquidity position of bank.
- The Credit Deposit (CD) ratio of the bank is $54.72 \%$, which seems to be lesser than standard ratio $70 \%$, shows bank is not lending its deposit properly.
- The profitability ratios has fluctuating trend, average ROA is $2.02 \%$ showing inconsistent variation.
- The net growth rate of bank is $8.45 \%$, which indicate increasing trend of net profit.

She has put forward the view that not only deposit is necessary for any financial institution but also the investment of that deposit is necessary to compete in the market. So she has recommended that the bank has to follow the liberal policy when sanctioning the loan and advances with sufficient guarantee and also implement the sound credit collection policy. The researcher has suggested the measures to improve the investment policy of the bank. Further the writer has mentioned that the bank has to concentrate on using its working fund in productive sector so that the bank can make income from it.

Tamrakar (2007), has conducted a thesis on "A study on loan advances of commercial banks with reference to Nepal Investment Bank Ltd., Everest Bank Ltd and Nepal Industrial and Commercial Bank Ltd." with the objectives as follows:

- To examine the present situation of loans and advances made by the commercial banks under study.
- To evaluate facts regarding the lending and recovery of loans.
- To analyze the lending capacity of the banks.
- To assess the current situation of NPA in commercial banks and analyze its effect on the performance of the commercial banks.

He has carried out the research work with help of secondary data obtained from annual reports and other secondary sources. In order to carry out the research, various financial and statistical tools are used, on the basis of which following finding are made;

- The lending trend of all banks is in irregular increasing trend, where NIBL has highest lending practices than EBL and NIC bank.
- The volume of non performing loan of all three banks is in irregular ups and downs; however EBL has maintained low volume of non performing loan in comparison to other two.
- The interest suspense of NIBL and NIC is fluctuating while that of EBL is increasing in diminishing rate.
- The loan loss provision of all three banks is increasing every year due to degradation of loan into doubtful and bad loan.
- The percent of deposit invested in loan and advances is consistent through out the period in the case of EBL than other two banks.
- The financial ratios of three banks are in consistent trend which indicate the better utilization of deposit.
- The correlation analysis and trend line analysis of loan and advances are positive, indicating more loan investment.

From the study, the researcher has concluded that along with increment in deposit, the loan and advances of the commercial banks are increasing. On the basis of finding, the researcher has recommended that all the banks should thoroughly analyze the capital, management, capability and credit information of customer as primary factor and external environment and collateral as secondary factor before taking lending decision to avoid increment NPL. The researcher has also suggested the banks should examined the investment portfolio carefully in regular interval.

Sharma (2008), in his study on, "Loan Management of Agricultural Development Bank Limited" focused the efficiency and effectiveness of loan recovery of the bank, has the objective to evaluate the loan disbursement and collection procedure of ADBL. The study has involved other objectives as follows;

- To examine the loan disbursement and collection procedure of ADBL
- To evaluate the trend of loan investment, collection and outstanding.
- To show achievement of purpose wise and term wise loan disbursement, collection and outstanding.
- To study lending policy, loan recovery procedure, interest berate and discount, interest change by ADBL.
- To suggest some remedies for improving loan disbursement and collection procedure of ADBL.

The researcher has made various statistical and financial analysis, according to which some findings are made as follows;

- The trend of total investment of development financing has increasing with average growth rate $10.43 \%$.
- The trend of total collection of development financing has also increasing with average growth rate $14.22 \%$.
- The trend of outstanding of development financing also increasing with growth rate 9.53\%
- The term wise loan disbursement, collection and outstanding is in fluctuating trend with varying average growth rates.

With the above finding the researcher has concluded that the bank should examine the past repayment records in case of borrowers who are unable to repay loan back and take corrective action immediately. He has figured out that weak supervision, high interest rate and other charges charged by the bank, political interferences and poor liquidity of borrowers are the poor recovery. Hence he has suggested that the bank must provide strict supervision during loan utilization, supervisor need to visit field to make fair eyes on the borrower's loan utilization for the concerned purpose and motivate the borrower to make full utilization of loan amount.

### 2.3 Research Gap

Going through the above study, it can be said that loan management is an important element for every commercial banks as it helps in managing the problem of NPA and Loan Loss Provisioning, which is raising problem for banking sector. Various researches have been found relating to the Loan Management of ADBL, but all the previous research works were fully focused on the loan disbursement, collection and outstanding. Here, in this study deposit collection of the bank and its impact on loan disbursement also included because bank can only disburse the loan if it has sufficient deposit i.e. the more the deposit the more the loan disbursement. Another fact of the previous researches is that they were focused on loan related to development banking. As we know, now ADBL has changed its function toward commercial banking also. So this research work has tried to include overall loan management of ADBL.

## CHAPTER - III

## RESEARCH METHODOLOGY

### 3.1 Introduction

As we know research involves certain methodology for the systematic analysis of the related topic. So research methodology includes some steps or process which helps to make complete and essential analysis. It contains sequential steps which a researcher applied during the research study for fulfilling its objectives. With the help of logical evidences and various statistical tools, the predetermined objectives of the research study can be analyzed and related problem can be solved. It includes method of critical thinking by defining and redefining problem, formulating hypothesis, collecting, organizing and evaluating data, making deduction and giving conclusion to determine weather the fit the formulated hypothesis. For a particular research project, the various determining variable like of project, time frame of project, importance of project may have to select the related methodology. The methodology involved in the study of loan management of Agricultural Development Bank Ltd have tried to come in conclusion regarding to loan disbursement and collection of the bank and its nonperforming assets (NPA) position. The methodology have to follow the under described process.

### 3.2 Research Design

The research design constitutes the blue prints of the collection, measurement and analysis of data. So a research design is the arrangement of conditions for collection and analysis of data in manner that aims to combine relevance to research purpose with economy in procedure. However, the design is made in simple form but it covers the main apprehension of the study.

Since the main crux of the study is to analyze the loan management of Agricultural Development Bank, all the indicators which are related with loan disbursement and collection of the bank have been calculated using data obtained from the five years end accounting records maintain by the bank. The study depends on both primary as well as secondary data on the basis of which collection, verification and evaluation of past evidences have been done for final conclusion. Various financial parameters and
effective research techniques are employed to identify the condition of loan disbursement and recovery of the bank. Both qualitative and quantitative data are used to get full information about loan disbursement and collection position of bank for fulfilling the objectives of study. It is difficult to study the principle causes arising from borrower side and quantify them in relation to repayment performance of the bank‘s loan investment.

Since, the study is based on certain research design. This study emphasizes on descriptive and analytical study of collected data over a period of time and it gives suggestion on the improvement. So the study based on descriptive and analytical research design.

### 3.3 Population and Sample

Altogether there are 26 commercial banks performing their financial activities to the public through various branches throughout Nepal and most of their stocks are traded in stock market. Due to the time limitation and unavailability of relevant data, the study is confined on only one bank. So, all commercial banks are considered as population and bank under study, i.e., Agricultural Development Bank limited contributes as sample. Agricultural Development Bank limited commenced its operation from 1986. For secondary data analysis, loan disbursement and collection of ADBL from fiscal year 2004/05 to 2008/09 is taken as sample.

### 3.4 Nature and Sources of Data

Generally the necessary data for every research study are collected from both sources primary and secondary. But the study is mainly based on secondary source of data. The main sources of information are concerned bank and its published documents, NRB and its published documents, newspaper, journals, books and dissertation. So, following are secondary data sources which have been considered in the study:

- Annual report and financial statement of ADBL
- Different laws, guidelines and directives of NRB and also ADBL.
- Text books published on subject matter
- Articles related to topic published in newspaper, journal, magazine, etc.
- Unpublished thesis and research paper related to subject matter.
- Websites of related fields.

According to need and objectives, all secondary data are compiled, processed and tabulated in time series in order to judge the reliability of data provided by bank. Formal and informal talks and interviews of concerned head, experts are also helpful to obtain the plus information about related topic.

### 3.5 Data Collection Technique

Both primary and secondary data are collected from its corporate office. Secondary data are collected from annual reports of ADBL from FY2004/05 to FY2008/09. Some data have been obtained from annual publication of NRB, bank journal, and website of bank. Other valuable information is collected from personal interaction with employees of ADBL.

Data are collected to draw inferences and conclusions for the research. A comprehensive method is followed to get $100 \%$ data from primary and secondary sources. Both quantitative and qualitative techniques are used to find out the necessary data.

### 3.6 Data Presentation and Tools for Analysis

In the whole research study, data analysis and presentation represent focal part of study. After data collection, they processed for analysis by using various financial and statistical tools to achieve the objectives of study. The data extracted from annual reports, financial statement and other sources are processed and tabulated in various tables and charts under different headings according to their nature .the processed data are set for analysis according to their availability. Various financial and statistical tools such as graph, percentage, coefficient of correlation, trend analysis, etc. are used for analysis. So with the help of both statistical and financial tools, the analysis can be more effective and genuine. Financial tools help to make judgment about the operating performance of bank and statistical tools help to find out the trend of credit position of bank.

### 3.7 Statistical Tools

Statistical tools used in this research help to see current trend of loan investment and collection. To analyze the relationship, Karl Pearson's coefficient of correlation, percentage, T-test are used to find out ADBL's loan investment and collection and to see the type of relation exist among the various variables and draw the inferences and recommendation. Following are the statistical tools used in the study:

### 3.7.1 K arl Pearson's Coefficient of Correlation

$r=\frac{\sum x y}{\sqrt{\sum x^{2} \sqrt{\sum y^{2}}}}$
Where, $\mathrm{r}=$ correlation coefficient lies between +1 to -1
$\mathrm{X}=$ independent variable
$\mathrm{Y}=$ dependent variable

Following Table is Considered to Describe the Relationship Between Variable. If $r$ is

| -1 | -0.7 | -0.3 | 0 | +0.3 | +0.7 | +1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Perfect <br> negative | Strong <br> negative | Weak <br> negative | Perfect <br> independence | Weak <br> positive | Strong <br> positive | Perfect <br> positive |

(Shrestha and Amatya; 2004: 178)

### 3.7.2 Coefficient of Determination

Coefficient of determination is denoted by $\mathrm{r}^{2}$ which indicates total variation independent variable $(\mathrm{Y})$ is explained by independent variable $(\mathrm{X})$

### 3.7.3 Hypothesis Testing

## T-test

T-test is used for testing the significance of a single mean, variance being unknown and also testing the significance of the difference between two independent means, variances being equal but unknown. It is also used for testing the significance of correlation coefficient.

## Hypothesis test - 1

Null hypothesis (H0) $\boldsymbol{\mu} \mathbf{1}=\boldsymbol{\mu} \mathbf{2}$
There is no significant difference between the mean ratio of targeted loan disbursement and actual loan disbursement.

## Alternative hypothesis (H1) $\boldsymbol{\mu} \mathbf{1 \neq \boldsymbol { \mu } 2}$

There is significant difference between the mean ratio of targeted loan disbursement and actual loan disbursement

## Hypothesis test-2

## Null hypothesis (H0) $\boldsymbol{\mu} \mathbf{1}=\boldsymbol{\mu} \mathbf{2}$

There is no significant difference between the mean ratio of targeted loan collection and actual loan collection.

## Alternative hypothesis (H1) $\boldsymbol{\mu} \mathbf{1 \neq \boldsymbol { \mu } \mathbf { 2 }}$

There is significant difference between the mean ratio of targeted loan collection and actual loan collection.

## Test statistic

$\mathrm{t}=\frac{\bar{X}_{1}-\bar{X}_{2}}{\sqrt{S^{2}\left(\frac{1}{n_{1}}+\frac{1}{n_{2}}\right)}}$

## Trend analysis

The arrangement of the statistical data chronologically (according to the occurrence of time) is known as time series and the statistical analysis of these chronological variations is termed as time series analysis. It is one of the statistical tools, which indicates the improvement or decrement of the financial situation. It helps to determine the future of the variables. The way from which the maximum information can be drawn from the figure collected is known as the analysis of time series. The future value can be calculated by using following equation;
$Y=a+b X$
Where,

$$
\mathrm{Y}=\text { trend value }
$$

```
a= y-intercept
b= slope of trend line of amount change in y-variable that is associated
    with change in one unit in x-variable.
X = time variable.
```


### 3.8 Diagrammatic and Graphical Presentation

Presentation of statistical data through the use of diagram is known as diagrammatic representation. Data presented through diagrams and graphs provide information at glance. Picture speaks itself, no need to explain. They show visual indication of magnitude, strengths trends and patterns of presented data. Diagrams generally provide fixed information about data where graphs provide more precise and accurate information (such as slope, rate, and future predicted value) than diagrams.

### 3.9 Financial Tools

Financial tools basically help to analyze the strength and weakness of firm, i.e., financial position of the bank. Financial statements such as balance sheet and income statements can be analyzed to assess the financial health and contribution of interest of loan disbursement by the bank.

### 3.9.1 Balance Sheet

Balance sheet is a classified summary of all assets and liabilities balance as well as all liabilities and credit balance after balance pertaining to profit and loss account have been collected together in a separate account. It is a financial statement used to summarize the financial position of a company on a given date. A quick look at the balance sheet shows the financial health of the company. Therefore, investors, lenders, bankers and creditors like to see the balance sheet of the company before making any financial deals so that they can know the financial worthiness of the company.

### 3.9.2 Profit and Loss Account

As profit and loss account is the second part of trading and profit and loss account, it is prepared after preparing the trading account for ascertainment of gross profit or loss. It is an account which is designed to highlight the net profit earned or net loss incurred by the company from its business transactions during accounting period.

# CHAPTER - IV <br> PRESENTATION AND ANALYSIS OF DATA 

### 4.1 Introduction

The main purpose of analyzing the data is to change it from an unprocessed form to an understandable presentation. Analysis of data comes prior to interpretation. The facts and the figures collected are to be processed with a view to reducing them to manageable proportions. The analysis of data consists of organizing, tabulating and performing statistical and financial analysis. Analysis of data means study the tabulated material in order to determine inherent facts or meaning. Interpretation is the search for the broader meaning of the research finding. Analysis is not complete without interpretation and interpretation cannot proceed without analysis. Different types of data require different method of presentation and analysis which can be used to simplify the data. So for simplicity, the data are presented in tables and diagrams to analyze them. Summarizing the data in a tabular form and displaying them in diagram sets a base for drawing out conclusions and making important recommendations.

Data is analyzed by using proper statistical tools such as correlation coefficient, regression, t -test and financial tools such as balance sheet and income statement to fulfill the research objectives. To test the significance and insignificance of correlation coefficient, $t$-test is used. On the basis of several data regarding ADBL's loan disbursement and collection, it focuses to present an overall disbursement and collection situation of loan granted by ADBL. In this study, it is tried to analyze whether the actual disbursement, collection and outstanding is in increasing or decreasing trend, whether the actual and targeted loan disbursement, outstanding and collection is differ or not. For this purpose, all the available data of five periods (F.Y.2004/05 to F.Y.2008/09) are presented and analyzed with the help of various tools.

### 4.2 Deposit Collection and Loan Disbursement

The main function of the commercial bank is to collect dispersed money from the public in the form of deposit. The bank takes various types of deposits from individuals, business organizations and other different types of institutions. Until and
unless the bank collects deposits from public, it can not mobilize deposits in the form of loan to the needy. Hence, the disbursement of loan is the mobilization of deposit, which depends upon the collection of deposit. Hence, the trend of deposit collection has been analyzed in order to analyze the trend of loan disbursement Deposit collection and loan disbursement of ADBL is increasing day by day. Following table presents the percentage of loan disbursement

Table 4.1
Deposit Collection and Loan Disbursement (in'000)

| Fiscal <br> year | Total <br> deposit <br> collection | Growth <br> rate\% | Loan <br> disbursement | Growth <br> rate \% | \% of loan <br> disbursement to <br> deposit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 27223046 | - | 28255509 | - | 103.8 |
| $2005 / 06$ | 29631817 | 8.13 | 30613889 | 7.7 | 103.3 |
| $2006 / 07$ | 32416358 | 8.59 | 29285522 | -4.54 | 90.34 |
| $2007 / 08$ | 32553827 | 0.42 | 36335966 | 19.4 | 111.6 |
| $2008 / 09$ | 35159610 | 8.00 | 41915104 | 15.35 | 119.2 |

(Source: Annual reports of ADBL)

Growth $\%=\frac{\text { Ending amount }- \text { Beginning amount }}{\text { Beginning amount }}$
Figure 4.1
Loan Disbursements to Total Deposit


In the above table, deposit collection is increasing in regular trend. In FY 2004/05, the deposit collection is lowest i.e., Rs. 27223046 thousand and the highest deposit collection is Rs. 35159610 thousand in FY 2008/09. So, the lowest deposit collection growth rate is 0.42 in fiscal year 2007/08 and highest is 8.59 in fiscal year 2006/07. Though, in fiscal year 2006/07, the deposit collection growth rate is highest, in last study period i.e. FY 2008/09, the growth is also high in respect to FY2007/08. So it shows well increment in deposit collection, which is good for bank's position.

Likewise, total loan disbursement is also found in increasing trend. The lowest loan disbursement is Rs. 28255509 thousand in FY 2004/05 and in FY 2008/09, the total loan disbursement is highest, i.e. Rs. 41915104 thousand. So, the lowest growth rate of loan disbursement is 4.54 in FY 2006/07 and the highest is 19.40 in FY 2007/08. Although in FY 2008/09, the growth rate show in declined comparatively as of year ahead but in amount it is increased, which do not create any effect in investment system.

The percentage of loan disbursement to total deposit collection is fluctuating trend, i.e. $103.82 \%, 103.31 \%, 90.34 \%, 111.62 \%$ and $119.20 \%$ from F.Y.2004/05 to FY 2008/09. The correlation coefficient value calculated between total deposit collection and total loan disbursement is +0.82 , which show the positive correlation. The coefficient of determination $\left(\mathrm{r}^{2}\right)$ is 0.67 , which indicates that $67 \%$ of total variation in dependent variable (loan disbursement) is explained by independent variable (deposit collection). The tabulated critical value of t at $5 \%$ level of significance for two tailed test at 3 degree of freedom is 3.182 , which is greater than calculated value of 2.50 . Therefore the coefficient of correlation shows insignificant relationship between actual loan disbursement and collection.

### 4.3 Actual Loan Disbursement and Loan Collection

Success of a bank does not depend only on the mobilization of deposit and loan disbursement but also the recovery of loan i.e. loan collection. Hence, the timely recovery of all extended credit is also equally important. ADBL has presented the actual loan disbursement and its collection in each and every year annual operation of business.

Table 4.2
Actual loan disbursement and collection (Rs. in 000)

| Fiscal year | Loan <br> disbursement | Growth <br> $\%$ | Loan <br> collection | Growth <br> $\%$ | $\%$ of <br> collection to <br> disbursement |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 28255509 | - | 26289750 | - | 93.04 |
| $2005 / 06$ | 30613889 | 7.7 | 28612217 | 8.83 | 93.46 |
| $2006 / 07$ | 29285522 | -4.54 | 28155899 | -1.59 | 96.14 |
| $2007 / 08$ | 36335966 | 19.4 | 34171617 | 17.6 | 94.04 |
| $2008 / 09$ | 41915104 | 15.35 | 40218719 | 17.7 | 95.95 |

(Source: Annual reports of ADBL)

Growth $\%=\frac{\text { Ending amount }- \text { Beginning amount }}{\text { Beginning amount }}$
Figure 4.2

## Loan Collection to Disbursement



In above table, total loan disbursement is also found in increasing trend. The lowest loan disbursement is Rs. 28255509 thousand in FY 2004/05 and in FY 2008/09, the total loan disbursement is highest, i.e. 41915104 thousand. So, the lowest growth rate of loan disbursement is $4.54 \%$ in F.Y .2006/07 and the highest is $19.40 \%$ in FY 2007/08. Even if the figure shows declination in the growth rate of loan disbursement,
in actual sense it do not means the amount of investment is lowered but it indicate the comparative investment is lowered.

Likewise the actual loan collection is also increased day by day in each year. The lowest actual loan collection amount is Rs. 26289750 thousand in FY 2004/05 and the highest actual collection amount is Rs. 40218719 thousand in FY 2008/09. The lowest growth rate on actual collection is 1.59 in FY 2006/07 and highest is $17.70 \%$ in FY 2008/09.

The percentage of loan collection to disbursement is increased thoroughly in each fiscal year from 2004/05 to 2008/09. The value of coefficient of correlation between actual loan disbursement and actual loan collection is +0.998 , which show the positive correlation between them. The coefficient of determination ( $\mathrm{r}^{2}$ ) is 0.995 , which indicates that $99.5 \%$ of total variation in actual loan collection is explained by the actual loan disbursement.

The tabulated critical value of $t$ at $5 \%$ level of significance for two tailed test at 3 degree of freedom is 3.182 , which is less than calculated value of 24.58 . Therefore the coefficient of correlation shows significant relationship between actual loan disbursement and collection.

### 4.4 Actual Loan Outstanding and Collection

Bank also provides the outstanding loan, which indicates the amount of loan remains to recovery in that fiscal year. ADBL collects loan amount regularly but its outstanding is increasing day-by-day because of market outreach as well as over due loan.

Table 4.3
Actual Loan Outstanding and Collection (Rs. in 000)

| Fiscal <br> year | Loan <br> Outstanding | Growth \% | Loan <br> Collection | Growth \% | \% of collection <br> to Outstanding |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 31309074 | - | 26289750 | - | 83.97 |
| $2005 / 06$ | 33310746 | 6.4 | 28612217 | 8.83 | 85.9 |
| $2006 / 07$ | 34440369 | 3.4 | 28155899 | -1.59 | 81.75 |
| $2007 / 08$ | 36604718 | 6.28 | 34171617 | 17.6 | 93.35 |
| $2008 / 09$ | 38301103 | 4.63 | 40218719 | 17.7 | 105.01 |

(Source: Annual reports of ADBL)

Growth $\%=\frac{\text { Ending amount }- \text { Beginning amount }}{\text { Beginning amount }}$
Figure 4.3

## Loan Outstanding to Loan Collection



In the above table, the amount figure of loan outstanding increased in each year, but the trend of growth rate fluctuated year by year The lowest loan outstanding amount is Rs. 31309074 thousand in the F/Y 2004/05. The lowest growth rate on actual loan outstanding is 3.40 in F/Y 2006/07 and the highest is 6.40 in F/Y 2005/06. It is better for ADBL to be the loan outstanding in a decreasing trend but the decreasing percentage is very low. ADBL has to reduce loan outstanding up to certain level.

Actual loan collection amount is also increased each year except in FY 2006/07. The lowest actual loan collection amount is Rs. 26289750 thousand in FY 2004/05 and highest actual loan collection amount is Rs. 40218719 thousand on the FY 2008/09. The lowest growth rate on actual collection is 1.59 in FY 2006/07 and the highest is 17.70 in FY 2008/09.The growth rate on actual loan collection is fluctuated in FY 2006/07and thereafter increased year on year.

The percentage of actual collection to outstanding is in increasing trend except FY 2006/07 but in a slow rate. The lowest percentage of actual loan collection to outstanding is $81.75 \%$ in FY 2006/07 and highest is $105.01 \%$ in FY 2008/09.

The coefficient of correlation value calculated loan outstanding and collection is 0.95 , which is highly positively correlated. Coefficient of determination ( $\mathrm{r}^{2}$ ) is 0.89 , which indicates that $89 \%$ of the total variation in actual loan collection is explained by the actual loan outstanding.

The tabulated critical value at $\mathrm{t} 5 \%$ level of significance for two failed test at 3 degree of freedom is 3.182 which is less than the calculated value of $t^{*} 5.05$ Therefore, the coefficient of correlation is significant or shows significant relationship between actual loan outstanding and collection.

### 4.5 Comparative Analysis of Loan Collection with Respect to Total Loan Disbursement and Total Loan Outstanding

Although ADBL disburse loan on the basis of deposit, the loan collection is made on the basis of loan disbursement and outstanding so that the position of recovery can be analyzed. Here, the below table shows the comparative analysis of total loan collection with respect to total loan disbursement and outstanding.

Table 4.4
Total Loan Disbursement, Collection and Outstanding (Rs. in ‘000)

| Fiscal <br> Year | Total Loan <br> disbursement | Growth <br> $\%$ | Total Loan <br> Collection | Growth <br> $\%$ | Total Loan <br> outstanding | Growth <br> $\%$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 28255509 | - | 26289750 | - | 31309074 | 6.7 |
| $2005 / 06$ | 30613889 | 7.7 | 28612217 | 8.33 | 33310746 | 6.4 |
| $2006 / 07$ | 29285522 | -4.54 | 28155899 | -1.59 | 34440369 | 3.4 |
| $2007 / 08$ | 36335966 | 19.4 | 34171617 | 17.6 | 36604718 | 6.28 |
| $2008 / 09$ | 41915104 | 15.35 | 40218719 | 17.7 | 38301103 | 4.63 |

(Source: Annual reports of $A D B L$ )
As shown by above table, there is fluctuating trend of loan collection and loan disbursement, while the trend of outstanding loan is decreasing. Although the amount figures of loan outstanding show the increasing trend, the growth percentage figures indicate the up-down movement. Here, in FY 2008/09, there is high rate of loan disbursement, collection and outstanding and in FY 2006/07, the rate decreases symmetrically in all three components. And again in FY 2007/08, only the rate of collection moves upward. The whole movement of loan collection with respect to loan disbursement and loan outstanding is summarized in below bar diagram:

Figure 4.4
Disbursement, Collection and


### 4.6 Trend Analysis of Total Deposit Collection, Total Loan Disbursement, Total

 Loan Collection and Total Loan OutstandingThere is various fluctuation occur in the amount of all entities i.e total deposit collection, total loan disbursement, total loan collection and total loan outstanding. So, following table is presented for analyzing the trend of up and down of all entities individually up to FY 2013/14.

Table 4.5
Trend Analysis of Deposit Collection Loan Disbursement,
Collection and Outstanding
(Rs. in billion)

| Fiscal <br> Year | Deposit <br> Collection | Loan Disbursement | Loan <br> Collection | Loan <br> Outstanding |
| :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 27.22 | 28.26 | 26.29 | 31.31 |
| $2005 / 06$ | 29.63 | 30.61 | 28.61 | 33.31 |
| $2006 / 07$ | 32.42 | 29.29 | 28.16 | 34.44 |
| $2007 / 08$ | 32.55 | 36.34 | 34.17 | 36.6 |
| $2008 / 09$ | 35.16 | 41.92 | 40.22 | 38.3 |
| $2009 / 10$ | 37.04 | 43.21 | 41.5 | 39.98 |
| $2010 / 11$ | 38.92 | 46.52 | 44.84 | 41.71 |
| $2011 / 12$ | 40.80 | 49.83 | 48.18 | 43.44 |
| $2012 / 13$ | 42.68 | 53.14 | 51.52 | 45.17 |
| $2013 / 14$ | 44.56 | 56.45 | 54.86 | 46.9 |

(Source: Appendix -2)

### 4.6.1 Trend of Total Deposit Collection

The trend of total deposit collection in upcoming years is analyzed using the trend analysis technique. The calculation of trend forecast has been presented in appendix. 2 (a). The trend line of projection of deposit collection of ADBL up to 2013/14 is presented as below:

Figure 4.5
Trend of Total Deposit Collection


The above trend line shows the increasing movement after FY 2008/09 and indicates the upward movement in the near future under the constant economic condition.

### 4.6.2 Trend of Total Loan Disbursement

The trend of total loan disbursement in upcoming years is analyzed using the trend analysis technique. The calculation of trend forecast has been presented in appendix. 2 (b). The trend line of projection of deposit collection of ADBL up to 2013/14 is presented as below.

Figure 4.6
Total Disbursement


The above trend line shows the increasing movement after FY 2008/09.and indicates the upward movement in the near future if economic condition is going on sound manner.

### 4.6.3 Trend of Total Loan Collection

The trend of total loan collection in upcoming years is analyzed using the trend analysis technique. The calculation of trend forecast has been presented in appendix. 2 (c). The trend line of projection of deposit collection of ADBL up to 2013/14 is presented as below.

Figure 4.7
Total Loan Collection


The above trend line shows the increasing movement after FY 2008/09.and indicates the upward movement in the near future in steady economic condition.

### 4.6.4 Trend of Total Loan Outstanding

The trend of total loan outstanding in upcoming years is analyzed using the trend analysis technique. The calculation of trend forecast has been presented in appendix. 2 (d). The trend line of projection of deposit collection of ADBL up to 2013/14 is presented as below

Figure 4.8
Total Outstanding


The above trend line shows the increasing movement in future years if everything is expected to be constant. But it is not so good for the financial health of bank.

### 4.7 Achievement of Purpose wise Loan Disbursement, Outstanding and Collection.

ADBL has invested various types of loan as development as well as commercial credit to uplift the life standard of public involved in various sector of economy such as agricultural, industry, trade, commerce and also deprived sector and service business. Following tables are drawn for presenting the yearly disbursement, outstanding and collection of loan.
6.7.1 Purpose wise Loan Disbursement for Fiscal year 2004/05 to 2008/09

Table 4.6
Purpose Wise Loan Disbursement (Amount in '000)

| Loan Purpose | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Growth |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Agriculture | 3874121 | 5629288 | 5296964 | 4776100 | 3653828 | 1.52 |
| Mines | 0 | 3899 | 3730 | 0 | 172 | -26.08 |
| Production | 5605295 | 2794892 | 2602296 | 3445600 | 5920549 | 11.8 |
| Construction | 0 | 607772 | 561890 | 1087000 | 979951 | 19.01 |
| Agricultural Tools | 542605 | 186943 | 173814 | 72100 | 1050 | -57.41 |
| Trans. Instrument <br> Production | 39346 | 43787 | 43024 | 32200 | 9 | -28.9 |
| Trans.\& comm. <br> Service | 888438 | 169239 | 164817 | 187300 | 104653 | -28.51 |
| Marketing | 3324193 | 8301644 | 8785656 | 12481700 | 13323832 | 51.1 |
| Finance \& Insurance | 8379026 | 682867 | 635023 | 306700 | 324420 | -36.2 |
| Service Industry | 1787150 | 1304076 | 1210232 | 1095300 | 1001480 | -13.07 |
| Other Service | 1795036 | 1754931 | 1629137 | 1320200 | 2024222 | 6.24 |
| Consumer Loan | 773455 | 1122668 | 1105726 | 380400 | 1139874 | 44.42 |
| Others | 1246844 | 8011883 | 7073213 | 11151400 | 13441064 | 152.26 |
| Total | 28255509 | 30613889 | 29285522 | 36336000 | 41915104 | 10.86 |

(Source: Annual reports of ADBL)
From the table, it can be assumed that although the total loan disbursement is in increasing trend, the movement of loan disbursement for different purposes is fluctuating and irregular path. The total loan investment increased from Rs. 28.26 billion in FY 2004/05 to Rs. 41.92 billion in FY 2008/09. The highest investment has been proceeding in marketing activities and that of lowest in mines due to various complicated situation happening in the country. In above table there are some negative growths which indicate there is constantly declining and /or fluctuating investment.

### 4.7.2 Purpose Wise Loan Collection from 2004/05 to 2008/09

Table 4.7
Purpose Wise Loan Collection (Rs. in '000)

| Loan Purpose | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Growth |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Agriculture | 3621400 | 5953102 | 4792954 | 4808300 | 5240311 | 13.55 |
| Mines | 0 | 3099 | 3050 | 0 | 2997 | -25.4 |
| Production | 4857471 | 2768236 | 2723360 | 3173900 | 5078097 | 7.98 |
| Construction | 0 | 332722 | 327328 | 835500 | 701259 | 34.39 |
| Agricultural Tools | 674356 | 168571 | 165838 | 60100 | 1370 | -59.53 |
| Trans. <br> Production | 101072 | 47039 | 46276 | 35000 | 53 | -44.82 |
| Trans.\& comm. Service | 764991 | 272778 | 268356 | 206700 | 152004 | -28.85 |
| Marketing | 3043662 | 8944054 | 8799062 | 11771300 | 12676725 | 58.43 |
| Finance \& Insurance | 8604978 | 623423 | 613317 | 340800 | 459568 | -25.99 |
| Service Industry | 1652300 | 1023767 | 1007171 | 905700 | 961223 | -10.9 |
| Other Service | 1177646 | 1410900 | 1388028 | 1038200 | 1615400 | 12.14 |
| Consumer Loan | 512285 | 1045116 | 1028174 | 287200 | 514407 | 27.36 |
| Others | 1279589 | 6019410 | 6992985 | 10708951 | 12815305 | 114.85 |
| Total | 26289750 | 28612217 | 28155899 | 34171651 | 40218719 | 11.58 |

(Source: Annual reports of ADBL)
Above table of loan collection shows that although purpose wise loan collection is in fluctuating trend, total loan collection is in increasing movement from Rs. 26.30 billion in FY 2004/05 to Rs. 40.21 billion in FY 2008/09. The highest collection has been found in marketing and that of lowest in transportation instrument production. The collection table emphasizes incremental trend of collection in all sectors except mines, services industry.

### 4.7.3 Purpose Wise Loan Outstanding from FY2004/05 to 2008/09

Table 4.8
Purpose wise Loan Outstanding (Rs. in '000)

| Loan Purpose | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Growth |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Agriculture | 10435864 | 10112050 | 10616060 | 10583900 | 8997398 | -3.35 |
| Mines | 1779 | 2579 | 3259 | 3200 | 399 | -4.5 |
| Production | 4214789 | 4241445 | 4120381 | 4392200 | 5234604 | 5.89 |
| Construction | 1088981 | 1364031 | 1598593 | 1850000 | 2449497 | 22.65 |
| Agricultural Tools | 385259 | 403631 | 411607 | 423600 | 102493 | -16.54 |
| Trans. Instrument <br> Production | 102827 | 99575 | 96323 | 93600 | 93524 | -2.33 |
| Trans.\& comm. <br> Service | 699567 | 596028 | 492489 | 473100 | 425752 | -11.53 |
| Marketing | 9609044 | 8966634 | 8953228 | 9663600 | 10310718 | 1.95 |
| Finance \& Insurance | 815536 | 874980 | 896686 | 862500 | 727380 | -2.43 |
| Service Industry | 1150328 | 1430637 | 1633698 | 1823300 | 1863562 | 13.09 |
| Other Service | 1066630 | 1410661 | 1651770 | 1933700 | 2342550 | 21.89 |
| Consumer Loan | 111200 | 1188752 | 1266304 | 1359500 | 1985002 | 16.72 |
| Others | 627270 | 2619743 | 2699971 | 3142518 | 3768224 | 89.25 |
| Total | 31309074 | 33310746 | 34440369 | 36604718 | 38301103 | 5.18 |

(Source: Annual reports of ADBL)

As shown in above loan outstanding table, the total loan outstanding is seemed to be increasing constantly, which is not good for the bank. The total loan outstanding is increased from Rs. 31.31 billion in F.Y.2004/05 to Rs. 38.30 billion in FY 2008/09. The highest outstanding loan has been viewed in agricultural sector followed by marketing and lowest outstanding loan is in mines and transportation instrument production. The outstanding table emphasizes the incremental trend of outstanding loan except finance and insurance, transportation instrument production. The highest outstanding in the case of agricultural sector is because of its prior banking activities which is only focused on agriculture.

### 4.8 Performing and Non-performing Loan

With a view to improving the quality of assets commercial banks, NRB has directed the commercial banks to classify their outstanding loans and advances on the basis of time effective from fiscal year 2001/02. The categories are pass, substandard, doubtful and bad. Pass loan is defined as performing loan whose principle amount is not past
due for a period up to three months. Substandard, doubtful and bad loan are defined as nonperforming loan. Bank's non-performing should be as low as possible so that the chances of non-recovery will be less. According to the international banking norms, the percentage of non-performing loan should be within $4 \%$ to $5 \%$. The table given below measures the amount and percentage of performing and non-performing loan on total loan outstanding:

### 4.8.1 Performing loan on total loan outstanding

Table 4.9
Percentage of Performing Loan on Total Loan Outstanding (Rs. in '000)

| Fiscal Year | Total Loan <br> Outstanding | Performing Loan | \% of Performing Loan <br> on Total Loan |
| :---: | :---: | :---: | :---: |
| $2004 / 05$ | 31309074 | 25305081 | 80.82 |
| $2005 / 06$ | 33310746 | 26451752 | 79.41 |
| $2006 / 07$ | 34440369 | 28255074 | 82.04 |
| $2007 / 08$ | 36604718 | 32794718 | 89.59 |
| $2008 / 09$ | 38301103 | 34983165 | 91.33 |

(Source: Annual Reports of ADBL)

The above table shows the percentage of performing loan in respect to the total loan outstanding. The above percentage figures indicate that the performing loan is constantly increasing during the review period except in the FY 2005/06. The percentage of performing loan on the total loan outstanding from FY 2004/05 to FY $2008 / 09$ are $80.82 \%, 79.41 \%, 82.04 \%, 89.59 \%$ and 91.335 From the above percentage figures, it can be said that the bank is doing well in loan management. The following bar diagram also analyzes the amount of performing loan on total loan outstanding.

Figure 4.9
Performing Loan on Total Loan Outstanding


### 4.8.2 Non-performing loan on Total loan outstanding

Table 4.10
Percentage of Non-performing loan to total loan outstanding (R s. in '000)

| Fiscal Year | Total Loan <br> Outstanding | Non-Performing <br> Loan | \% of Non-Performing <br> Loan <br> on Total Loan |
| :--- | :--- | :--- | :--- |
| $2004 / 05$ | 31309074 | 6003993 | 19.18 |
| $2005 / 06$ | 33310746 | 6858994 | 20.59 |
| $2006 / 07$ | 34440369 | 6185295 | 17.96 |
| $2007 / 08$ | 36604718 | 3810000 | 10.41 |
| $2008 / 09$ | 38301103 | 3317938 | 8.66 |

(Source: Annual reports of ADBL)
The above table shows the percentage of non-performing loan in respect to the total loan outstanding. The above percentage figures indicate that the non-performing loan is constantly decreasing during the review period except in the FY 2005/06. The percentage of performing loan on the total loan outstanding from FY 2004/05 to FY $2008 / 09$ are $19.18 \%, 20.59 \%, 17.96 \%, 10.41 \%$ and $8.66 \%$ respectively.

The above table shows that the percentage of non-performing loan to total loan outstanding is high in respect to international banking norms. That is, according to International Banking Norms, the percentage of non-performing loan on total loan
outstanding should be within $4 \%$ to $5 \%$. The main reason behind this was that bank disbursed huge amount of loan without sorting out about the collateral and also due to delay of loan repayment by the borrowers. The following bar diagram also analyzes the amount of performing loan on total loan outstanding

Figure 4.10
Non-performing Loan on Total Loan Outstanding


### 4.9 Targeted and Achieved Loan Disbursement and Collection

Planning and project department of ADBL determined targeted loan disbursement and collection for each and every year. Actual loan disbursement and collection occurs in every year of business operation.

### 4.9.1 Targeted Loan Disbursement and Achieved Loan Disbursement

Table 4.11
Percentage Change of Targeted and Actual Loan Disbursement (R s. In '000)

| FY | Loan Disbursement |  | Difference | Difference (\%) |
| :---: | :---: | :---: | :---: | :---: |
|  | Targeted | Actual |  |  |
| $2004 / 05$ | 14550000 | 28255509 | 13705509 | 94.2 |
| $2005 / 06$ | 16970000 | 30613889 | 13643889 | 80.4 |
| $2006 / 07$ | 18040000 | 29285522 | 11245522 | 62.34 |
| $2007 / 08$ | 19260000 | 36335966 | 17075966 | 88.66 |
| $2008 / 09$ | 34330000 | 41915104 | 7585104 | 22.11 |

(Source: Planning Department of ADBL)

The targeted and actual investment amount is fluctuating year by year. The lowest targeted loan investment amount is Rs. 14550000 thousand in FY 2004/05 and the highest targeted amount is Rs. 34330000 thousand in FY 2008/09. Actual loan disbursement is also found in increasing trend. The lowest loan disbursement is Rs. 28255509 thousand in FY 2004/05 and the highest actual loan disbursement amount is 41915104 thousand in FY 2008/09.

Although the percentage change between targeted loan disbursement and achieved loan disbursement is in fluctuating trend, the actual investment is higher than targeted amount. The percentage figures are $94.20 \%, 80.40 \%, 62.34 \%, 88.66 \%$ and $22.11 \%$ in F/Y 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively.

The tabulated critical value at $\mathrm{t} 5 \%$ level of significance for two tailed test at 8 degree of freedom is 2.306, which is less than the calculated value $t^{*} 2.90$ Therefore, there is significant difference between the targeted amount and achieved amount of loan disbursement. This mean the targeted amount is extremely differ from the achieved amount, as the achieved amount is high than targeted. The comparative growth figure is presented in following line diagram.

Figure 4.11
Targeted \& Achieved Disbursement


### 4.9.2 Targeted Loan Collection and Achieved Loan Collection

Table 4.12
Percentage change of targeted and actual loan collection (Rs. in '000)

| Fiscal Year | Loan Collection |  | Difference | Difference (\%) |
| :---: | :---: | :---: | :---: | :---: |
|  | Targeted | Actual |  |  |
| $2004 / 05$ | 10310000 | 26289750 | 15979750 | 154.99 |
| $2005 / 06$ | 11720000 | 28612217 | 16892217 | 144.13 |
| $2006 / 07$ | 13160000 | 28155899 | 14995899 | 113.95 |
| $2007 / 08$ | 14730000 | 34171617 | 19441617 | 131.99 |
| $2008 / 09$ | 32080000 | 40218719 | 8138719 | 25.39 |

(Source: Planning department of $A D B L$ )

The targeted and achieved loan collection amount is increased annually. The lowest targeted loan collection amount is Rs. 10310000 thousand in FY 2004/05 and the highest targeted amount is Rs. 32080000 thousand in FY 2008/09. Actual loan collection is also found in increasing trend. The lowest loan collection is Rs. 26289750 thousand in FY 2004/05 and the highest actual loan collection amount is 40218719 thousand in FY 2008/09.

The percentage change between targeted loan collection and achieved loan collection is $154.99 \%, 144.13 \%, 113.95 \%, 131.99 \%$ and $25.29 \%$ from F/Y 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively.

The tabulated critical value at $\mathrm{t} 5 \%$ level of significance for two tailed test at 8 degree of freedom is 2.306 , which is less than the calculated value $t^{*} 3.19$. Therefore, there is significant difference between the targeted amount and achieved amount of loan collection. This mean the targeted amount is extremely differ from the achieved amount, as the achieved amount is high than targeted. The comparative amount is summarized in following line diagram.

The difference percentage between targeted and achieved loan disbursement and collection shows error in setting standard of targeted loan disbursement and collection because there is great deviation.

Figure 4.12
Targeted \& Achieved Loan Collection


### 4.10 Financial Analysis Tools

### 4.10.1 Balance Sheet Analysis

Balance sheet is a classified summary of all assets and liabilities balance as well as all liabilities and credit balance after balance pertaining to profit and loss account have been collected together in a separate account. It is a financial statement used to summarize the financial position of a company on a given date. A quick look at the balance sheet shows the financial health of the company. Therefore, investors, lenders, bankers and creditors like to see the balance sheet of the company before making any financial deals so that they can know the financial worthiness of the company. Management of the asset and liabilities is important prerequisite for the stability and profitability of every bank. Thus it is the main intend of every commercial bank's management to optimize the portfolio of assets and liabilities with regard to specific bank policy. The principle component of the commercial bank's assets and liabilities are total deposit and loan disbursement.

## Table 4.13

## Comparative balance sheet of Agricultural Development Bank Limited

## Agricultural Development Bank Limited

Comparative Balance Sheet

|  | Rs. In ' 000 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Capital \& Liabilities | Fiscal Year |  |  |  |  |
|  | 2004/05 | 2005/06 | 2006/07 | 2007/08 | 2008/09 |
| Share Capital | 1677615 | 6478000 | 7528000 | 10777500 | 10777500 |
| Reserves \& Surplus | -7666883 | -7313358 | -6254909 | -5442189 | -452327 |
| Debentures \& Bonds | 0 | 0 | 0 | 0 | 0 |
| Borrowings | 3589299 | 513532 | 373947 | 257373 | 198250 |
| Deposits | 27223046 | 29631817 | 32416358 | 32553827 | 35159610 |
| Bills Payable | 0 | 0 | 0 | 0 | 0 |
| Proposed Dividend Payable | 0 | 0 | 0 | 0 | 276000 |
| Income Tax Liabilities | 235147 | 748270 | 284744 | 365242 | 597719 |
| Other Liabilities | 6164751 | 5239362 | 3812071 | 5174996 | 5261987 |
| Total Liabilities | 31222975 | 35297623 | 38160211 | 43686749 | 51818739 |
| Assets |  |  |  |  |  |
| Cash Balance | 680844 | 746812 | 749552 | 905235 | 1413971 |
| Balance with Nepal Rastra Bank | 1730302 | 3018299 | 2001144 | 1806731 | 2717813 |
| Balance with Banks | 623892 | 1006590 | 938625 | 912032 | 1075869 |
| Money at Call or Short Notice | 0 | 0 | 161599 | 49995 | 2244198 |
| Investment | 1355833 | 1511330 | 3177461 | 4757097 | 4896061 |
| Loans, Advances \& Bills Purchased | 22638255 | 24900913 | 27252333 | 30589428 | 32603096 |
| Fixed Assets | 816191 | 882083 | 788868 | 781149 | 803333 |
| Non-Banking Assets | 0 | 0 | 0 | 0 | 0 |
| Other Assets | 3377658 | 3231596 | 3090629 | 3885082 | 6064398 |
| Net Loss | 0 | 0 | 0 | 0 | 0 |
| Total Assets | 31222975 | 35297623 | 38160211 | 43686749 | 51818739 |
| Growth (\%) | - | 13.05 | 8.11 | 14.48 | 18.61 |

Source: Annual Report of ADBL

From the balance sheet it is shown that the total liabilities and total assets are increasing in upward trend except in FY 2004/05 and FY 2008/09, because the country was facing the imperfect political situation. Hence in the liability side, the deposit, the amount which means to invest, is also increasing annually in upward
trend from FY 2004/05 to FY 2008/09 i.e. in amount Rs.27223046, Rs.29631817, Rs. 32416358 , Rs. 32553827 and Rs. 35159610 thousand respectively. In asset side also, amount of loan advances and bill purchased is in increasing from FY 2004/05 to FY 2008/09, i.e. in amount Rs. 22638255, Rs. 24900913, Rs. 27252333, Rs. 30589428 and Rs. 32603096 thousand respectively. Almost major part of the amount received from deposit is expensed in giving loan. This shows the bank is utilizing the maximum amount of deposit investing in loans, which indicate the bank having sound financial position.

The total amount of assets and liabilities is increasing each sampled year, which is shown in percentage ratio. The percentage ratio is $13.05 \%, 8.11 \%, 14.48 \%$ and $18.61 \%$ respectively from FY 2004/05 to FY 2008/09. From the assigned percentage ratio, it is seemed that there is gradual increase in balance sheet. It means bank is doing well in both activities i.e. in deposit collection and loan investment.

### 4.10.2 Profit \& Loss Account Analysis

As profit and loss account is the second part of trading and profit and loss account, it is prepared after preparing the trading account for ascertainment of gross profit or loss. It is an account which is designed to highlight the net profit earned or net loss incurred by the company from its business transactions during accounting period.

## Table 4.14

## Comparative Profit and Loss Account of Agricultural Development Bank

## Limited

Agricultural Development Bank Limited
Comparative Profit \& Loss Account
Rs. In ' 000

| Particulars | Fiscal Year |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2004/05 | 2005/06 | 2006/07 | 2007/08 | 2008/09 |
| Interest Income | 3915225 | 4033545 | 4623096 | 3961131 | 4231143 |
| Interest Expenses | 1487499 | 1439844 | 1605867 | 1641208 | 1157070 |
| Net Interest Income | 2427726 | 2593701 | 3017229 | 2319923 | 3074073 |
| Commission \& Discount | 42646 | 42262 | 49818 | 71139 | 90045 |
| Other Operating Income | 286315 | 164861 | 232033 | 350677 | 382245 |
| Exchange Fluctuation Income | 0 | 2834 | 0 | 11955 | 22096 |
| Total Operating Income | 2756687 | 2803658 | 3299080 | 2753694 | 3568459 |
| Personnel Expenses | 963176 | 1775337 | 1306805 | 1849133 | 2486716 |
| Other Operating Expenses | 447881 | 254889 | 277546 | 288020 | 300691 |
| Exchange Fluctuation Loss | 11937 | 0 | 14061 | 0 | 0 |
| Operating Profit Before Provision | 1333693 | 773432 | 1700668 | 616541 | 781052 |
| Provision for Possible Losses | 1505105 | 149285 | 337783 | 2677477 | 2184688 |
| Operating Profit | -171412 | 624147 | 1362885 | -2060936 | -1403636 |
| Non-operating Income/(Expense) | 92780 | 117764 | 7419 | 18336 | 634989 |
| Loan Loss Provision Written-back | 0 | 549333 | 1803215 | 4064478 | 1381931 |
| Profit From Regular Activities | -78632 | 1291244 | 3173519 | 2021878 | 613284 |
| Income / Expenses from Extraordinary Activities | 0 | -355266 | -1883003 | -1212162 | 1106749 |
| Net Profit from All Activities | -78632 | 935978 | 1290516 | 809717 | 1720033 |
| Employee Bonus Provision | 0 | 69331 | 95594 | 59979 | 127410 |
| Income Tax Provision | 0 | 513123 | 136473 | 80499 | 232476 |
| This Year | 0 | 148270 | 136473 | 80499 | 232476 |
| Up to Last Year | 0 | 364853 | 0 | 0 | 302547 |
| Net Profit / (Loss) | -78632 | 353524 | 1058449 | 669239 | 1057600 |
| Growth | 99.01 | 549.6 | 199.4 | -40.55 | 58.03 |

Source: Annual Report of ADBL/N

The above profit and loss account show the bank's worth position during the sampled period. So it can be reviewed that the bank gains the good worth position with the achievement of increasing growth percentage ratio except in FY 2007/08. it can be seen that there is also the profitable position of the company in FY 2007/08 but it is low as compared to the last year i.e. FY 2006/07. Just as this fiscal year i.e. F/Y $2008 / 09$, the percentage ratio is increased to $58.03 \%$, so this does not indicate that the bank is not profitably weak

Table 4.15
Interest received from investment of loan

| Years | $\mathbf{2 0 0 4 / 0 5}$ | $\mathbf{2 0 0 5 / 0 6}$ | $\mathbf{2 0 0 6 / 0 7}$ | $\mathbf{2 0 0 7 / 0 8}$ | $\mathbf{2 0 0 8 / 0 9}$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Interest received from Loan | 3842793 | 3921137 | 4548409 | 3181489 | 4032744 |
| Total Income | 4336966 | 4910599 | 6715581 | 8477716 | 6742450 |
| Income \% | 88.61 | 79.85 | 67.73 | 37.53 | 59.81 |

Source: Annual Report of ADBL/N
From the interest table, the income received from the interest takes maximum majority in total income. With respect to the total income, the interest income received from loan is $88.61 \%, 79.85 \%, 67.73 \%, 37.53 \%$ and $59.81 \%$ in FY 2004/05 to FY 2008/09 respectively. Although, the income from interest takes majority measurement in total income, it is declining year by year in last four years. Hence this indicates that the loan and interest collecting ratio is not analogous with loan disbursement in last four years. But in this fiscal year, i.e. F/Y 2008/09, the income received from the interest is increased in respect to last year. So it can be assumed that bank is gaining well performance in loan and interest collection.

### 4.11 Major Findings of the Study

### 4.11.1 Finding Obtained from Analysis of Deposit Collection and Loan Disbursement

There is a good picture of deposit collection with increment every year from fiscal year 2004/05 to 2008/09. But increased percentage of deposit collection does not follow the consistent trend, rather it is fluctuating. Like wise loan disbursement amount has also increased every year but with fluctuating rate. In the FY 2008/09, the percentage of loan disbursed is high as compare to other which indicates that the maximum amount is utilized as loan in respect to deposit collected in that year. The
calculated coefficient of correlation is 0.82 , which shows that deposit collected loan disbursed are positively correlated. Hence, it can be that ADBL has successfully mobilized its increasing deposit in granting during the five year period.

### 4.11.2 Findings Obtained from Analysis of Loan Disbursement, Loan Collection and Loan Outstanding

Actual loan investment and collection is increasing year by year with fluctuating growth rate. Although there is negative trend of individual growth percentage of loan disbursement and loan collection, the growth percentage of loan collection to disbursement is high in FY 2006/07 in comparison to other years. The highest percentage of collection to disbursement is $96.14 \%$. There exist a highly positive relationship between loan collection and disbursement, i.e. 0.998 , which indicates that if loan collection is high then there will be high amount of loan disburse.

Though the loan collection is in fluctuating trend, there is increasing trend of outstanding loan but it is not so good for the bank. Although the loan outstanding amount is increasing each year, the growth percentage is declining; it means bank is gaining good position in loan management. Even the loan outstanding is inclining upward; the percentage of loan collection to loan outstanding is also in climbing trend. This shows that the amount of collection to outstanding is high as of amount of collection to disbursement. The highest percentage of loan collection to outstanding is $105.01 \%$ in FY 2008/09 and also there exist positive relationship between loan collection and outstanding.

### 4.11.3 Finding Obtained from Purpose-Wise Loan Disbursement, Collection and Outstanding

The total loan disbursement is in increasing trend, the movement of loan disbursement for different purposes is fluctuating and irregular path. The total loan investment increased from Rs. 28.56 billion in FY 2004/05 to Rs. 41.91 billion in FY 2008/09. The highest investment has been proceeding in marketing activities and that of lowest in mines due to various complicated situation happening in the country.

Although purpose wise loan collection is in fluctuating trend, total loan collection is in increasing movement from Rs. 26.30 billion in FY 2004/05 to Rs. 40.22 billion in

FY 2008/09. The highest collection has been found in marketing and that of lowest in transportation instrument production. The collection table emphasizes incremental trend of collection in all sectors except mines, services industry and those of agricultural activities. The total loan outstanding is seemed to be increasing constantly, which is not good for the bank. The total loan outstanding is increased from Rs. 31.31 billion in F.Y.2004/05 to Rs. 38.30 billion in FY 2008/09. The highest outstanding loan has been viewed in marketing and lowest outstanding loan is in mines and transportation instrument production. The outstanding table emphasizes the incremental trend of outstanding loan except agricultural sector, transportation instrument production.

### 4.11.4 Finding Obtained from Analysis of Performing \& Non-Performing Loan

Out of total loan outstanding, performing and non-performing loan are classified according to there recovery due date The performing loan is constantly increasing during the review period except in the FY 2005/06, which can be said that the bank is doing well in loan management. The non-performing loan is constantly decreasing during the review period except in the FY 2005/06. Although the percentage of nonperforming loan to total loan outstanding is high in respect to international banking norms, but bank make an effort to meet those norms in FY 2008/09. That is, according to International Banking Norms, the percentage of non-performing loan on total loan outstanding should be within $4 \%$ to $5 \%$. But ADBL tries to reduce the percentage of non-performing loan and keep trying to increase the performing loan percentage

### 4.11.5 Finding Obtained from Analysis of Targeted and Achieved Loan Disbursement and Collection

Targeted loan disbursement and collection is set according to company rules. Although the targeted disbursement and collection is increasing, the percentage difference between targeted and achieved loan disbursement and collection is in fluctuating trend. Overall the targeted and achieved investment and loan collection amount is increased annually. The targeted amount of loan disbursement and collection is vastly different from achieved amount, as the amount achieved is very high. It is excellent for the ADBL/N profit and performance. Since previous years, it is seemed that targeted and achieved amounts of disbursement and collection have
vast difference, so the bank had set the target as it make not so difference with achieved amount by using forecasting technique. And it makes real analysis.

## CHAPTER - V <br> SUMMARY, CONCLUSION AND RECOMMENDATION

The research conducted is about the loan management and collection of ADBL. The main objectives of the study are to make analysis on deposit collection, loan disbursement, loan collection and also the loan outstanding with the help of various statistical tools. After the analysis, to make research complete, the summary and conclusion are drawn from the findings of analysis. So this chapter is a complete package of conclusion and suggestion, which would be meaningful to top management of the bank to initiate action and achieve the desire result. Summary gives the brief introduction to the entire chapter of the study and shows the actual facts of the present situation under the topic of the study. Conclusions of the findings are based on the consequences of the analysis of relevant data by using various financial and statistical tools.

### 5.1 Summary

Financial institution plays a crucial role in the process of economic growth of a country. Banks are financial regulator, which collects funds and invest them in productive sector. Commercial bank is one of the organs of capital market, which accumulates the scattered fund in the deposit and utilizes them by giving away credit to the various sectors like trade, industry, agriculture etc. The well-managed investing activities of bank enhance the economic health of the country because the loan provided by bank supports the growth of new business, which in turn uplift the economic activities of the country. At present, there are 26 commercial banks operating in Nepal. Although agricultural development bank has started its banking operation as development bank, now it has enhanced its operation toward the commercial banking.

As the research covers the lending and recovery activities of the bank, deposit collected has also been studied as it is associated with the loan disbursement. The main function of bank is to collect the scattered money from public in the form of deposit and to disburse it as loan in order to obtain profit. Bank charges higher interest rate to borrowers than they pay to depositors. Success of bank does not rely on
mobilization of deposit as loan, the timely recovery of loan is also equally important. If loan are not recovered on time, it becomes non-performing loan and the bank has to maintain higher amount of loan loss provision which leads to stumpy profit. Hence, the profitability of the bank is very much affected by the lending function. In this research, analysis and presentation of data has been conducted by using various financial and statistical tools.

First of all, deposit collection is analyzed for the further analysis. The analysis of deposit collection by the bank reveals that amount of deposit collected every year has increased except the last review period. The highest deposit collection is $8.59 \%$ in FY 2006/07. But in FY2007/08, the deposit collection is low i.e. $0.42 \%$, due to low interest rate in comparison to others and also overgrowing of commercial banks, which cause external distribution of bank. Another reason of low deposit collection is investment of fund in non-banking sector like shares, real estate etc. considering these reason of low deposit collection, the bank has to make strategy to raising the deposit. Again, in FY 2008/09, the deposit collection is increased to $8.00 \%$.

The amount of loan disbursed has increased every year. As the highest loan disbursement is $19.04 \%$ in FY 2007/08 and the correlation coefficient shows that there is significant relationship between deposit collected and loan disbursed. It implies that the deposit collected has significantly been mobilized in loan disbursement. At same time, the loan collection is also increasing annually. As of loan disbursement, the highest loan collection is $20.74 \%$ in FY 2004/05, which is followed by $17.70 \%$ in FY2008/09 and the correlation between loan collection and loan disbursement is highly positive.

The loan collection status of ADBL is satisfactory increasing and at same time, the outstanding loan is also inclining upward, but it is not so good for the bank. The highest percentage of outstanding loan is $6.70 \%$ in FY 2004/05. Although the amount of loan outstanding is increasing, its percentage is decreasing. The percentage ratio of loan collection to outstanding is increasing year by year, which means the correlation between loan collection and loan outstanding is perfectively positive. It means that the recovery of disburse and outstand loan is considerably well, which indicates good financial health of bank.

Despite of being loan and advances more profitable than other assets, it creates risk of non-repayment. Therefore they are classified into performing and nonperforming loan on the basis of overdue ageing schedule. Analysis of performing and non-performing loan shows that the performing loan is highest in FY 2008/09 and in same year nonperforming is declined to 8.66 , which is very close to international norms.

Overall, it can be said that the bank's loan disbursement and recovery is going well and it will increase the bank's financial strength. Summary of overall analysis is summarized as follows:

| Correlation of disbursement to deposit | 0.820 |
| :--- | :--- |
| Correlation of collection to disbursement | 0.998 |
| Correlation of collection to outstanding | 0.950 |

### 5.2 Conclusion

The analysis of the study reveals that the loan disbursement and collection function of ADBL is satisfactory. But the fluctuating trend of loan disbursement and recovery can't be overlooked. The deposit collection of bank shows the increasing pattern but at a fluctuating rate. In the same way, the percentage of loan disbursed is also in increasing trend though it is fluctuating. Although the deposit collection is low in 2007/08, in FY 2008/09, growth rate of deposit collection is achieved back to $8.00 \%$ and also the loan investment is high.

The amount of non-performing loan has been declining, which shows the better performance of bank. Although the nonperforming loan is decreasing, it is not sufficient for the bank's better position. As according to the International banking norms, the percentage of non-performing loan should be 4 to $5 \%$ of total outstanding loan. So it is not as good as required. The reason for decreasing non-performing loan is written off of them according to direction given by NRB, i.e. the non-performing loans overdue above 5 years are to be written off. Though the reason of low amount of non-performing loan is writing off of them, it improves the annual performance of bank.

The total loan disbursement, collection and outstanding of ADBL is in increasing trend. From the overall data, higher volume of amount has been investing in the agricultural sector in comparison with other sector. Hence, it seems ADBL has promoting overall agricultural sector. ADBL is running through the guide line of NRB and its supervision and direction is always accepted by the bank. After 38 year of establishment, ADBL has just been incorporated as public limited. It operates as "A" category financial institution under the legal framework of BAFIO and Company Act 2053. Now days, ADBL is working as public company. Bearing many constraints, it is going to change its lending, recovery and collection policy by time to time in near future. So we can hope that it will make investment in the entire sector.

### 5.3 Recommendations

One of the objectives of this study is to provide a number of suggestions after analyzing the data of ADBL. The following suggestion will be helpful to the organization and other interested person and organization.

1. Although there is satisfactory condition of loan disbursement and collection function of bank, the fluctuating trend should be revealed into smooth and regular increment.
2. The deposit collection is directly affecting the disbursement of loan. So the bank should make positive effort to increase the deposit by providing equivalently high interest rate as of other.
3. Loan must be given if the banker is satisfied that borrower can repay it from the cash flow generated from the operating activities. However the bank wants to ensure that their loan is repaid even incase of failure of business. To prevent the loss, the bank takes collateral for recovery of loan. So, the bank should take proper valuation of collateral.
4. Loan recovery is not as good as loan disbursement. Poor recovery is cause of weak supervision, high interest and other charges laid by bank, poor liquidity of borrower, so it is recommended that the recovery policy and procedure must be exercised strictly.
5. There occurs the chance of bank's failure due to the higher percentage of nonperforming loan, though it is decreased. So it is recommended that high intention is given in reducing the level of non-performing loan as to the banking norms.
6. As the bank has set up the targets for loan disbursement, collection and outstanding, it is seemed the achieved is more than targeted, which indicates that bank is performing well. So the target must set targets for every fiscal year.
7. Professionals should be given opportunity to manage the banks and introduce effective management to run the organization independently. And unnecessary obstacles and disturbance of employee union should be minimized.
8. Before several years Nepal was facing the problem of insurgency which resulted to shift the branches from rural areas to the urban areas but after change of political scenario of the country. Nepal is heading toward the peace keeping process. More consciously Nepal is in transition stage. This is the perfect period for resifting those branches back to the respective areas.
9. Now ADBL has changed into public limited, it should maintain the new commercial loan other than agricultural loan to attract more customers relating to agro and non-agro business.
10. Political influences in loan disbursement should be avoided as it may lead worse condition to the bank's loan management process.

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## APPENDIX-1

## a. Correlation analysis of deposit collection and loan disbursement

Let,

$$
\begin{array}{ll}
X= & \text { Deposit Collection } \\
Y= & \text { Loan Disbursement }
\end{array}
$$

Rs. in billion

| Fiscal <br> Year | $\mathbf{X}$ | $x=(X-\bar{X})$ | $\mathbf{x}^{\mathbf{2}}$ | $\mathbf{Y}$ | $y=(Y-\bar{Y})$ | $\mathbf{y}^{\mathbf{2}}$ | $\mathbf{x y}$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 27.22 | -4.18 | 17.44 | 28.26 | -5.02 | 25.24 | 20.98 |
| $2005 / 06$ | 29.63 | -1.77 | 3.12 | 30.61 | -2.67 | 7.15 | 4.72 |
| $2006 / 07$ | 32.42 | 1.02 | 1.05 | 29.29 | -3.99 | 15.95 | -4.09 |
| $2007 / 08$ | 32.55 | 1.15 | 1.33 | 36.34 | 3.06 | 9.34 | 3.53 |
| $2008 / 09$ | $\mathbf{3 5 . 1 6}$ | $\mathbf{3 . 7 6}$ | $\mathbf{1 4 . 1 7}$ | $\mathbf{4 1 . 9 2}$ | $\mathbf{8 . 6 4}$ | $\mathbf{7 4 . 5 8}$ | $\mathbf{3 2 . 5 1}$ |
|  | $\mathbf{1 5 6 . 9 8}$ |  | $\mathbf{3 7 . 1 1}$ | $\mathbf{1 6 6 . 4 2}$ |  | $\mathbf{1 3 2 . 2 6}$ | $\mathbf{5 7 . 6 5}$ |

$\mathrm{N}=5$
$\bar{X}=\frac{\sum X}{N}=\frac{156.98}{5}=31.40$
$\bar{Y}=\frac{\sum Y}{N}=\frac{166.42}{5}=33.28$
$\mathrm{r}=\frac{\sum x y}{\sqrt{\sum x^{2} \sqrt{\sum y^{2}}}}=\frac{57.65}{\sqrt{37.11} \sqrt{132.26}}=0.82$
$r^{2}=0.67$
$\mathrm{t}^{*}=\frac{r}{\sqrt{\frac{1-r^{2}}{n-2}}}=\frac{0.82}{\sqrt{\frac{1-(0.82)^{2}}{5-2}}}=2.50$

## b. Correlation Analysis of Loan Disbursement and Loan Collection

Let,
$\mathrm{X}=$ loan disbursement
$\mathrm{Y}=$ loan collection

Rs. in billion

| Fiscal <br> Year | $\mathbf{X}$ | $x=(x-\bar{X})$ | $\mathbf{x}^{\mathbf{2}}$ | $\mathbf{Y}$ | $y=(Y-\bar{Y})$ | $\mathbf{y}^{\mathbf{2}}$ | $\mathbf{x y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 28.26 | -5.024 | 25.24 | 26.29 | -5.2 | 27.04 | 26.12 |
| $2005 / 06$ | 30.61 | -2.674 | 7.15 | 28.61 | -2.88 | 8.29 | 7.70 |
| $2006 / 07$ | 29.29 | -3.994 | 15.95 | 28.16 | -3.33 | 11.09 | 13.30 |
| $2007 / 08$ | 36.34 | 3.056 | 9.34 | 34.17 | 2.68 | 7.18 | 8.19 |
| $2008 / 09$ | 41.92 | 8.636 | 74.58 | 40.22 | 8.73 | 76.21 | 75.39 |
|  | $\mathbf{1 6 6 . 4 2}$ |  | $\mathbf{1 3 2 . 2 6}$ | $\mathbf{1 5 7 . 4 5}$ |  | $\mathbf{1 2 9 . 8 2}$ | $\mathbf{1 3 0 . 7 1}$ |

$\mathrm{N}=5$

$$
\bar{X}=\frac{\sum X}{N}=\frac{166.43}{5}=33.28
$$

$$
\bar{Y}=\frac{\sum Y}{N}=\frac{157.45}{5}=31.49
$$

$$
\mathrm{r}=\frac{\sum x y}{\sqrt{\sum x^{2} \sqrt{\sum y^{2}}}}=\frac{130.71}{\sqrt{132.26} \sqrt{129.82}}=0.998
$$

$r^{2}=0.995$
$\mathrm{t}^{*}=\frac{r}{\sqrt{\frac{1-r^{2}}{n-2}}}=\frac{0.998}{\sqrt{\frac{1-(0.998)^{2}}{5-2}}}=24.58$

## c. Correlation Analysis of Loan Collection and Loan Outstanding

Let,
$\mathrm{X}=$ loan collection
$\mathrm{Y}=$ loan outstanding
Rs. in billion

| Fiscal <br> Year | $\mathbf{X}$ | $x=(X-\bar{X})$ | $\mathbf{x}^{\mathbf{2}}$ | $\mathbf{Y}$ | $y=(Y-\bar{Y})$ | $\mathbf{y}^{\mathbf{2}}$ | $\mathbf{x y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 26.29 | -5.20 | 27.04 | 31.31 | -3.48 | 12.12 | 18.11 |
| $2005 / 06$ | 28.61 | -2.88 | 8.29 | 33.31 | -1.48 | 2.20 | 4.27 |
| $2006 / 07$ | 28.16 | -3.33 | 11.09 | 34.44 | -0.35 | 0.12 | 1.17 |
| $2007 / 08$ | 34.17 | 2.68 | 7.18 | 36.6 | 1.81 | 3.27 | 4.85 |
| $2008 / 09$ | 40.22 | 8.73 | 76.21 | 38.3 | 3.51 | 12.31 | 30.62 |
|  | $\mathbf{1 5 7 . 4 5}$ |  | $\mathbf{1 2 9 . 8 2}$ | $\mathbf{1 7 3 . 9 6}$ |  | $\mathbf{3 0 . 0 2}$ | 59.02 |

$\mathrm{N}=5$
$\bar{X}=\frac{\sum X}{N}=\frac{157.45}{5}=31.49$
$\bar{Y}=\frac{\sum Y}{N}=\frac{173.96}{5}=34.79$
$\mathrm{r}=\frac{\sum x y}{\sqrt{\sum x^{2} \sqrt{\sum y^{2}}}}=\frac{59.02}{\sqrt{129.82} \sqrt{30.02}}=0.95$
$r^{2}=0.89$
$\mathrm{t}^{*}=\frac{r}{\sqrt{\frac{1-r^{2}}{n-2}}}=\frac{0.95}{\sqrt{\frac{1-(0.95)^{2}}{5-2}}}=5.05$

## APPENDIX - 2

a. Trend Analysis of Total Deposit Collection

Rs. in billion

| $\mathbf{F Y}$ | Year (x) | Total deposit (y) | $\mathbf{x y}$ | $\mathbf{x}^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 1 | 27.22 | 27.22 | 1 |
| $2005 / 06$ | 2 | 29.63 | 59.26 | 4 |
| $2006 / 07$ | 3 | 32.42 | 97.26 | 9 |
| $2007 / 08$ | 4 | 32.55 | 130.2 | 16 |
| $2008 / 09$ | 5 | 35.16 | 175.8 | 25 |
|  | $\mathbf{\Sigma x = 1 5}$ | $\mathbf{1 5 6 . 9 8}$ | $\mathbf{4 8 9 . 7 4}$ | $\mathbf{\Sigma \mathbf { x } ^ { \mathbf { 2 } } = 5 5}$ |

The regression equation of total deposit (y) on years ( $x$ ) is as follows:
$y=a+b x$ . (1)

Where, a and b are constants
The normal equations are
$\sum y=n a+b \sum x$
$\sum x y=a \sum x+b \sum x^{2}$

Substituting the values in above equations we get,
$156.98=5 \mathrm{a}+15 \mathrm{~b}$
$489.74=15 \mathrm{a}+55 \mathrm{~b}$

Multiply equation no. (2) By 3 and subtracting it from equation (3), we get
$470.94=15 \mathrm{a}+45 \mathrm{~b}$
$489.74=15 \mathrm{a}+55 \mathrm{~b}$
$18.80=10 b$
$\therefore \mathrm{b}=1.88$
Putting the value of (b) in equation number (2), we get
$156.98=5 \mathrm{a}+15 \times 1.88$
$156.98=5 \mathrm{a}+28.2$
$5 \mathrm{a}=128.78$
$a=25.76$

Now putting the value of (a and (b) in equation no. (1) We get regression equation of $y$ on $x$
$y=25.76+1.88 x$

Forecast of 5 years

| FY | Year (x) | Deposit |
| :--- | :--- | :--- |
|  |  | $\mathbf{y = 2 5 . 7 6}+\mathbf{1 . 8 8} \mathbf{x}$ |
| $2009 / 10$ | 6 | 37.04 |
| $2010 / 11$ | 7 | 38.92 |
| $2011 / 12$ | 8 | 40.80 |
| $2012 / 13$ | 9 | 42.68 |
| $2013 / 14$ | 10 | 44.56 |

b. Trend Analysis of Total Loan Disbursement

Rs in billion

| $\mathbf{F Y}$ | Year (x) | Total loan <br> disbursement (y) | $\mathbf{x y}$ | $\mathbf{x}^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 1 | 28.26 | 28.26 | 1 |
| $2005 / 06$ | 2 | 30.61 | 61.22 | 4 |
| $2006 / 07$ | 3 | 29.29 | 87.87 | 9 |
| $2007 / 08$ | 4 | 36.34 | 145.36 | 16 |
| $2008 / 09$ | 5 | 41.92 | 209.6 | 25 |
|  | $\boldsymbol{\Sigma x = 1 5}$ | $\mathbf{1 6 6 . 4 2}$ | $\mathbf{5 3 2 . 3 1}$ | $\boldsymbol{\Sigma \mathbf { x } ^ { \mathbf { 2 } } = \mathbf { 5 5 }}$ |

The regression equation of total deposit (y) on years (x) is as follows:
$y=a+b x$
Where, a and b are constants

The normal equations are

$$
\begin{aligned}
& \sum y=n a+b \sum x \\
& \sum x y=a \sum x+b \sum x^{2}
\end{aligned}
$$

Substituting the values in above equations we get,

$$
\begin{equation*}
166.42=5 a+15 b \tag{2}
\end{equation*}
$$

$532.31=15 \mathrm{a}+55 \mathrm{~b}$
Multiply equation no. (2) By 3 and subtracting it from equation (3), we get
$499.26=15 \mathrm{a}+45 \mathrm{~b}$
$532.31=15 \mathrm{a}+55 \mathrm{~b}$
$33.05=10 \mathrm{~b}$
$\therefore \mathrm{b}=3.31$

Putting the value of $b$ in equation number (2), we get

$$
\begin{aligned}
& 166.42=5 a+15 \times 3.31 \\
& 166.42=5 a+49.65 \\
& 5 a=116.77 \\
& a=23.35
\end{aligned}
$$

Now, putting the value of (a) and (b) in equation number (1) we get regression equation of $y$ on $x$
$y=23.35+3.31 x$

Forecast of 5 years

| FY | Year (x) | Disbursement <br> $\mathbf{y}=\mathbf{2 3 . 3 5 + 3 . 3 1 x}$ |
| :--- | :--- | :---: |
| $2009 / 10$ | 6 | 43.21 |
| $2010 / 11$ | 7 | 46.52 |
| $2011 / 12$ | 8 | 49.83 |
| $2012 / 13$ | 9 | 53.14 |
| $2013 / 14$ | 10 | 56.45 |

c. Trend Analysis of Total Loan Collection

Rs. in billion

| $\mathbf{F Y}$ | Year (x) | Total loan collection (y) | $\mathbf{x y}$ | $\mathbf{x}^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 1 | 26.29 | 26.29 | 1 |
| $2005 / 06$ | 2 | 28.61 | 57.22 | 4 |
| $2006 / 07$ | 3 | 28.16 | 84.48 | 9 |
| $2007 / 08$ | 4 | 34.17 | 136.68 | 16 |
| $2008 / 09$ | 5 | 40.22 | 201.1 | 25 |
|  | $\mathbf{\Sigma x = 1 5}$ | $\mathbf{1 5 7 . 4 5}$ | $\mathbf{5 0 5 . 7 7}$ | $\boldsymbol{\Sigma} \mathbf{x}^{\mathbf{2}=55}$ |

The regression equation of total deposit (y) on years (x) is as follows:
$y=a+b x$
Where, $a$ and $b$ are constants
The normal equations are
$\sum y=n a+b \sum x$
$\sum x y=a \sum x+b \sum x^{2}$
Substituting the values in above equations we get,
$157.45=5 a+15 b \ldots$ (2)
$505.77=15 \mathrm{a}+55 \mathrm{~b} \ldots$ (3)
Multiply equation no. (2) By 3 and subtracting it from equation (3), we get
$472.35=15 a+45 b$
$505.77=15 \mathrm{a}+55 \mathrm{~b}$
$33.42=10 \mathrm{~b}$
$\therefore \mathrm{b}=3.34$

Putting the value of (b) in equation number (2), we get
$157.45=5 \mathrm{a}+15 \times 3.34$
$157.45=5 \mathrm{a}+50.13$
$5 \mathrm{a}=107.32$
$\mathrm{a}=21.46$
Now putting the value of (a) and (b) in equation number (1) We get regression equation of $y$ on $x$
$y=21.46+3.34 x$

Forecast of 5 years
FY
Year (x)
Collection
$y=21.46+3.34 x$

| $2009 / 10$ | 6 | 41.50 |
| :--- | :--- | :--- |
| $2010 / 11$ | 7 | 44.84 |
| $2011 / 12$ | 8 | 48.18 |
| $2012 / 13$ | 9 | 51.52 |
| $2013 / 14$ | 10 | 54.86 |

d. Trend Analysis of Total Loan Outstanding

Rs. in billion

| $\mathbf{F Y}$ | Year (x) | Total loan outstanding (y) | $\mathbf{x y}$ | $\mathbf{x}^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 1 | 31.31 | 31.31 | 1 |
| $2005 / 06$ | 2 | 33.31 | 66.62 | 4 |
| $2006 / 07$ | 3 | 34.44 | 103.32 | 9 |
| $2007 / 08$ | 4 | 36.6 | 146.4 | 16 |
| $2008 / 09$ | 5 | 38.3 | 191.5 | 25 |
|  | $\boldsymbol{\Sigma x}=\mathbf{1 5}$ | $\mathbf{1 7 3 . 9 6}$ | $\mathbf{5 3 9 . 1 5}$ | $\boldsymbol{\Sigma \mathbf { x } ^ { \mathbf { 2 } } = \mathbf { 5 5 }}$ |

The regression equation of total deposit (y) on years (x) is as follows:
$y=a+b x$
Where, a and b are constants
The normal equations are
$\sum y=n a+b \sum x$
$\sum x y=a \sum x+b \sum x^{2}$
Substituting the values in above equations we get,
$173.96=5 a+15 b$.
$539.15=15 \mathrm{a}+55 \mathrm{~b}$
Multiply equation no. (2) By 3 and subtracting it from equation (3), we get
$521.88=15 \mathrm{a}+45 \mathrm{~b}$
$539.15=15 \mathrm{a}+55 \mathrm{~b}$
$17.27=10 \mathrm{~b}$
$\therefore \mathrm{b}=1.73$

Putting the value of (b) in equation number (2), we get
$173.96=5 \mathrm{a}+15 \times 1.73$
$173.96=5 \mathrm{a}+25.95$
$5 \mathrm{a}=148.01$
$\mathrm{a}=29.60$
Now putting the value of (a) and (b) in equation number (1) we get regression equation of $y$ on $x$
$y=29.60+1.73 x$

Forecast of 5 years

| FY | Year (x) | Outsta <br> $\mathbf{y}=\mathbf{2 9 . 6 0}$ |
| :--- | :--- | :--- |
| $2009 / 10$ | 6 | 39.98 |
| $2010 / 11$ | 7 | 41.71 |
| $2011 / 12$ | 8 | 43.44 |
| $2012 / 13$ | 9 | 45.17 |
| $2013 / 14$ | 10 | 46.90 |

## APPENDIX-3

## A. T-Test For Targeted And Actual Loan Disbursement

Let,
$\mathrm{X} 1=$ targeted loan disbursement
$\mathrm{X} 2=$ actual loan disbursement
Rs. in billion

| Fiscal year | $\mathbf{X}_{\mathbf{1}}$ | $\mathbf{x}_{\mathbf{1}}{ }^{\mathbf{}}=\left(\mathrm{X}_{1}-\bar{X}_{1}\right)^{\mathbf{2}}$ | $\mathbf{X}_{\mathbf{2}}$ | $\mathbf{x}_{\mathbf{2}}{ }^{\mathbf{2}}=\left(\mathrm{X}_{2}-\overline{X_{2}}\right)^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 14.55 | 36.97 | 28.26 | 25.22 |
| $6062 / 63$ | 16.97 | 13.4 | 30.61 | 7.14 |
| $2006 / 07$ | 18.04 | 6.71 | 29.29 | 15.94 |
| $2007 / 08$ | 19.26 | 1.88 | 36.34 | 9.35 |
| $2008 / 09$ | 34.33 | 187.69 | 41.91 | 74.44 |
|  | $\mathbf{1 0 3 . 1 5}$ | $\mathbf{2 4 6 . 6 5}$ | $\mathbf{1 6 6 . 4 1}$ | $\mathbf{1 3 2 . 0 9}$ |

$\mathrm{N}=5$
$\bar{X}_{1}=\frac{\sum X_{1}}{N}=\frac{103.15}{5}=20.63$
$\overline{X_{2}}=\frac{\sum X_{2}}{N}=\frac{166.41}{5}=33.28$
$S^{2}=\frac{\sum X_{1}{ }^{2}+\sum X_{2}{ }^{2}}{n_{1}+n_{2}-2}=\frac{246.65+132.09}{5+5-2}=47.34$

Test statistic under $H_{0}$,
$t=\frac{\overline{x_{1}}-\overline{x_{2}}}{\sqrt{S^{2}}\left(\frac{1}{n_{1}}+\frac{1}{n_{2}}\right)}=\frac{20.63-33.28}{\sqrt{47.34\left(\frac{1}{5}+\frac{1}{5}\right)}}=-2.90$
$|t|=2.90$

## B. T-Test For Targeted And Actual Loan Collection

Let,
$\mathrm{X} 1=$ targeted loan collection
X2= actual loan collection
Rs. in billion

| Fiscal year | $\mathbf{X}_{\mathbf{1}}$ | $\mathbf{x}_{\mathbf{1}}{ }^{\mathbf{2}}=\left(\mathrm{X}_{1}-\bar{X}_{1}\right)^{\mathbf{2}}$ | $\mathbf{X}_{\mathbf{2}}$ | $\mathbf{x}_{\mathbf{2}}{ }^{\mathbf{}}=\left(\mathrm{X}_{2}-\overline{X_{2}}\right)^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 10.31 | 36.72 | 26.29 | 27.02 |
| $6062 / 63$ | 11.12 | 27.56 | 28.61 | 8.28 |
| $2006 / 07$ | 13.61 | 7.62 | 28.16 | 11.08 |
| $2007 / 08$ | 14.73 | 2.69 | 34.17 | 7.19 |
| $2008 / 09$ | 32.08 | 246.8 | 40.21 | 76.07 |
|  | $\mathbf{8 1 . 8 5}$ | $\mathbf{3 2 1 . 3 9}$ | $\mathbf{1 5 7 . 4}$ | $\mathbf{1 2 9 . 6 4}$ |

$\mathrm{N}=5$
$\bar{X}_{1}=\frac{\sum X_{1}}{N}=\frac{81.85}{5}=16.37$
$\overline{X_{2}}=\frac{\sum X_{2}}{N}=\frac{157.74}{5}=31.55$
$S^{2}=\frac{\sum X_{1}{ }^{2}+\sum X_{2}{ }^{2}}{n_{1}+n_{2}-2}=\frac{321.39+129.64}{5+5-2}=56.38$

Test statistic under $H_{0}$,
$t=\frac{\overline{x_{1}}-\overline{x_{2}}}{\sqrt{S^{2}}\left(\frac{1}{n_{1}}+\frac{1}{n_{2}}\right)}=\frac{16.37-31.55}{\sqrt{56.38\left(\frac{1}{5}+\frac{1}{5}\right)}}=-3.19$
$|t|=3.19$

