CHAPTER-I
INTRODUCTION

1.1 Background of the Study

As a consequence of liberalization, the changes affect the ownership pattern of banks, regulatory aspects, availability of funds, and the cost of funds as well as opportunities to earn, range of services and management of priority sector lending. Development financial institutions will have a lesser impact on the Nepalese economy. Consumerism is here to stay. Non-banking products, like insurance is going to be a tremendous opportunity for banking sector. With this realization the government mushroomed into a number of establishments like agriculture, industry, commerce, public works, transport, and other sectors.

In this circumstance, banking was seen as major components to uplift the economic conditions of public, and country and the world as well. Therefore the government was forced to adopt a liberal economic policy regarding operation of banks. About the financial liberalization process it can be said that "the interest rate deregulation curtailment or elimination of directed credits, lifting entry and exit barriers for financial intermediaries, restructuring of banking system and institution for regulatory and supervisory mechanism is some of the key components of such liberalization". This led to the influx of commercial banks in Nepal. Banks are those financial intermediaries who accept deposit and grants loan. In other word bank may be defined as financial intermediaries accepting deposits and granting loans; offers the widest menu of services of any financial institution.

Bank plays a vital role in developing economy of any country. It is a resource mobilizing institution which accepts deposit from various source and invest such accumulated resources in the field of agriculture, trade, commerce, industry, tourism etc. "The banking sector is largely responsible for collecting household saving in terms of different types of deposit and regulating it in the society by lending in different sector of economy. But lending their resources in small scale industries

under intensive banking program has enabled the bank is to share in the economic growth of the country" *(Shrestha, 2003: 22).*

Banks are among the most important financial institutions in the economy. They are the principal source of credit (loan able funds) for million of individual and families and for many units of government (school districts, cities, countries, etc). Moreover, for small local business ranging from grocery stores to automobile dealers, banks are after the major source of credit to stork the shelve with merchandise or to fill a dealer's showroom with new cars. When business and consumers must make payment for purchase of goods and services, more often than not they use bank-provided cheque, credit card, or electro device connected to a computer network. And when they need financial information and financial planning, it is the banker to whom they turn most frequently for advice and counsel.

Above all else, banks are financial intermediaries, similar to credit unions, insurance companies, and other institutions selling financial services. The term financial intermediary simply means a business that interacts with two types of individuals and institutions in the economy; i) deficit-spending individuals and institutions, whose current receipts of income exceed their current receipts of income and who, therefore, need to raise funds extremely through borrowing; and ii) surplus-spending individuals and institutions, whose currently receipts of income exceed their current expenditures on goods and services so they have surplus funds to save and invest. Banks perform the indispensable task on intermediation between these two groups, offering convenient financial services to surplus spending individuals and instructions in order to attract funds and then loaning those funds of deficit-spending individual's institutions.

Funds and information flow readily to both lender and borrowers, and the prices of loans and securities seem to be determined in highly competitive markets. In a perfectly competitive and efficient financial system, in which all participants have open and equal access to the financial markets and can borrow and lend at the same interest rate, in which no one participant can exercise control over interest rates or

prices, in which all pertinent information affecting the value of loans, securities and other assets is readily available to all market participants at negligible cost, in which transactions costs are not significant impediments to trading assets, and all loans and securities are available. Another contribution banks make is their willingness to accept risky loans from borrowers, while issuing low-risk securities to their depositors. In effect, banks engage in risky arbitrage across the financial markets.

Nowadays, two types of banking practices are seen in the financial market, commercial banking and development banking. The commercial banks usually make business in urban areas whereas development banks provide services in rural areas. In the commercial lending, usually the same client is repeated of loan repaid. But in development finance if such repetition occurs, the outreach could not be extended. Generally commercial banks play a vital role to meet the cash need of different organs of the society *(Kunwar, 2003: 249)*.

1.2 Problem of statement and research question

As an institutional investors, commercial banks are the backbone of the economy by transforming saving into capital stock. They make their investment in business sector, industrial sector, consumer sector, real estate sector, financial sector, deprived sector under different loan scheme. The composition of asset portfolio of commercial banks get influenced by the central monetary authority.

Problems like lack of investment environment, uncertain government policy, portfolio construction technique, hedging fund techniques, less developed capital market, limited opportunities to exercise portfolio management, hesitation of taking risk, lack of proper techniques to run such activities in best and successful manners are faced by the commercial banks.

Banking competition is in increasing trends while the investment opportunity is not increasing in the same ratio. Banks are found to be more interested in less risky and liquid sector like treasury bills, development bonds, national saving certificates, shares and debentures of corporation and making loan to service oriented

institutions. Thus it seems that they have not formulated their investment policy in proper way to optimize investment portfolio. Therefore, the main purpose of the study is to analyze investment portfolio of the Everest Bank Limited and Nabil Bank Limited, return on various types of investment portfolio and optimization of portfolio with reference to NEPSE banking sector index. This study states the following questions:
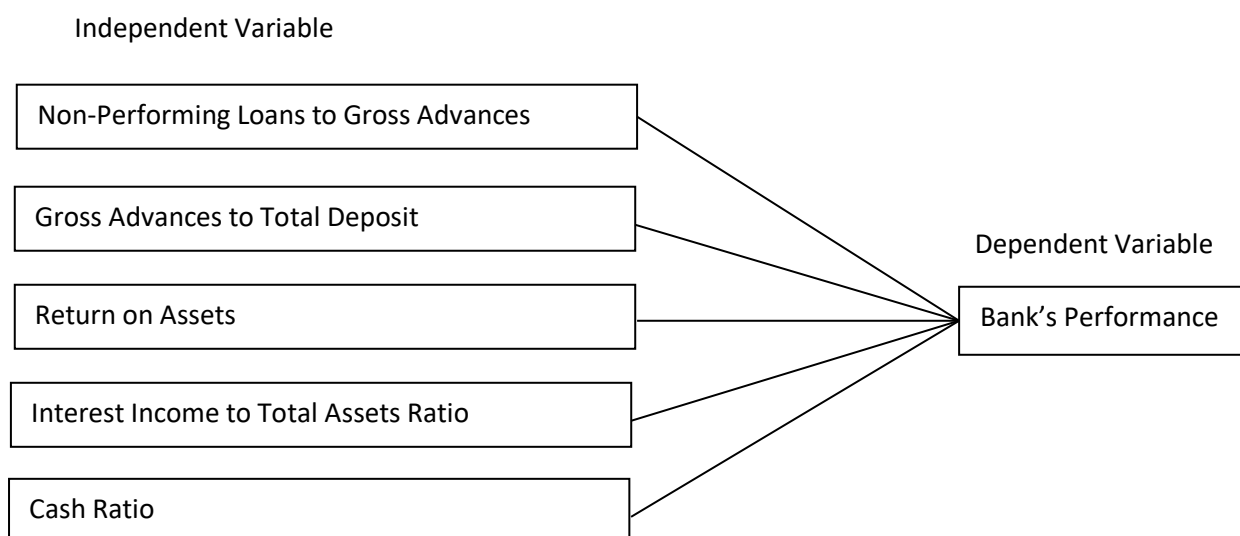
- Is loan portfolio management directed towards objectives of profit maximization of EBL and NABIL?
- What is the credit (total loan and advances) to deposit ratio of EBL and NABIL.
- What is the relationship between total loan and advances (credit) to deposit ratio of EBL and NABIL ?
- What is the relationship between investment and total deposit of EBL?

1.3 Objective of the study

The objective of the study is to identify the loan portfolio management of Everest Bank Limited and Nabil Bank Limited. The other objectives are as follows.

- To analyze the financial performance of Everest Bank and Nabil Bank in terms of loan portfolio management.
- To analyze the credit (total loan and advances) to deposit ratio of EBL and NABIL.
- To study the relationship between total loan and advances (credit) to total deposit ratio of EBL and NABIL.
- To find out the relationship between investment and total deposit of EBL and NABIL.

1.4 Conceptual Framework

Independent Variable

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┌─────────────────────────────────────────┐
│ Non-Performing Loans to Gross Advances   │
└─────────────────────────────────────────┘

┌─────────────────────────────────────────┐
│ Gross Advances to Total Deposit          │
└─────────────────────────────────────────┘                    Dependent Variable

┌─────────────────────────────────────────┐          ┌──────────────────────┐
│ Return on Assets                         │          │  Bank's Performance  │
└─────────────────────────────────────────┘          └──────────────────────┘

┌─────────────────────────────────────────┐
│ Interest Income to Total Assets Ratio    │
└─────────────────────────────────────────┘

┌─────────────────────────────────────────┐
│ Cash Ratio                               │
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Figure 1: The variables and theoretical constructs of interest.

1.5 Significance of the Study

There are few researches in commercial banking and especially on their loan management, insufficient books for the study. Lending is one of the essential and main functions where the whole banking business is rested upon. Thus, a study on the commercials banks and especially in their Lending and investment practices carry a great significant to various groups but in particular is directed to a certain groups of people/organization, which are:

- Importance to shareholders.
- Importance to the management bodies of these banks for the evaluation of the performance of their banks and in comparison with other banks.
- Importance to "outsiders" which are mainly the customers, financial agencies, stock exchanges.
- Importance to the government bodies or the policy makers such as the central bank.
- This study would be important for the students as it provides theoretical as well as conceptual frame work of different aspect of loan management.

1.6 Limitations of the Study

The main limitation of this study are as follows.

- The study period covers a period of five fiscal years i.e. from FY 2012/13 to 2016/17.
- All the data are secondary in data. Mostly published financial documents, other related journals, magazine and books, booklet. Therefore outcome may rely on reliability secondary data.
- The study in mainly focused on Loan portfolio management of EBL.
- Out of 28 commercial banks only two banks (EBL and NABIL) taken as sample for this study.

1.8 Organization of the study

The whole study has been divided into five chapters.

Chapter - I

First is introduction chapter, which includes general background, statement of the problem, focus & signification of the study, objectives of the study and limitations of the study and chapter plan.

Chapter - II

Second chapter deals with the review of available literatures in the field of the study being conducted. This includes review of the theories of the concerned topic, review of supportive text, review of books, review of bulletins and annual reports published by bank, review of related articles and review of previous thesis.

Chapter - III

Third chapter explains the research methodology employed to conduct the study and tools and techniques used in analysis of the data as well. This chapter includes, research design, sources of data, population and samples, method of data analysis and various financial and statistical tools.

Chapter - IV

Fourth chapter is the main body of the research. This is devoted to the presentation and analysis of data through definite course of research methodology. The main working of this chapter is to analyze different financial ratios related to the credit position, liquidity analysis of the sample banks. Major findings of the study are also included in this chapter.

Chapter - V

Fifth is the last chapter of the study, which provides summary and conclusion, suggestions and recommendations for improving the future performance of the sample banks. Besides these, bibliography and appendices will also present at the end of the thesis. Similarly, acknowledgement, table of contents, list of tables, list of figures, abbreviations are included in the front part of the thesis report.

CHAPTER-II
REVIEW OF LITERATURE

Review of literature is the way to discover what other research area of problem has uncovered. A critical review of the literature helps the researcher to develop a thorough understanding and insight into previous research work that relates to present study. The literature review thus provides with the knowledge of the status of the field of research. the purpose of the literature review is, thus, to find out what research studies have been conducted in one's chosen field of study, and what remains to be done.

2.1 Concept of Review

2.1.1 Concept of Commercial Bank

Before defining the term commercial bank, let us define the meaning of bank and commercial. According to S. and S.'s definition of bank, a banker or bank is a person or company carrying on the business of receiving money and collecting drafts, for customers subject to the obligation of honoring cheque drawn upon them from time to time by the customers to the extent of the amount available on their customer (Shekher and Shekher, 1999; 4).

Paget (1987), states that no one can be a banker who does not take deposit accounts take current accounts, issue and pay cheque of crossed and uncrossed, for his customers. He further adds that if the banking business carried on by any person is subsidiary to some other business; he cannot be regarded as a banker.

Commerce is the financial transactions related to selling and buying activities of goods and services. Therefore Commercial view point. They perform all kinds of banking functions as accepting deposit, advancing credits, credit creation and agency functions. They provide short-term credit, medium term credits and long terms credit to trade and industry. They also operate off balance sheet functions such as issuing guarantee, bonds, letter of credit, etc.

The Commercial Bank pool together the savings of the community and arrange for their productive use. They supply the financial needs of modern business. They accept deposits from the public, which are repayable on demand or on sort notice. They cannot afforded to invest their funds in long-term securities or loans. Their business is restricted to financing the short-term need of trade and industry. In their day-to-day transactions they cannot afforded to supply the block capital required for the purchase of fixed assets. They grant loans in the form of cash credit and overdrafts. They also render a number of subsidiary services such as collection of bills and cheques, safe keeping of valuables of their customers etc. They provide short-term accommodation by discounting the bills of exchange. Commercial banks in general advance loan for short periods to industry and agricultural" (Radhaswamy, 1979; 495).

"Although Commercial banks are privately owned enterprises they have been given the extra ordinary power to create money in form of demand deposits, all well as to extinguish money so created" (Kent, 1972;323).

Commercial banks are 'financial intermediaries' for they borrow from those who are not immediately spending all their current receipts and they lend to those who have intentions of immediate spending on goods beyond the range of their own current receipts. (Sayers, 1967; 17).

Commercial banks act as an intermediately; accepting deposits and providing credits to the needy area. The main source of the commercial bank is current deposit, so they give more importance to the liquidity of investment and as such they specialized in commercial banks are restricted to invest their funds in corporate securities. Their business is confined to financing the short-term needs of trade and industry such as working capital financing. They cannot finance in fixed assets. They grant credits in the form of cash credits and overdrafts. Apart from financing, they also render services like collection of bills and cheque, safe keeping of valuables, financial advising, etc to their customers (Vaidhya, 1999; 24).

2.1.2 Functions of Commercial Banks

The business of commercial bank is primarily to hold deposit and make credits and investments with the object of securing profits for its shareholders. Its primary motive is profit: other consideration is secondary (Sudharsanam, 1976; 123). The major functions of commercial banks are as follows.

- Accepting Deposit
- Advancing Credit
- Agency Services
- Credit Creation
- Financing of foreign Trade
- Safekeeping of Valuable
- Making Venture Capital Credits
- Financial Advising, Security Brokerage Services.

- **Assist in foreign Trade:**

The bank assist the traders engaged in foreign trade of the country. He discounts the bills of exchange drown by exports to receive money in the home currency. Similarly, he also accepts the bills drown by foreign exports (Vaidhya, 1999;29)

- **Offers Investment Banking and Merchant Banking Services**

Banks today are following in the footsteps of leading of financial institutions all over the globe in offering investment banking and merchant banking services to corporations. These services included identifying possible merger targets, financing acquisitions of other companies, dealing in security underwriting, providing strategic marketing advice and offering hedging services to protect their customers against risk from fluctuating world currency prices and changing interest rates, (Vaidhya, 1999; 29). Further, they support the overall economic development of the country by various modes of financing.

2.1.3 Concept of Credit

Credit is the amount of money lent by the creditor (bank) to the borrower (Customers) either on the basis of security or without security. Sum of the money lent by a bank, is known as credit (Oxford advanced learners Dictionary 1992; 279).

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

Credit is a present right to a future payment. It is the power to obtained goods or services by giving a promise to pay money (or goods) one demand or at a specified date in the futures. It may be defined as the power to sewer commodities or services at the present time in returned for some equal tent or services at a future date. A credit in Low, commence and economics is the right which one person, the creditor has to compel another person, the debtor to pay or do something. It may be called a "short sale" Of money, it means "sale on trust". (Johnson, 1940; 224)"Credit is the purchasing power." (Mill, 1945; 18).

Credit is financial assets resulting from the delivery of cash or other assets by a lender to a borrower in return for an obligation of repy on specified date on demand. Banks generally grants credit on four ways (Chhabra and Taneja, 1991:4)
- Overdraft
- Cash Credit
- Direct Credit
- Discounting of Bills

2.1.4 Types of Credit

Overdraft:

It denotes the excess amount withdraw over their deposits.

Cash Credit:

The credit is not given directly in cash but deposit account is being opened on the name of credit taker and the amount credited to the account. in this way, every credit creates deposit.

Term Credit:

It refers to money lent in lump sum to ther borrowers. It is principal form of medium term debt financing having maturities of 1 to 8 years. Barely and Myers urge that bank credits with maturities exceeding 1 years are called term credits. the firm agrees to pay interest based onthe bank's prime rate and to repay principal in the regular installments. Special patterns of principal payments over time can be negotiated to meet the firm's special needs (Richard, 1996; 80).

Working capital credit:

Working capital denotes the difference between current assets and current liabilities. It is granted to the customers to meet their working capital gap for supporting a production process. A natural process develops in funds moving through the cycle are generated to repay a working capital credit.

Priority or Deprived Sector Credit:

Commercial banks are required to extend advances to the priority and deprived sector 12% of the total Credit must be towards priority sector including deprived sector. Rs. 2 million for agriculture cum service sector and Rs. 2.5 million for single borrows are limit sanctioned to priority sector. Institutional support to 'Agriculture Development Bank' and "Rural Development Bank' are also considered under this category, deprived sector lending includes:

- Advances to poor/downtrodden/week/derived people up to Rs. 30,000 for generating income or employment.
- Institutional Credit to Rural Development Bank.
- Credit to NGOs those are permitted to carryout banking transaction for lending up to Rs. 30,000.

Hire-purchase financing (Installment Credit)

Hire-purchase credits are characterized by periodic repayment of principal and interest over the maturity of the credit. Hirer agrees to take the goods on hire at a stated rental including their repayment of principal as well as interest with an option to purchases. A recent survey of commercial banks indicates those bank are

planning to offer installment credits on a variable rate basis. It can be secured and unsecured as well as direct and indirect installment credit.

Housing Credit (Real Estate Credit)

Financial institutions also extend housing credit to their customers. It is different types. such as: residential building, commercial complex, construction of warehouse etc. It is given to those who have regular income or can earn revenue from housing project itself.

Project Credit

Project credit is granted to the customers as per project viability. The borrowers have to invest certain proportion to the project from their equity and the rest will be financed as project credit. Construction credit is short-term credits made to develops for the purpose of completing proposed projects. Maturities on construction credits range from 12 months to as long as 4 to 5 years, depending on the size of the specific project (Johnson, 1940:242). The basic guiding principal involved in disbursement policy is to advance funds corresponding to the completion stage of the project. Hence, what percent of the credit will be disbursed at which stage of completion must be spelled in disbursement policy? term of credit needed for project fall under it.

Consortium Credit

No single financial institution grant credit to the project due to single borrower limit or other reasons and two or more such institution may consent to grant credit facility to the project among them.

Credit card and Revolving lines of Credit

Banks are increasingly utilizing change cards and revolving lines of credit to make unsecured consumer credit. Revolving credit line lowers the cost of making credit since operating and processing cost are reduced. Due to standardization, centralized, department processes revolving credits resulting reduction on administrative cost. Continued borrowing arrangement enhances cost advantages. Once the credit line it established, the customer can borrow and repay according to his needs and the bank can provided the fund to the customer at lower cost.

Charge cards and credit lines tied to demand deposit accounts are the two most common reveling credit agreements. It can be further divided into credit card, automatic overdrafts lines and large credit lines.

- **Off-Balance Sheet Transaction**

In fact, bank guarantee and letter of credit refer to off balance sheet transactions of financial institution. It is also known as contingent liability. Contingent liability pinpoints the liability which may or may not arise during the happening of certain event. Footnotes are kept as reference to them instead of recording in the books of accounts. it is non funded based remunerative facilities but more risky than the funded until adequate collateral are not taken. Lets its two varieties be described separately.

- **Bank Guarantee**

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

- **Letter of credit (L/C)**

It is issued on behalf of the customer (importer) in favor of the exporter (Seller) for the import of goods and services stating to pay certain sum of money on the submission of certain documents complying the stipulated terms and conditions as per as the agreement of L/C. It is also known as importers letter of credit since the bank of importer do not open separate L/C for the trade of sum commodities.

2.1.5 Objectives of the Sound Credit Policy

The purposes of a written credit policy are
- To assume compliance by lending personnel with the bank's policies and objectives regarding the portfolio of credits and
- To provide personnel with a framework of standards within which they can operate.

2.1.6 Lending Criteria

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

a. Character

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

- Memorandum and Articles of Association.
- Registration certification.
- Tax registration certificate (Renewed)
- Resolution to borrow.
- Authorization person authorizing to deal with the bank.
- Reference of other lenders with whom the applicant has dealt in the past or bank A/C statement of the customer.

b. Capacity

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

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

c. Capital

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

d. Collateral

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

e. Conditions

Once the funding company is satisfied with the character, capacity, capital and collateral then a credit agreement (Sanction letter) is issued in favor of the Borrower stating conditions of the credit to which borrower's acceptances is accepted.

2.1.7 Principles of sound lending policy

Lending constitutes the main business of a banking company a major chunk of the profits of a bank comes out of this function. But no lending can take place without some inherent risks. As bankers are trustees of the depositors money, they cannot take undue risks. A banker has to follow a cautions policy and conduct the business of lending on the basis of certain sound principles. Here are some of the important principles of sound lending.

a. Safety

The main business of banking consists in borrowing various types of deposits such as current, saving and fixed deposits and lending such deposits to needy borrowers in the form of advances and discounting of bills. This obviously implies that safety of such funds should be ensured. Otherwise the banker will not be in position to repay his deposits and once the confidence of the depositors is shaken, he cannot carry on the banking business.

If the banker has to ensure safe lending he has to look to the three C's if the borrower namely character, capacity and capital., character of the borrower is important because that determines his willingness to repay the loan, his capital and

capacity to run the business successfully determine his capacity to pay the safety of the loan depends on both his capacity to repay and willingness to repay.

Banks will have to keep a portions of the deposits received for honoring the demands made by the customers. Only the balance can be safely. the banks endeavor is of the course to lend as much of the deposits as possible without which he will not be in a position to meet his interest, obligations and the maintenance of establishment. Therefore, he has to lend with a view to earn interest but lend it safe.

b. Liquidity

By liquidity is meant the readiness with which the bank can convert the assets into cash. Liquidity means short-term solvency of the borrower. A banker is essentially the lender of short-term funds because he knows that the bulk of his deposits are repayable on demand or at short notice. As the banker's deposits are subject to the legal obligation of being repayable on demand and at short notice, he must ensure liquidity also while lending, so that in times of need, he will be able to convert the assets into cash.

Bank can ensure high liquidity by keeping all deposits in the form of cash only. In such a case, he will not be in position to meet the interest obligations and expenditure of the establishment. From experience, he has learnt that he can safely lend out a substantial portion of the funds. but while lending he should try to ensure liquidity, i.e. in times of need, he must be able to obtain repayment of the money within a reasonably short time. Liquidity also implies that the assets can be sold without any loss. Thus the concept of liquidity has twin aspects namely quick sale ability or convert ability of the assets and the absence of risk of loss in such conversion.

c. Profitability

Commercial banks obtain funds from shareholders and naturally if dividend is to be paid on such shares it can only be paid by earning Profits. Even in the case of public sector banks although they are service motivated they will have to justify their

existence by earning profits. This is not possible unless the funds are employed profitably. From out of the revenue earned, the banker has to pay interest on deposits, salary to the staff, meet other establishment expenses, build-up reserves and the balance must permit the payment of dividend to shareholders. So for the bank to sustain on a long run, it has to seek many profitable sectors where it can mobilize its collected fund. Before lending, a banker has to see that the advance and credit is on the whole profitable. Lending rates are affected by banks' internal policy like credit rating of the borrower, bank rate of NRB, inter-bank competition and NRB's guidelines on lending rates.

d. Purpose of Loan

Nowadays, the purpose for which loans are granted has acquired precedence over the principle of security. If a loan in required for a non-productive or speculative purpose, a banker will be reluctant to entertain the proposal. Loans for social functions, ceremonies, pleasure trips or for repayment of prior loans are not favored by a banker, as they are unproductive in nature. But it is very difficult for the bank to ensure the advance has been used for the purpose for which it was taken. A person may take a loan obviously for a productive use, but may spend it on speculation. The central bank through its directives, also determines the policy to be followed by the banks with regard to the purpose for which advances may not be granted. So a banker should enquire the purpose for which it is taken for safe lending.

e. Security

Traditionally, bankers have been security oriented. The security offered against a loan can be of various types. It may vary from a piece of land or a building to a commercial paper or bullion. Whatever may be the security, a banker has to realize that it only cushion to all back upon in case of need and its adequacy alone should not form the sole consideration for advance. It must be ensured that the security when accepted must be adequate, readily marketable, easy to handle and free from encumbrances.

f. Diversification of loans

There is a very familiar saying that "Do not put all the eggs in the same basket". Banker should try to diversify loans as far as possible, so that he may minimize his risks in lending. If the banker lends only to one industry or only to few big firms or concentrates in a certain geographical area, the risk is great. He should diversify lending, so that he may not affected by the failure of one industry or of a few big borrowers. A banker who puts all his eggs in one basket is not prudent banker.

g. National Interest and suitability

Bankers must ascertain on what type of business the customer is involved whether it saves the national interest or not, whether the firm is acting responsibly towards the society that it is operating in like brick industry or the cement industry and the precautions taken by it against environment pollution. Central bank issues directives, prohibiting banks to invest in various sectors such as the import of arms and ammunitions etc. Also bankers must remain vigilant of the law and order situation where borrower carries its business.

2.1.8 Some Important Banking Terms

The study in this section comprises of some important banking terms for which efforts have been made to clarify the meaning, which are frequently used in this study, which are given below.

A. Deposits

Deposit is the most important source of liquidity for a commercial bank. It is also the main source of fund that a bank usually uses for the generation of profit. Therefore, the efficiency depends on its ability to attract deposits. Banks collects the scattered savings of the public through various accounts type like saving, current, fixed etc. Deposit being the borrowed amount from the depositors or from general public and institutions, it constitutes the liability of a bank. The management of a bank is always influencing it through deliberate policy action; the deposits of a bank are affected by various factors. They are as follows.

- Types of customers

- Physical facilities of bank

- Management accessibility of customers

- Types and range of service offered by the bank.

- Interest rate paid on deposits.

- Goodwill and financial position of the bank

In addition to the above, the prevailing economic conditions exert a decisive influence on the amount of deposit the bank receives.

B. Loan and advances

"Loan, advance and overdraft are the main sources of income for a bank. Bank deposit can cross beyond a desired level but level of loans, advances and overdraft will never cross it. The facilities of granting loan, advances and overdrafts are the main services in which customer of the bank can enjoy.

Fund borrowed from bank are much cheaper than those borrowed from unorganized money lenders. The demand for loan has excessively increased due to cheaper interest rate. Furthermore, an increase in an economic and business activity always increases the demand for the fund. Due to limited resources and increasing loans, there is some fear that commercial banks and other financial institutions too may take more preferential collateral while granting loans causing unnecessary trouble to the general customers.

In addition to this, some portion of loan advances and overdraft includes that amount which is given to staff of the bank for house loan, vehicle loan, personal loan and others. In mobilization of commercial banks fund, loan advance and overdrafts have occupied a large portion.

C. Investment on Government Securities, Share and Debenture

"Though a commercial bank can earn some interest and dividend from the investment of government securities, share and debenture, it is not the major portion of income, but it is treated as a second source of banking business. A commercial

bank may extend credit by treating it as a second source of banking business." A commercial bank may extend credit by purchasing government securities bonds and shares for several reasons.

Some of them are given as:

- It may want to space it maturates so that the inflow of cash coincide with expect withdrawals by depositors or large loan demands of its customers.
- It may wish to have high grade marketable securities to liquidate if its primary reserve becomes inadequate.
- It may also be forced to invest because the demand for loans has decreased or is not sufficient to absorb its excess reserves.

However, investment portfolio of commercial bank is established and maintained primarily with a view of nature of banks. Liabilities that is since depositors may demand fund in great volume without previous notice to banks. The investment must be of a type that can be marketed quickly with little or no shrinkage in value.

D. Investment on other Company's Share and Debentures

Most of commercial banks invest their excess fund to the share and debenture of the other financial and non-financial companies. Due to excess fund but least opportunity to invest those funds in much more profitable sector and to meet the requirement of NRB directives, the commercial banks purchase shares and debenture of regional development bank, NIDC and other development banks.

E. Liquidity

Liquidity is the ability of bank to meet its obligations on time, especially in relation to repayment of inter-bank borrowings and customer deposits. Liquidity management is a very crucial job of commercial bank and the bank should maintain adequate amount of cash in its vault and NRB for its daily operation and administrative purpose. As per the arrangement of NRB effective from fiscal year 2004/05, the commercial banks are required to maintain cash reserve of 5% with NRB of its total deposit liability with NRB. The previous provisions of cash in vault maintenance have been withdrawn now.

F. Capital Adequacy

Capital is the blood of any business without which business cannot be run or established. In financial term, capital is the excess of assets over liabilities and can be defined as the wealth, which is employed for the production. Capital is required by a bank as a cushion to absorb losses, which should be borne by shareholders ratherthan depositors and to finance the infrastructure of the business. Capital adequacy is to maintain adequate amount of capital or fund to safeguard the money of the depositors against any possible loss. NRB require banks to maintain a certain capital adequacy ratio based on the total risk weighted assets and the banks are supposed to meet the minimum requirement of CAR.

G. Off-Balance Sheet Activities

Off balance sheet activities involve contracts for future purchase or sale of assets and all these activities are contingent obligations. These are not recognized as assets or liabilities on balance sheet. Some examples of these items are letter of credit, letter of guarantee, bills of collection etc. These activities are very important; as they are the good source of profit of bank through they have risk. Nowadays, some economists and finance specialists to expand the modern transactions of a bank stressfully highlight such activities.

H. Banking Risks

Normally, banks confront different kinds of risks, which are categorized as follows:

- **Credit Risks**

Credit risk arises whenever another party enters into an obligation to make payment or deliver value to the bank. This risk is mostly associated with the lending.

- **Liquidity Risk**

Liquidity risk arises when bank itself fail to meet its obligation. The bank required to make payments to the different parties at different times, when they fall due to other parties, its the liquidity risk.

- **Yield Risk**

It is the risk that bank's assets may generate less income than expense generated by its liabilities.

- **Market risk**

The risk of loss resulting from Movements in the market price of financial instruments in which the bank has a position is the market risk. Such instruments include bonds, equities, foreign exchange and associated derivative products.

- **Operational Risk**

The risk of failure in the banks procedures or controls, whether from external or internal causes or as a result of error or fraud with is the institution is the operational risk.

- **Ownership / Management Risk**

The risk that shareholders directors or senior management be unfit for their respective positions or dishonest.

2.1.9 Project appraisal

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

- Is the project technically sound?
- Will the project provide a reasonable return?
- Is the project in line with the overall economic objectives of the economy?

    Generally, the project appraisal involves the investigation from the following aspects (Gautam, 2004;258):

- Financial aspect
- Economic aspect
- management / Organizational aspect
- legal aspect

2.1.10 NRB Directives

NRB issued directives to run commercial banks in a healthy competitive manner to ensure the sustainable development of the overall banking system. The financial sector reform of Nepal was initiated in mid 1980s. Since then NRB has been playing pioneer role in regulation, supervision and monitoring of commercial banks by issuing directives. At present the number of guidelines issued by NRB to commercial bank reaches sixteen, which are as follows.

- The provision of minimum capital fund to be maintained by the commercial bank.
- The provision of loan classifications and loan loss provisioning on the credit.
- The provision relating to limit on credit exposure and facilities to a single borrower, group of related borrowers and single sector of the economy.
- The provision relating to accounting policy and the structure of financial statements to be followed by the commercial banks.
- Regulation relating to minimization of risk inherent in the activities of commercial banks.
- The provision of institutional good governance to be followed by commercial banks.
- Time frame for implementation of regulatory directives issued in connection with inspection and supervision and supervision of commercial banks.
- Regulation relating to investment in shares and securities by commercial banks.
- The provision of submission of statistical data to the NRB. Banking management division and inspection and supervision division.
- Regulation relating to sale and ownership transfer of promoters shares.
- Regulation relating to, stringent blacklisting procedure for loan defaulters.
- The provision relating to compulsory deposited amount of NRB.
- Regulation relating to developing the branch office of commercial banks.
- Provision relating to interest rates.
- Provision relating to collection of financial sources.
- Provision relating to consortium financing.

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

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

- No security at all or security that is not in accordance with the borrower's agreement with the bank,

- The borrower has been declared bankrupt,

- The borrower is absconding or cannot be found,

- Purchased or discounted bills are not realized within 90 days from the due date.

- The credit has not been used for the purpose originally intended.

- Owing to non-recovery, initiation as to auctioning of the collateral has passed six months and if the recovery process is under litigation.

- Loans provided to the borrowers included in the black list and where the **Credit Information Bureau** blacklists the borrower.

- Additional Arrangement in Respect of Term Loan,

In respect of term loans, the classification shall be made against the entire outstanding loan on the basis of the past due period of over due installment In the even of conversion of continent liabilities of the bank e.g. letters of credit, un-matured guarantees, in to the liability of the bank, such amount becomes recoverable from the customers. Hence, such amount shall also be classified as per the classification norms applicable to loans and advances and accordingly be provided with requisite provisioning.

Prohibition to Recover Principal and Interest by Overdrawing the Current Account and Exceeding the Overdraft Limit Principal and interest on loans and advances shall not be recovered by overdrawing the borrower's current account or where overdraft facility has been extended, by overdrawing such limit, However, this arrangement shall not be construed as prohibitive for recovering the principal and interest by debiting the customer's account and recovery is made as such resulting in overdraft, which is not settled within one month, such overdrawn, principal amount shall also be liable to be included under the outstanding loans and such loans shall

be liable to be included under the outstanding loan and such loan shall be downgraded by one step from its current Classification. In respect of recognition of interest, the same shall be as per the clause relating to income recognition mentioned in Directives No.4.

- **Loan Loss Provisioning**

The Loan loss provisioning, on the basis of the outstanding loans and advances and purchase classified as per this Directives, shall be provided as follows:

Classification of Loan	Loan Loss Provision
Pass	1%
Substandard	25 %
Doubtful	50 %
Loss	100%

Note: Loss loan provision set aside for performing loan is defined as "general loan loss provision" and loan loss provisions set aside for Non-performing loan is defined as "Specific Loan Loss Provisions".

B. **Provision for extending Advances & Investment in Productive, Priority and Deprived Sector:**

- **Productive Sector :**

Productive sector include advances to priority sector and other productive sector which includes advances and investment in shares and debentures of small, medium and large industries as defined in industrial enterprises act; pre-shipment loan like purchase of merchandise, processing, assembling, packaging etc.; and export bill financing, advances for purchase of public transport like truck, bus, tempo etc. and agricultural/farm equipment; investments on shares and debentures of government/semi-government or private sector agricultural insurance, go-down, banking or like companies etc.

As per NRB regulation, commercial banks are required to extend 40% of the total advances to productive sector, which also include 12% to priority sector including deprived sector.

- **Priority Sector Loan Program**:

"Priority Sector" is defined to include micro and small enterprises which help increase production, employment and income as prioritized under the national development plans with and objective to uplift the living standard of general public particularly the deprived and low income people by progressively reducing the prevalent unemployment, poverty, economic inequality and backwardness. Micro and small enterprises are classified into agricultural enterprises, cottage and small industries and services. In addition, other businesses as specified by NRB from time to time are also included under Micro and small enterprises. All credits extended to priority sector up to the limit specified by NRB are termed as "Priority Sector Credit"

NRB has provided the requisite proportion of priority sector lending as follows:

- Deprived Sector Lending:

"Deprived Sector" includes low income and particularly socially backward women, tribes, lower caste, blind, hearing impaired and physically handicapped persons and squatters (sukumbasi) family. All loans extended for the operation of self-employment oriented micro-enterprises for the upliftment of economic and social status of deprived sector up to the limit specified by NRB is termed as "Deprived sector Loan". "Deprived sector Loan" is considered as integral part of priority sector loan and this loan comprise micro-credit programs and projects also.

The business under the priority sector loan program has been classified under the following four major heads:

- Agriculture and Agro-based business
- Cottage and small industries
- Services
- Other business

Lending in Deprived Sector will be included in priority sector for the purpose of compliance test for 13.5% (10% + 3.5%) loan to priority sector.

Deprived sector loan is advances up to Rs. 50,000 per borrower family meant for weak, poor and deprived people extended in the following manner by the commercial banks shall qualify to be included under deprived sector loan:

- Direct investment made by the commercial banks themselves in income generation employment oriented programs.
- Investments made by commercial banks in share capital of Rural Development Banks, Rural Micro Finance Development Center and other Development Banks established with an objective to extend loan to deprived sector.
- Advances to the Rural Development Banks and other Development Banks engaged in the similar poverty alleviation programs.
- Advances to Cooperative, Non-governmental organization and small farmers cooperatives approved by NRB for carrying out banking transactions.
- Advances to Micro-Finance Institutions/(Rural Development Banks and other financial institutions, cooperatives and non-governmental organizations approved by NRB for intermediation) stipulating the condition to disburse such loan to deprived sector only.
- Loans extended by commercial banks to development banks engaged in micro credit activities with stipulated condition to disburse the loan only to the deprived sector up to Rs.30,000 a family shall be eligible for the purpose of inclusion under deprived sector loan.

- **Regulation relating to Loan Classification and loan loss provisioning**
  With and objective to minimize the possible loss of credits extended by commercial banks as provided under section 23(1) of Nepal Rastra Bank Act 2012 (with amendment) relating to development and regulation and banking system. This directive in respect of loan classification & provisioning has been issued in exercised of authority under section 56 of bank and financial institutions act 2063.

- **Classification of Outstanding Loan and Advances on the Basis of Aging**

  Banks shall classify outstanding principal amount of loan and advances on the basis of aging.

2.6 Review of Previous Studies

2.6.1 Review of Articles and Journals

Shrestha (2012) conducted on "Non-Performing Loans and Stock Prices: A Case of Nepalese Commercial Banks." The main objective of his research was to asceratin the determinants of nonperforming loans (NPL) in the Nepalese commercial banking sector using a descriptive statistics, trend and one factor econometric model. The study has selected 18 Nepal commercial banks by using stratified sampling method, and found the aggregate values of ratio that measures the banks' health. The results show that aggregate NPL of commercial banks is in decreasing trend and the model is consistent with priori of the NPL to its stock price. This indicates that every rupee appreciation in the NPL brings about stock price decrease by 0.528 rupee. The study has shown an increasing trend of the total performing loan to total deposit ratio in the industry, while NPL is on the decline. It has given positive indication that the banks are able to mobilize their deposit in productive sectors. The aggregate mean value and standard deviation of the Non-Performing Loan to Total Deposit of the commercial banks are 0.085 and 0.051 respectively. The maximum and minimum values of this ratio are 0.167 and 0.027 in 2003 and 2010 respectively (PYC Nepal Journal of Management, August 2011, Vol. IV, No. 1).

Gundu (2013) conducted on "The impact of credit risk management on financial performance of commercial banks in Nepal". The general objectives of the study was to establish the impact of credit risk management on financial performance of banks and specific objectives were to establish impact of default rate, cost per loan assets on bank financial performance. The result of the showed that credit risk management is an important predictor of bank financial performance thus success of bank performance depends on risk management. The study results also showed that default rate as one of the risk management indictors is a major predictor of the

bank financial performance to the extent of 56% and followed by capital adequacy ratio at 25%. Credit risk management is crucial on the bank performance since it have a significant relationship with bank performance and contributes up to 22.6% of the bank performance. Among the risk management indicators, default rate management is the single most important predictor of the bank performance whereas cost per loan assets is not significant predictors of bank performance. Since risk management in general has very significant contribution to bank performance, the banks are advised to put more emphasis on risk management. (International Journal of Arts and Commerce Vol. 1 No. 5 October 2013)

Nazaj and Meka (2014)conducted on "Loan Management and its Role in the Lending Process". Bank loan management is crucial and it is instrumental in ensuring the success or failure of any credit institution. Albanian banking system as a relatively newcomer in the market economy, started to apply modern lending rules & procedures after the major loan portfolio was already created, whereas the key role of risk management and its respective procedures was mostly unknown for the majority of banks in Albania, during the credit boom. On the other side, Bank of Albania has been relatively late in taking up its role in controlling and monitoring the process of setting up the lending structure and regulation, as a mandatory standard, applicable in lending practices for commercial banks in Albania. The adjusted Basel I standards helped banks in Albania to weather the effects of the last financial crisis, but proved incomplete, in terms of ensuring long - term loan quality management. The paper shed light on main reasons why Albanian banks lagged behind in terms of applying and implementing modern risk management practices and procedures, during the credit boom period and explain why applying rules, procedures, intending to correct mistakes done during lending process, or improving the low quality portfolio, proved to be costly and of less success. Also, the paper put emphasis on lack of properly qualified and well-trained credit officers, within Albanian banks, as most of them practiced "on job training", and only a few banks took care of training the staff, and arranging proper organizational structures, which were mostly focusing to sales rather than risk. Finally, the paper provides some recommendations on improving internal lending practices and procedures, along

with modern risk management principles and near-future full implementation of Basel II standards by Bank of Albania. Keywords: Credit portfolio, loan quality management, Basel requirements, central bank supervision, NPLs- Non Performing Loan.

Bhattarai (2015) conducted on "Determinants of Lending Interest Rates of Nepalese Commercial Banks". The aim of this study is to investigate the determinants of lending rate of Nepalese commercial banks. The analysis of data was based on a sample of 6 commercial banks observed over the period 6 years (2010 to 2015). The models used in the study were: pooled OLS model, fixed effects model and random effects model. This study has used 'lending rate' as dependent variable, while the explanatory variables are: operating cost to total assets ratio, deposit interest rate, profitability (ROA) and default risk. The estimated results of these three regression models reveal that operating costs to total assets ratio, profitability (ROA) and default risk have significant positive impact on the commercial bank lending rate. However, deposit rate has negligible impact on lending interest rate. Thus, this study concludes that the major determinants of commercial banks' lending rate are: operating costs to total assets ratio, profitability (ROA) and default risk in Nepalese perspectives.

Timsina (2016) "Determinants of Bank Lending in Nepal" Commercial banks constitute a major chunk of total assets in the banking system in Nepal and extension of credit is one of the major functions of banking institutions. If banks are not efficient in their lending behavior, it may not contribute to economic growth. On the other hand, their inefficient and imprudent banking practices may lead to riskier financial instability. The main objective of the study is to test and confirm the effectiveness of the determinants of commercial bank lending behavior in Nepal by using time series Ordinary Least Square regression approach for empirical analysis. The model involves Nepalese commercial banks' private sector credit (pvct) as dependent variable and other variables such as their volume of deposits (dep), interest rate (Ir), stipulated cash reserve requirements ratio (crr), their liquidity ratio (lr), inflation (inf), exchange rate (exr), and gross domestic product (gdp) as

independent variables for the period; 1975 – 2014. From the regression analysis, it was found that Gross Domestic Product and liquidity ratio of banks have the greatest impacts on their lending behavior. Granger Causality Test shows the evidence of unidirectional casual relationship from GDP to private sector credit. The study implies that GDP is the barometer of the economy and commercial banks should pay their attention to the overall macro economic situation of the country, factors affecting the GDP in general and their liquidity ratio in particular while taking lending decision.

Malla (2017) "Credit Portfolio Management in Nepalese Commercial Banks". The portfolio management of the Nepalese banking sector has been improved remarkably during last 10 years due to the strict regulation of Nepal Rastra Bank. This journal will try to describe the present credit portfolio management practice of Nepalese commercial banks by using qualitative and quantitative methods. In this study, concentration of banks for credit portfolio management has been studied by analyzing security wise loan, product wise loan and sector wise concentration of loan where the researcher has found assorted outcomes. This research also aims to provide some suggestions to overcome with problems associated with credit portfolio.

2.6.2 Review of Unpublished Theses

Shrestha (2012) conducted the study on "A Study on *Credit Position of Nepalese Commercial Banks (Special reference to BOK and NIBL)"*had made following objectives and major findings.

Objectives:

- To explore the credit position of BOK and NIBL.
- To inspect the level of the non-performing loan investments that exists within the banking industry.
- To analyze the lending policy of Nepalese commercial banks with the help of BOK and NIBL.

Major Findings:

- NIBL had high liquidity than BOK. Likewise, fluctuation in CRR ratio was lower of BOK in relation to NIBL.

- Among the two sampled banks, NIBL bank had lowest non-performing assets to total assets ratio with the average of 0.87% compared to 1.32% of BOK. Besides that both banks had performed well in managing the non-performing assets low even in the higher increment in the total assets side.

- Among the two sampled banks, NIBL bank had maintained the low mean non-performing assets to total loan and advances ratio with 1.33%. In relation to that of BOK was 1.94%.

- NIBL had increased collecting interest bearing deposits but BOK had managed to reduce the ratio, which means their non-interest bearing deposits were growing.

- NIBL had highest interest bearing deposits than BOK.

Rouniyar, (2013)conducted on *"Liquidity & profitability Analysis of Listed of Four Commercial Banks (with reference to NABIL, SCBNL, EBL and SBI)"* has made following objectives and major findings:

Objectives:

- To assess the profitability and liquidity position of the commercial banks,

- To evaluate the relationship between selected dependent and independent variables regarding liquidity and profitability of the banks.

Major findings:

- From the ten years analysis i.e. fiscal year 2001/02 to 2010/11 return on equity is highest of SCBNL and lowest of SBI among the four sample banks. SBI has more risky than other sample banks.

- In the same way, return on capital fund or employed to risked assets for SBI is more volatile than other sample banks. SBI has not managed its profitability to maintain capital adequacy than other sample banks. NABIL is more uniformity which has less CV than others.

Pokharel (2013) conducted on **"*Comparative Study on Credit Policy of Nepalese Commercial Banks (With Reference To NIC & NCC Banks Limited)"*** had made following objectives and major findings.

Objectives:

- To analyze the effectiveness in credit policy of Nepalese commercial banks.
- To explore the strength and weakness in the loan management and credit policy of NIC and NCC.

Major findings:

- The average loan and advances ratio of NIC and NCC was 86% and 79% respectively. NIC had maintained higher loan & advances to total deposit. In this way, it shown that NIC seemed to be strong to mobilize its total deposit as loan. However higher ratio did not mean it was always better from the point of liquidity.
- Both the banks were capable to use more than 50% of deposit on loan and advances. If maintained this, it helped to make consistency on the profitability of the banks.
- The average interest income to total loan of the NCC had best performance than NIC.
- NIC had lowest non performing loan to total loan. NIC was best performer than the NCC. Banking sector was seriously affected by the non-performing loan. The Mean ratio of NIC and NCC was 4.90% and 12.05% respectively.

Kafle (2014) conducted Comparative Study on*Credit Management of Commercial Banks (with reference to BOK and SBI)"* had made following objectives and major findings:

Objectives:

- To assess the profitability and liquidity position of the commercial banks,
- To findout the credit position and nonperforming loan of commercial banks.
- To evaluate the relationship between selected dependent and independent variables regarding liquidity and profitability of the banks.

Major findings:

- The average ratio for return on assets was 1.03% and 2.38% for SBI and BOK respectively. Coefficient of variation indicates the fluctuating trend or measuring the uniformity of the banks which is 11.65% and 23.10% for SBI and BOK respectively.

- The average return on capital fund or employed to risked assets was 11.86% and 11.56% for SBI and BOK respectively. From the five years analysis i.e. fiscal year 2008/09 to 2012/13 the return on capital fund or employed to risked assets was slightly higher of SBI which was 11.86% than BOK i.e. 11.56% in average among two sample banks.

- The average of net profit to total deposit ratio was 1.11% and 2.52% for SBI and BOK respectively i.e. higher of BOK than SBI.

- The average of Net profit to total loan and advances ratio was 2.16% and 3.07% for SBI and BOK respectively. Net profit to total loan and advances ratio of BOK was higher than SBI with more uniformity.

- The average cash reserve ratio was 8.24% and 8.43% for SBI and BOK respectively. This indicates that the cash reserve ratio for the both bank had maintained as directed by NRB standard i.e. to generate the liquidity. Coefficient of variation indicates the fluctuating trend or measuring the uniformity of the banks which was 15.05% and 7.24% for SBI and BOK respectively. From this, it can be easily seen that the CRR of SBI was less consistency than BOK since the CV of SBI had higher than BOK.

- The average total loan/credit to total deposit ratio was 51.74% and 81.27% for SBI and BOK respectively. This indicates that the capability of the SBI was seemed to be poor to utilize the total deposits on loans and advances for profit generating purposes as compared to BOK.

- The average interest income to loans and advances ratio was 10.21% and 10.80% for SBI and BOK respectively. This indicates that the capability of the banks to manage the loans and advances in earning higher interest income. SBI was more volatile than BOK.

- The average NPL ratio was 1.10% and 1.71% for SBI and BOK respectively. The credit risk ratio of BOK was not succeed to reduce in first three fiscal

year 2008/09 to 2011/12 i.e. increasing trend and succeed to reduce only in fiscal year 2012/13.

Gurung (2016) entitled with *"Loan Management of Commercial Banks (with reference to NBBL and HBL)"* had made following objectives and major findings:
Objectives:

- To analyze the financial position of the selected sample banks.
- To measure the performance in quality, efficiency and contribution of profitability.
- To findout the liquidity position, the impact of deposit in liquidity and its effect on lending performance.

Major findings:

- Current ratio of sample banks showed fluctuating trend, HBL was more capable of meeting immediate liabilities in contrast to NBBL
- After analyzing the liquid fund to current liabilities ratio, can conclude that both bank do not differ significant with respect to this ratio.
- Loan and advance to total asset ratio of NBBL was higher than HBL. The overall performance of NBBL was the best with the higher mean ratio.
- There was the better utilization of loan and advance and investment in HBL than NBBL.HBL was more successful to utilize the despite fund in investment.

Nepal (2017) *"Credit Management of Commercial Banks in Nepal"*had made following objectives and major findings:
Objectives:

- To assess the credit practices of selected Nepalese commercial banks.
- To explore the credit efficiency, analyze the industry environment.
- To explore the relationship with loan & advances, NPA and Net profit

Major findings:

- Repayment is satisfactory in agro based industry and production sector compared to other sectors.

- Management quality and credit efficiency of selected banks found satisfactory as they have standard credit practices
- Credit disbursement and repayment has significant relationship. Flow of new credit depends upon the recovery status.

2.7 Research Gap

Nonperforming loan is becoming a great problem to all the commercial banks. All the commercial banks lend their deposits on different sectors of the economy. But all the sectors are not worsening in today's scenario. Some researchers have studied on implementation aspect of NRB directives by commercial bank while some other studied non performing loan and loan loss provisioning of commercial banks. This study 'Comparative Study on Credit Management of Commercial Banks (with reference to NIBL and EBL)' is made to fulfill the research gap in contrast to liquidity, loan & advances, deposit total assets, non performing loan and relationship between different financial indicators. This study is based on secondary data and it will assess the credit management of banking sector and by providing the proper atmosphere for the banking market in our country. Thus, the earlier studies on these issues need to be updated and validated because of the many changes taking place in Nepalese banking sector. The current study is a supplement to overcome the weakness and fulfill the some gaps in research.

CHAPTER- III
RESEARCH METHODOLOGY

Research methodology can be designed as systematic process that is adopted by the research in studying problems with certain objectives. It refers to the aggregate of the research design used, data collection techniques used, sampling design implemented, statistical tools and technique used and employed and so on. The research orientation and activities are encouraged in the college and universities in order to reinforce and improve learning, and to enhance analytical and research skills. Also, it is now widely accepted that an understanding of the concepts and methods of research is just not the concern of the university family, but is essential for other professionals working in different fields. Thus, over the past few decades, the level of interest in research methodology has exploded.

3.1 Research Design

A research design is a specification of methods and procedures for acquiring the information needed. It is the overall operational pattern of frame work for the project that stipulates what information is to be collected, from which sources and by what procedures." *(Paul & Donald; 1999: 135)* The research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to control variance.

Since the main objective of the study is to analyze the comparative study on credit management of two sample banks, all the indicators which are related with credit and depositof the bank have been calculated using data obtained from the five year end accounting records maintain by the bank. The study depends on secondary data on the basis of which collection, verification and evaluation of past evidence have been done for final conclusion. Various financial parameter and effective techniques are employed to identify the condition of loan disbursement and recovery of the bank. To conduct the study, both analytical and descriptive research approach are

adopted for the reality available historical data. So the study based on descriptive and analytical research design.

3.2 Population and Sample

According to NRB there are altogether 28 commercial banks operating Nepal. In this scenario, two commercial banks, NABIL Bank Limited and Everest Bank Limited have been selected as sample for the present study. Similarly, financial statements of these two banks for 5 fiscal years from 2012/13 to 2016/2017 have been taken as samples for the same purpose.

3.3 Data Collection

The researcher used the secondary data. The secondary data have collected from the different sources. Secondary sources consists of annual reports of the banks, published and unpublished bulletins, reports of the banks, previous studies and reports, banking and financial statistics report of Nepal Rastra Bank Magazines etc.

3.4 Method of Data Analysis

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

   a) Financial Tools
   b) Statistical Tools

3.4.1 FinancialTools

For sake of analysis, various financial tools were used. The basic tools used were ratio analysis; beside it income and expenditure analysis and cash flow analysis have been used.

3.4.1.1 Ratio Analysis

Ratio analysis is a powerful and most widely used tool of financial analysis.

A. Liquidity Ratio:

Liquidity refers to the ability of a firm to meet its short-term or current obligations as and when they fall due for payment. So liquidity ratios are used to measure the ability of a firm to meet its short-term obligations and from them the present cash solvency as well as ability to remain solvent in the event of adversities of the same can be examined.

Inadequate liquidity can lead to unexpected cash short falls that must be covered at inordinate costs, thus reducing profitability. In the worst case, inadequate liquidity can lead to the liquidity insolvency of the institution. On the other hand, excessive liquidity can lead to low asset yields and contribute to poor earnings performance. To find out the ability of banks to meet their short-term obligations, which are likely to mature in the short period, these ratios are calculated. The following ratios are developed under the liquidity ratios to identify the liquidity position.

- **Cash and Bank Balance to Total Deposit Ratio:**

This ratio shows the ability of banks immediate funds to cover their deposit. Higher the ratio shows higher liquidity position and ability to cover the deposits and vice versa. It can be calculated by dividing 'cash and bank balance' by deposits. This ratio can be calculated using the following formula.

$$= \frac{\text{Cash and Bank Balance}}{\text{Total Deposits}}$$

- **Cash and Bank Balance to Current Deposits Ratio:**

This ratio computed to disclose the soundness of the finance company to pay total calls made of current deposits. It can be expressed as:

$$= \frac{\text{Cash and Bank Balance}}{\text{Current Deposits}}$$

B. Activity/Efficiency Ratio:

It is also known as turn over or efficiency ratio or assets management ratio; measures how efficiently the firm employs the assets. Turn over means the number

of times and assets flow through a firm's operations and into sales. Greater rate of turnover or conversion indicates more efficiency of a firm in managing and utilizing its assets, being other things equal. Various ratios are examined under this heading.

- Total Loan and Advances to Total Deposits Ratio:

Commercial banks utilize the outsider's fund for profit generation purpose. Loan and advances to deposit ratio shows whether the banks are successful to utilize the outsiders funds (i.e. total deposits) for the profit generating purpose on the credit and advances or not. Generally, a high ratio reflects higher efficiency to utilize outsider's fund and vice-versa. The ratio can be calculated by using following formula.

$$\text{Total Loan and Advances to Total Deposits Ratio} = \frac{\text{Loan and Advances}}{\text{Total Deposits}}$$

- Loan and Advances to Fixed Deposit Ratio:

Fixed deposits are the long-term interest bearing obligations and loan and advances is the major sources of investment to generate the income by the commercial banks. This ratio measures how many times the amount is used in loan and advances in comparison to fixed deposit for the income generating purpose. The ratio is slightly differ with the former one, because it only includes the fixed deposits, where as the former on includes all the deposits. The following formula is used to obtain this ratio.

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

- Total Loan and Advances to Total Assets Ratios:

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

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

- Performing Assets to Total Assets Ratio:

It tells the percent of performing assets on total assets. It is useful to know the fact that whether the good loan is increasing or not. We can generate more earning by increasing good loan and reducing bad and inferior loan. It teaches us to invest sources of final only on good loan (i.e. profitable venture). It is computed as:

$$\text{Performing Assets Ratio} = \frac{\text{Performing Assets}}{\text{Total Assets}}$$

- Loan loss provision on Loan and Advances:

It measures the percentage or loan loss provision on loan and advances. Loan loss provision on loan is given to reduce risk of non-payment of released loan. As per directives to bank and finance companies by NRB (2058 B.S.), 1% of good loan can be provisioned as loan loss provision to reduce risk that may arise due to no recovery of disbursed loan. It is computed as:

$$\text{Loan Loss Provision Ratio} = \frac{\text{Total loan loss provision}}{\text{Total loan due}}$$

C. Profitability Ratios:

Profit is the difference between revenues and expenses over a period of time. A company should earn profit to survive and to grow over a long period of time. So profits are essential, but profit earning is not the ultimate aim of company and it should never be earned at the cost of employees, customer and society. "Profitability ratios are the indicators of degree of managerial success in achieving firms overall goals." It shows the overall efficiency of the business concern. The following ratios are calculated under the profitability ratios:

Return on Assets (ROA): Return on assets ratio measures net profit after tax as compared to the amount invested in the assets. Van Horne viewed, "when we multiply the assets turnover of the firm by net profit margin, we obtain the return on assets ratio or earning power on total asset" (Van Horne; 1996: 174). The statement can be written in the following formula:

$$\textit{Return on Assets} = \frac{\textit{Net Profit After Tax}}{\textit{Total Assets}} \times \textit{100\%}$$

These ratios are useful to measure the profitability of a firm and these are the short term measure of firm's effectiveness also.

Net Profit after Tax to net worth: Operating profit to net worth is also a measure of bank's efficiency so far as the matter of utilizing the equity capital is concerned. How much revenue is generated by utilizing the equity fund is an issue to be examined.

$$\text{Net profit to net worth} = \frac{Net \text{ profit After Tax}}{\text{Net worth}}$$

Net Profit to Total Deposit: Net profit to total deposit gauges the bank's efficiency to generate net profits out of the total deposit it collected. That means if the bank is able to make more profits from the deposit collected through the different sources then this ratio tends to be more.

$$\text{Net profit to total deposit} = \frac{Net \text{ profit After Tax}}{\text{total deposit}}$$

Net Profit to Total loan and advances: Net profit to total loan and advances gauges the bank's efficiency to generate net profits. It is calculated as following manner.

$$\text{Net profit to total loan and advances} = \frac{Net \text{ profit After Tax}}{\text{total loan and advances}}$$

Credit Risk Ratio:

This ratio indicates the possibility of loan being default or not getting repaid by the client with subsequent losses to the bank. It is calculated as the percentage of nonperforming loans to total loans and advances/credit.

$$\text{Credit Risk Ratio} = \frac{\text{Total Non performing loans}}{\text{Total loans and advances}}$$

Higher ratio shows the presence of more risky assets in the volume of loans and advances, and vice versa.

Hence, these are the various financial tools that were used to achieve the objectives of this study.

- Interest Income to Total Loan and Advances:

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

$$= \frac{\text{Interest Income}}{\text{Total Loan and Advances}}$$

3.5.2 Statistical Tools

Various statistical tools can be used to analyze the researchers. These tools are used in research in order to draw the reliable conclusion through the analysis of financial data. Following tools are used for this purpose.

3.5.2.1 Arithmetic Mean

An average is a single value selected form a group of values to represent them in same way, which is supposed to stand for whole group of which it is a part, as typical of all the values in the group (Waugh A.E.). Out of various measures of the central tendency, arithmetic mean is one of the useful tools applicable here. It is easy to calculate and understand and understand and based on all observation.

Mean ($\overline{X}$)

The arithmetic mean or average is the sum of total values to the number of observations in the sample. It represents the entire data which lies almost between the two extremes. For this reason an average is frequently referred to as a measure of central tendency. In this study it is used in data related to dividend of sample banks over five years. It is calculated as:

Arithmetic Mean: Arithmetic mean is the average return over periods.. It is calculated by,

$$\overline{X} = \frac{X_1 + X_2 + X_3 + ... + X_n}{n}$$

Or, $\overline{X} = \dfrac{\sum X}{n}$

Where,

$\overline{X}$ = Arithmetic mean return

x_1, x_2, x_3 ………….. x_n = Set of observations

n = total no. of observations

$\sum X$ = Sum of given observation

Standard Deviation (S.D.)

The measurement of the scatterings of the mass of figures in a series about an average is known as dispersion. S.D. is an absolute measurement of dispersion in which the drawbacks present in other measures of dispersion are removed. The high amount of dispersion reflects high standard deviation. The small standard deviation means the high degree of homogeneity of the observations. In simple term high SD means very less similarity in the values and low SD means high similarity among the values. SD gives the accurate result between

$$\text{S.D.} \sqrt{\frac{\sum (X - \overline{X})^2}{n}}$$

Where,

X = number of observations in the sample

$\overline{X}$ = mean of number of observations in the sample

n = number of years

$\sum (X - \overline{X})^2$ = Sum of Total number of observations deviation from mean in the sample.

Standard deviation is the absolute measure of dispersion. The relative measure of dispersion bases on the standard deviation is known as the Coefficient of standard deviation.

The coefficient of dispersion based on standard deviation multiplied by 100 is known as coefficient of Variance and written, as C.V is given by;

$$\text{Coefficient of Variation} = \frac{\text{Standard deviation}}{\text{Mean}} \times 100$$

C.V.) $= \dfrac{\sigma}{\overline{x}} \times 100$

It is independent unit. So two distribution can bitterly compared with the help of C.V for their variability. Less the C.V more will be the uniformity consistency etc and more the C.V. less will be the uniformity consistency etc.

According to Prof. Karl Pearson, coefficient of variation is the percentage variation in mean, standard deviation being considered as the total variation in the mean. It is one of the relative measures of dispersion that is useful in comparing the amount of variation in data groups with different mean. For comparing the variability of two distributions, we compute the coefficient of variation for each distribution. A distribution with greater CV is said to be more variable or heterogeneous than the other.

Correlation Coefficient Analysis

If the distribution consists of two variables then correlation is used to find out the relation between them. Two variables are said to correlation when they are so related that the change in the value of one variable is accompanied by the change in the value of other. Correlation is the measure of relationship between two or more characteristics of population or sample. It is simply measure the chance between the phenomenon's.

Correlation is a statistical tools with the help of which we can determine whether or not two or more variable are correlated & if they are correlated the degree (extent) and direction of correlation is determined . Correlation is the statistical tools that we can used to describe the degree of which one variable is linearly related to another. The coefficient of finding out coefficient (I.e. Karl Pearson's Coefficient of correlation, Spearman's Rank Correlation Coefficient, Kendall's Tau etc) ; Karl pearl son's method is applied in this study.

If two variables very in the same direction i.e. if increase (or decrease) in the value of one variable result increase (or decrease) in the value of other variable, then tow variables are said to have positive correlation.

Similarly, the two variables are said have negative correlation if they vary in the opposite direction (Or decrease) in the value of other variable result decrease (or increase) in the value of other variable.

One of the widely used mathematical methods of calculating the correlation coefficient between tow variable is Karl Pearson's Correlation coefficient. It is also known as Pearson's correlation coefficient & denoted by 1_{xy} or, simply r. if x be the one variable and y be the other variable with n number of observation then r is defined;

Correlation of coefficient $r = \dfrac{n \sum XY - \sum X \times \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2}.\sqrt{n \sum Y^2 - (\sum Y)^2}}$

r = coefficient of correlation

ΣXY = Sum of product of two series.

ΣX² = Sum of squared in X series

ΣY² = Sum of squared in Y series

The value of this coefficient can never be more than + 1 or less than -1. Thus, + 1 and -1 are the limit of this coefficient. The r = + 1 implies that correlation between variables is positive and vice- versa. And zero denoted no correlation.

The result of correlation coefficient is always lies between – 1 & +1

When r = +1, there is positively perfect correlation between two variables

When r = -1 there is negatively perfect correlation between two variable

When r = 0, there is no correlation between two variables or the variables are uncorrelated.

Neither the value of r to +1 closer will be relationship between two variables nor will the value of r to 0 lesser be the relationship between two variables.

t- Statistics-

It was developed by W.S. Grosset (Pen name Student) in 1908. Then this distribution is explained by R.A. Fisher. To test the validity of assumption of the study for small samples, t- test is used. It is very difficult to make a clear cut distinction between small samples and large samples. However from practical point of view, in most of the situations a sample is termed as small, if n≤30. For applying t distribution, the t- values are calculated first and compared with the critical values at a certain level of significance for given degree of freedom. If the computed value of 't' exceeds the table value (say t 0.05), it is known that the 5 percent level of significance but if t-values are less than the corresponding critical of the 't' distribution, the difference is not termed as significant.

Under H_0, the t statistic is:

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

Where,

t=calculated value of t

r= correlation of coefficient between the variables.

n= number of sample.

CHAPTER - IV
PRESENTATION AND ANALYSIS OF DATA

This is the body part of the study in which collected data are presented and analyzed with the help of table, bar diagram i.e. figure. In this chapter, first section presents for the evaluation of the banks' liquidity position. Second section presents credit efficiency i.e. resources utilization of the banks. Similarly, third section presents the profitability of the banks. Forth section presents the evaluation of linear relationship between net profit after tax and total loan and advances and total deposit and total loan and advances of sample banks. Finally, fifth section presents the basic findings based on the discussion in preceding four sections.

4.1 Evaluation of Liquidity Position of the Banks

The main objective of this research is to evaluate the loan management of EBL and NABIL. While evaluating the banks in terms of liquidity, a ratio has been used and this is as follows.

4.1.1 Liquidity Ratio

Liquidity ratio measures the short-term solvency of a firm. The ratio is the crude measurement of liquidity position of a firm. The ability to pay the firm's short-term obligation is measured with the liquidity ratio.

4.1.1.1 Cash Bank Balance to Total Deposit

This ratio measures the ability of the banks to meet its immediate obligation. The bank should adequate cash and bank balance to meet the unexpected as well as the heavy withdrawal of deposits. The ratio shows the preparation of total deposits held at most liquid assets. Table 4.1 presents the five years cash and bank balance to total deposit ratio of sample banks.
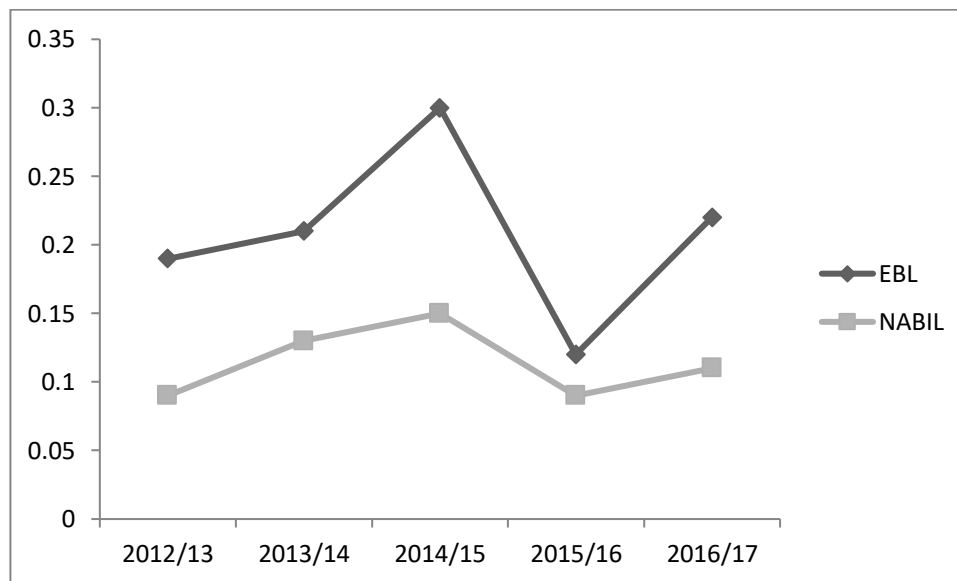
Table: 4.1

Cash Bank Balance to Total Deposit (in times)

Fiscal Year	EBL	NABIL
2012/13	0.19	0.09
2013/14	0.21	0.13
2014/15	0.30	0.15
2015/16	0.12	0.09
2016/17	0.22	0.11
Mean	**0.21**	**0.114**
S.D.	**0.06**	**0.0233**
C.V. (%)	**28.57**	**20.44**

Sources: Appendix I & II

Figure: 4.1

Cash Bank balance to total deposit of sample banks in (%)

The above table 4.1 and Figure 4.1 show that the cash and bank balance to total deposit ratio of sample banks. The average of this ratio of EBL is 0.21 times.Similarly, the highest ratio of EBL is 0.30 times in fiscal year 2014/15 and the least is 0.12 times in year 2015/16. The average of this ratio of NABIL is 0.114 times. Similarly, the highest ratio of NABIL is 0.15 times in fiscal year 2014/15 and the least is 0.09 times in year 2012/13 and 2015/16.

The C.V of EBL and NABIL are 28.57% and 20.44% respectively. This shows that there is less variation in cash bank balance to total deposit of NABIL than EBL. A high ratio represents the greater ability to meet their all types of deposits. But too high ratio of cash and bank balance to total deposits may be unsuitable and harmful because it affects their profitability position and also low ratio is unfavorable as capital will be tied up and opportunity cost will be higher.

4.1.2 Total Loan and Advances to Total Deposit Ratio

This ratio is calculated to find out how the banks are successful utilizing the outsider's fund i.e. total deposits for profit generating purpose in the form of extending loan and advances. It is calculated as;

Table: 4.2

Total Loans and Advances to Total Deposit Ratio

FY	EBL	NABIL
2012/13	76.57	72.89
2013/14	78.03	72.55
2014/15	66.63	62.84
2015/16	73.52	69.02
2016/17	81.27	75.59
Mean	**75.2**	**70.58**
S.D.	**0.49**	**4.40**
C.V. (%)	**0.65**	**6.23**

Sources: Appendix I & II

Figure: 4.2

Total Loans and Advances to Total Deposit Ratio
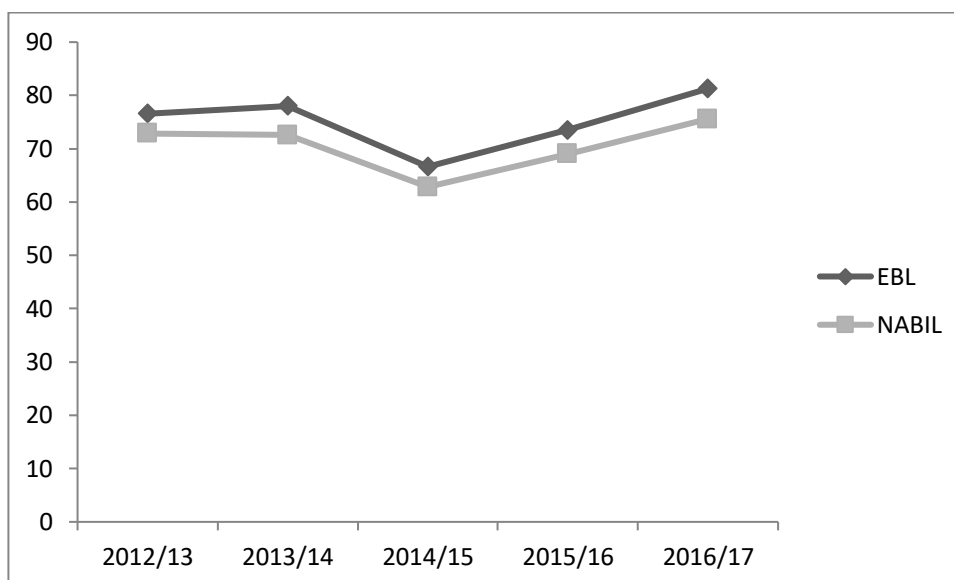
The abovetable 4.2 and figure 4.2 show that the total loan and advances to total deposit ratio of EBL and NABIL for the last five fiscal years. The mean of this ratio of EBL is 75.2% respectively.Similarly, this ratio of EBL is the highest of 81.27% and the least is 66.63% with the corresponding year 2016/17 and 2014/15 respectively.The mean of this ratio of NABIL is 70.58% respectively. Similarly, this ratio of NABIL is the highest of 75.59% and the least is 62.84% with the corresponding year 2016/17 and 2014/15 respectively.

The C.V of EBL and NABIL are 0.65% and 6.23% respectively. This shows that there is less variation in Total Loans and advances to total deposit ratio of EBL than NABIL.The higher mean ratio indicates the more successful in utilizing the resource in profitable sectors. Higher turnover ratio is considered significant as it is indicated that the bank is utilizing gist assets in profitable field and vice versa.
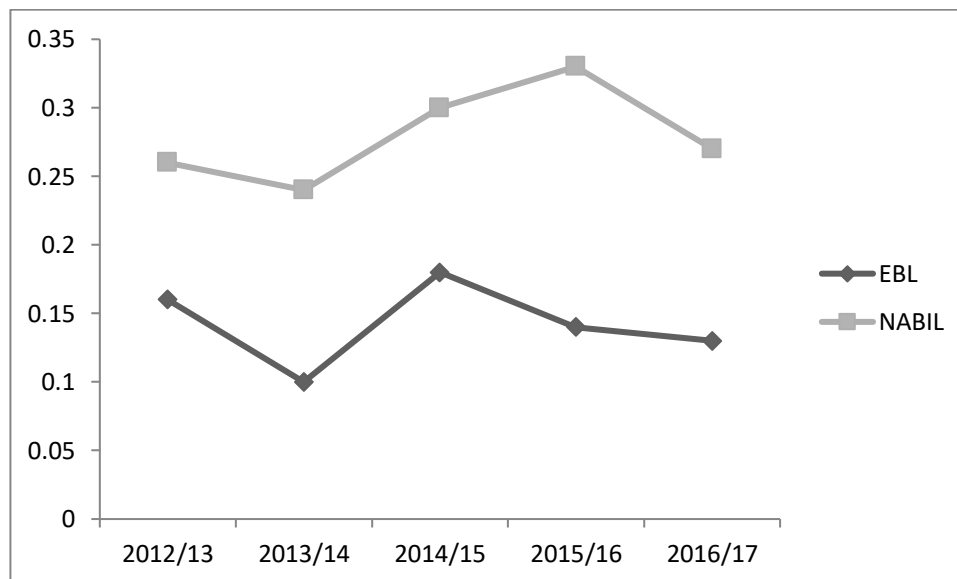
4.1.3 Investment to Total deposit Ratio

The ratio of investment in total amount of deposit.An investment is a commitment of money that is expected to generate additional money. Every investment entails some degree of risk. It requires a present certain sacrifice for a future uncertain benefits. This ratio can be shown in the following table.

Table: 4.3

Investment to Total deposit(In times)

FY	EBL	NABIL
2012/13	0.16	0.26
2013/14	0.10	0.24
2014/15	0.18	0.30
2015/16	0.14	0.33
2016/17	0.13	0.27
Mean	**0.14**	**0.28**
S.D.	**0.02**	**0.032**
C.V. (%)	**14.29**	**11.43**

Source: Appendix-I and Appendix-II

Figure: 4.3

Investment to Total deposit

The above table 4.3 and Figure 4.3 show that the investment to total deposit ratio of EBL and NABIL during the last five fiscal year. The mean ratio of EBL is 0.14 times. Similarly, the highest and the least ratio of EBL is 0.18 times and 0.10 times with the corresponding year 2014/15 and 2013/14 respectively. The mean ratio of EBL is 0.28 times. Similarly, the highest and the least ratio of NABIL is 0.33 times and 0.24 times with the corresponding year 2015/16 and 2013/14 respectively.

The C.V of EBL and NABIL are 14.29% and 11.43% respectively. This shows that there is less variation in Investment to Total Deposit of NABIL than EBL.

4.1.4 Loans and Advances to Saving Deposit Ratio

The ratio indicates how many times the short term interest bearing deposits are utilized for generating the income. Saving deposit are the short term interest bearing liabilities. Loans and advances are the major sources of investment to generate income in commercial banks. This ratio is shown in the following table.

Table: 4.4

Total loan and advances to Saving deposit (In times)

Fiscal Year	EBL	NABIL
2012/13	2.12	1.98
2013/14	1.89	1.68
2014/15	1.70	1.53
2015/16	1.78	1.42
2016/17	2.17	1.75
Mean	**1.93**	**1.67**
S.D.	**0.18**	**0.19**
C.V. (%)	**9.33**	**11.38**

Source: Appendix-I and Appendix-II

Figure: 4.4

Total loan and advances to Saving deposit (In times)
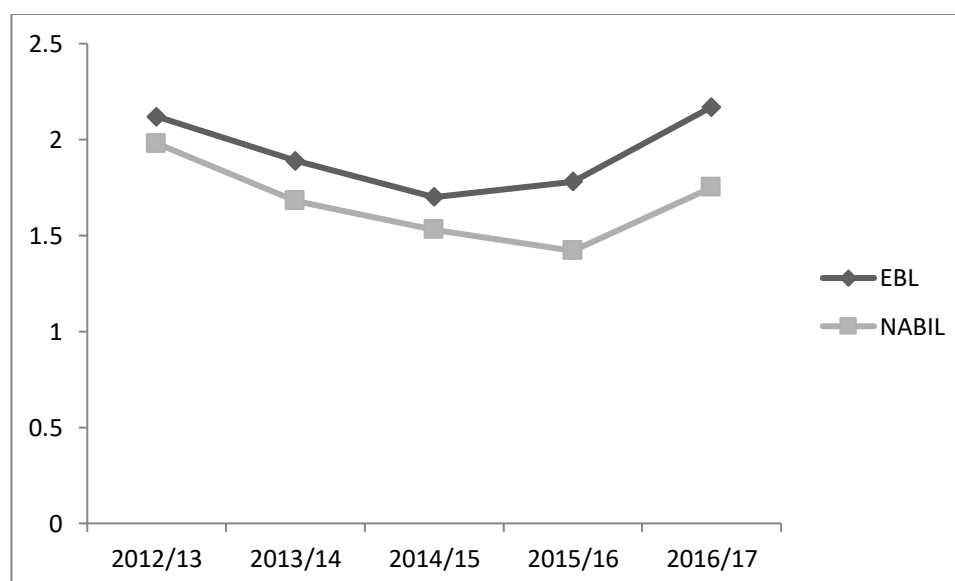
The above table 4.4 and figure 4.4 show that the total loan and advances to saving deposit of EBL and NABIL. The mean of this ratio of EBL is 1.93 times. For EBL, this ratio is the highest of 2.17 times inthe fiscal year 2016/17 andthe least of 1.70times in the fiscal year 2014/15. The mean of this ratio of NABIL is 1.67 times. For NABIL, this ratio is the highest of 1.98 times in the fiscal year 2012/13 and the least of 1.42 times in the fiscal year 2015/16. The C.V of EBL and NABIL are 9.33% and 11.38% respectively. This shows that there is less variation in Total loan and advances to Saving Deposit of EBL than NABIL.

4.2Activity Ratios

It measures the performance efficiency of an organization from various angles of its operation. This ratio indicates the efficiency of an activity of an enterprise to utilize available funds, particularly short term funds. The Loan loss provision to total loan and advance ratio of ADBL is shown in the following table.

4.3Credit Risk Ratio

This ratio indicates the possibility of loan being default or not getting repaid by the client with subsequent losses to the bank. It is calculated as the percentage of nonperforming loans to total loans and advances/credit. Higher ratio shows the presence of more risky assets in the volume of loans and advances, and vice versa.

Table: 4.5

Credit Risk Ratio Sample Banks(In %)

Fiscal Year	EBL	NABIL
2012/13	0.62	2.19
2013/14	0.97	2.30
2014/15	0.66	1.86
2015/16	0.38	1.17
2016/17	0.26	0.81
Mean	**0.58**	**1.67**
S.D.	**0.25**	**0.58**
C.V. (%)	**43.10**	**34.73**

Source: Appendix-I and Appendix-II

Figure 4.5

Credit Risk Ratio of Sample Banks in (%)
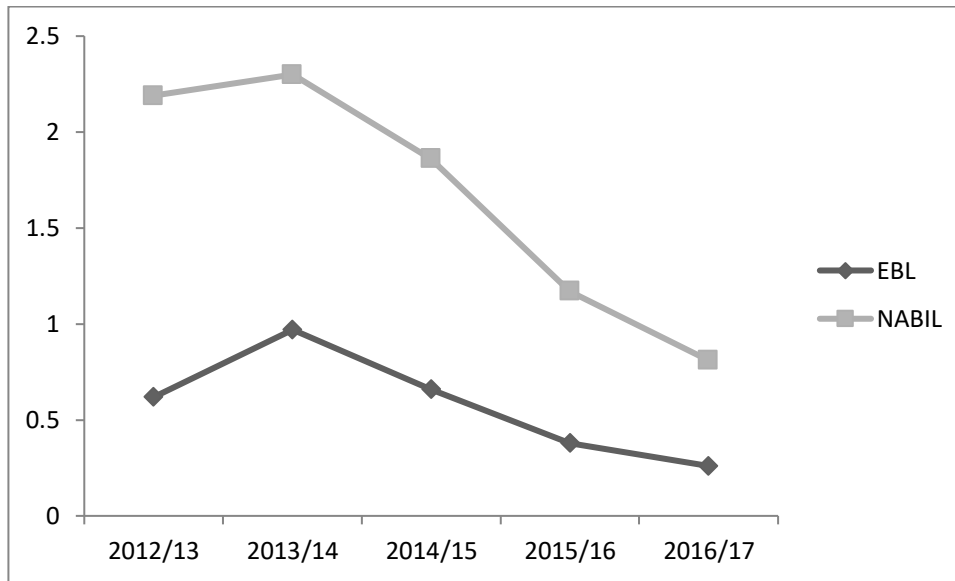
The above table 4.5 and figure 4.5 show that the Credit risk ratio of sample banks during the last five fiscal years. The average credit risk ratio is 0.58% of EBL. This ratio is the highest of 0.97% in year 2013/14 and the least of 0.26% in the fiscal year 2016/17. The average credit risk ratio is 1.67% of NABIL. This ratio is the highest of 2.30% in year 2013/14 and the least of 0.81% in the fiscal year 2016/17.

However, according to NRB directives, NPL should not be more than 5% of total loan and advances and it is better to less than 1% for the sound financial performance. Hence, EBL is slightly decreasing and succeed to reduce below 1% and NABIL is more than EBL.The C.V of EBL and NABIL are 43.10% and 34.73% respectively. This shows that there is less variation in Credit Risk Ratio of NABIL than EBL.

4.4 Evaluation of Profitability Position of the Banks

Profitability refers to the operating efficiency of firms. Here, the financial ratio analysis using annual data of five years have been used to measure short-term profitability. These ratios have been presented and analyzed in this section comprehensively.

4.4.1 Interest Income to Loans and Advances Ratio:

This ratio indicates the capability of the banks to manage the loans and advances in earning higher interest income. It shows the proportion of interest income earned as compared to the total loans and advances granted.

Table:4.6

Interest Income to Loans and Advances Ratio in (%)

Fiscal Year	EBL	NABIL
2012/13	11.17	12.29
2013/14	10.68	10.30
2014/15	9.02	8.79
2015/16	7.34	8.08
2016/17	8.72	8.97
Mean	**9.39**	**9.69**
S.D.	**0.14**	**1.49**
C.V.	**1.49**	**15.38**

Sources: Appendix I & II

Figure: 4.6

Interest Income to Total Loans and Advances Ratio in (%)
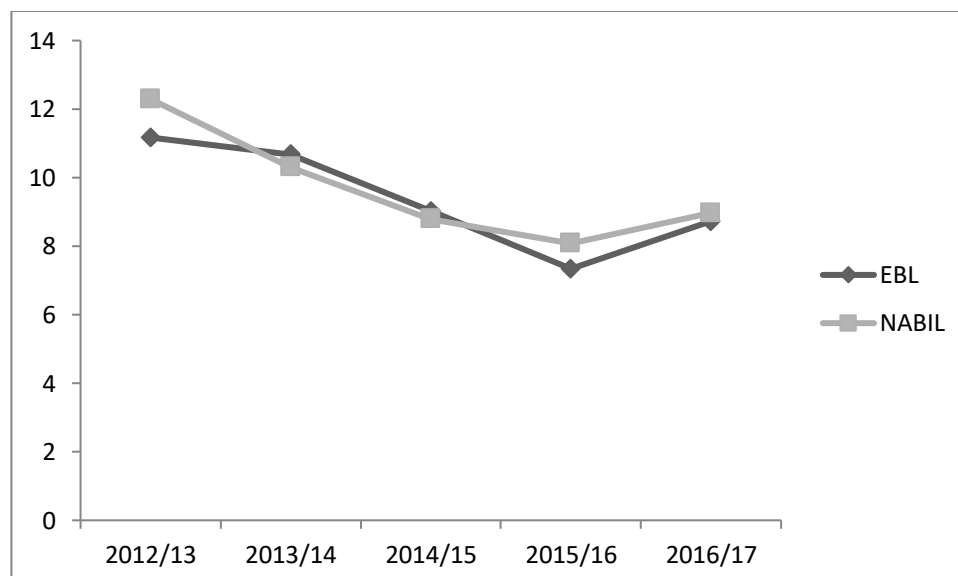
The above table 4.6 and figure 4.6 show that the interest income to total loans and advances ratio of sample banks during the last five fiscal years. The average of this ratio of EBL is9.39%. The average of this ratio of NABIL is 9.69%. This indicates

that the capability of the banks to manage the loans and advances in earning higher interest income.Coefficient of variation indicates the fluctuating trend or measuring the uniformity of the banks which is 1.49% for EBL and 15.38% for NABIL.

4.4.2Net Profit to Total Deposit

Net profit to total deposit gauges the bank's efficiency to generate net profits out of the total deposit it collected. That means if the bank is able to make more profits from the deposit collected through the different sources.

Table 4.7

Net Profit to Total Deposit In (%)

Fiscal Year	EBL	NABIL
2012/13	2.55	3.48
2013/14	2.49	3.07
2014/15	1.89	2.00
2015/16	1.85	2.55
2016/17	2.11	3.03
Mean	**2.18**	**2.83**
S.D.	**0.29**	**0.51**
C.V.	**13.30**	**18.02**

Sources: Appendix I & II

Figure 4.7

Net Profit to Total Deposit Ratio
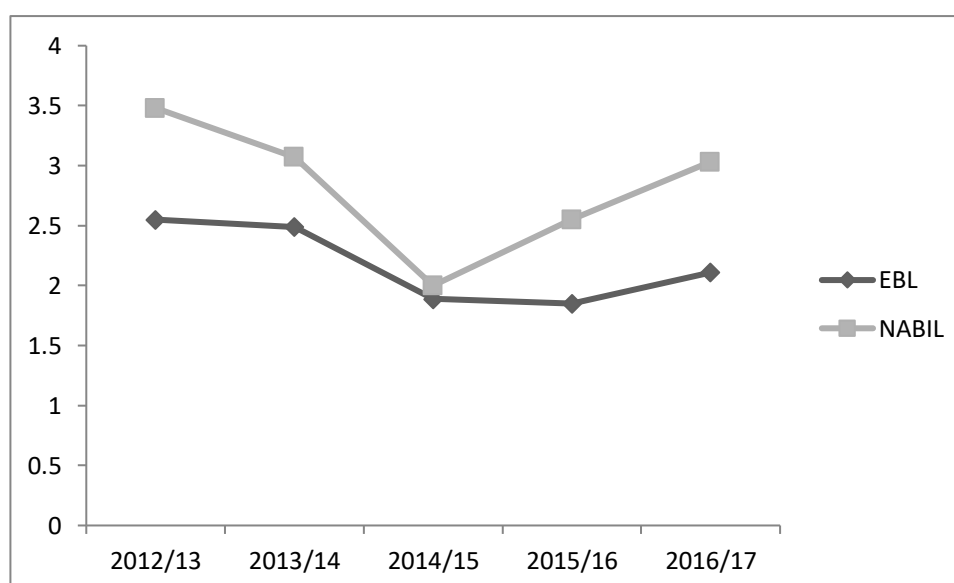
The above table 4.7 and figure 4.7 show that the Net profit to total deposit gauges the bank's efficiency to generate net profits out of the total deposit it collected. The average of net profit to total deposit ratio is 2.18% forEBL and 2.83% for NABIL. By measuring the coefficient of variation, Coefficient of variation indicates the fluctuating trend or measuring the uniformity of the bank which is 13.30% for EBL and 18.02% for NABIL.

4.4.3Net Profit After Tax (NPAT) to total Assets Ratio / Return on Assets

Return on assets is calculated in order to know the effectiveness of investment on total assets with respect to net profit. Table 4.9 presents the ROA for the bank.

Table 4.8

Return on Assets of Sample Bank in (%)

Fiscal Year	EBL	NABIL
2012/13	2.23	3.02
2013/14	2.19	2.65
2014/15	1.59	1.80
2015/16	1.52	2.21
2016/17	1.72	2.57
Mean	1.85	**2.45**
S.D.	0.30	**0.42**
C.V.	16.22	**17.14**

Sources: Appendix I & II

Figure 4.8

Return on Assets Sample Banks
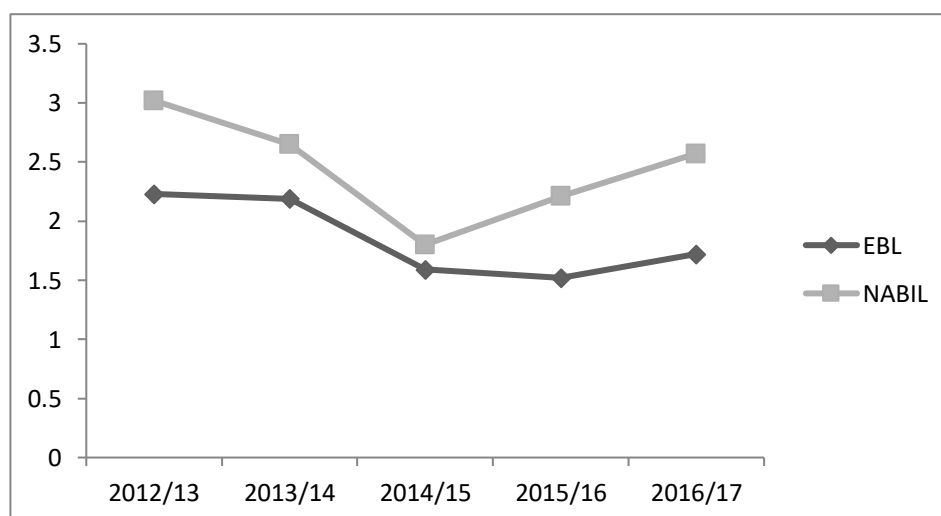
The above table 4.8 and figure 4.8 show that the result of return on assets ratio of EBL. The average ratio for return on assets is 1.85% forEBL and 2.45% for NABIL. This indicates that the return on assets for the bank is satisfactory.

The C.V of EBL and NABIL are 16.22% and 17.14% respectively. This shows that there is less variation in Credit Risk Ratio of EBL than NABIL. Through this analysis, predicts that the bank's success in future in order to achieve its goal. It is because, return on assets with respect to equity investment and assets are higher.

4.5 Correlation Analysis

Correlation coefficient is the statistical tools that can be describe to which one variable is linearly related to another the coefficient of correlation measures the degree of relationship between two sets of figures. Among the various methods of finding out coefficient of correlation, Karl Pearson's Method is applied in the bank. It is the most common and useful tool to measure the relationship between two variables X and Y can be obtained by using this method.

4.5.1 Correlation Analysis between total Deposit and Loans and Advances

The correlation coefficient between total deposits and loan and advances to measure the relationship between major financial sources i.e. total deposits and major component of income generating assets i.e. loans and advances. In correlation Analysis, deposit is the independent variable (Y) and loan and advances is dependent variable (X).The purpose of computing the coefficient of correlation is to justify whether the deposits are significant used in loan and advances or not and whether there is any relationship between these two variables.

Table 4.9

Correlation analysis between total deposit and loans and advances of Sample banks

Bank	r	t-calculated	t-tabulated	Result
EBL	0.9401	9.232	3.182	Significant
NABIL	0.9536	5.487	3.182	Significant

Source: Appendix III

The table 4.9 depicts banks is positive relationship between the total deposit and total loan and advances of EBL and NABIL. When there is increase in the total deposit then loan and advances also increases along with it. By testing t-statistc, the result shows that the correlation between total loan and advances and total deposit is significant since calculated value of't' is greater than tabulated value at 5% level of significance and 3 degree of freedom for EBL and NABIL.

4.5.2Correlation Analysis between Investment and total deposit

Correlation coefficient between total deposit and investment measures the degree of relationship between total deposit and investment.The purpose of computing the coefficient of correlation is to justify whether the banks loans and advances are significantly generate profit or not and whether there is any relationship between two variables. To find out the correlation (r) various calculations are done.

Table 4.10

Correlation coefficient between Investment and total Deposit of Sample banks

Bank	r	t-calculated	t-tabulated	Result
EBL	0.7578	2.012	3.182	Insignificant
NABIL	0.9551	5.589	3.182	Significant

Source: Appendix-III

Table 4.10 highlights that the coefficient of correlation between total deposit and investment of EBL is 0.7578. By testing t-statistic, the result shows that the correlation between total loan and advances and total deposit of EBLis insignificant since calculated value of't' is less than tabulated value at 5% level of significance and 3 degree of freedom. NABIL bank has positive relationship between investment and total deposit of NABIL. When there is increase in the total deposit then investment also increases along with it.

4.6 Major Findings of the Study

The majorfinding of the study is presented in the following manner.

- The average cash and bank balance to total deposit ratio of EBL is 0.21 times. Likewise, the highest ratio of EBL is 0.30 times in fiscal year 2014/15

and the least is 0.12 times in year 2015/16. By measuring the Coefficient of variation, CV of EBL has risk of 28.57%. Similarly, the average cash and bank balance to total deposit ratio of NABIL is 0.114 times. Likewise, the highest ratio of NABIL is 0.15 times in fiscal year 2014/15 and the least is 0.09 times in year 2012/13 and 2015/16. By measuring the Coefficient of variation, CV of NABIL has risk of 20.44%.

- The mean total loan and advances to total deposit ratio of EBL is 75.2%. Similarly, this ratio of EBL is the highest of 81.27% and the least is 66.63% with the corresponding year 2016/17 and 2014/15 respectively. By measuring coefficient of variation, EBL has CV of 0.65% i.e. minimum. The higher mean ratio indicates the more successful in utilizing the resource in profitable sectors. The mean total loan and advances to total deposit ratio of NABIL is 70.58%. Similarly, this ratio of NABIL is the highest of 75.59% and the least is 62.84% with the corresponding year 2016/17 and 2014/15 respectively. By measuring coefficient of variation, NABIL has CV of 6.23%. The higher mean ratio indicates the more successful in utilizing the resource in profitable sectors.

- The mean investment to total deposit ratio of EBL is 0.14 times respectively. Similarly, the highest and the least ratio of EBL is 0.18 times and 0.10 times with the corresponding year 2014/15 and 2013/14 respectively. The mean investment to total deposit ratio of NABIL is 0.28 times respectively. Similarly, the highest and the least ratio of NABIL is 0.33 times and 0.24 times with the corresponding year 2015/16 and 2013/14 respectively.

- The mean total loan and advances to saving deposit of this ratio of EBL is 1.93 times and NABIL is 1.67 times. By measuring the coefficient of variation, EBL and NABIL is moderate risk.

- The average credit risk ratio is 0.58% of EBL and 1.67% of NABIL respectively. This ratio of EBL is less than 1% in all fiscal years. However, according to NRB directives NPL should not be more than 5% of total loan and advances and it is better to less than 1% for the sound financial

performance. Hence, EBL is succeed to reduce below 1% but the ratio of NABIL is higher than 1 so, it should be better less than 1%.

- The average interest income to total loan and advances ratio of EBL is 9.39% and 9.69% of NABIL. This indicates that the capability of the banks to manage the loans and advances in earning higher interest income. Coefficient of variation indicates the fluctuating trend or measuring the uniformity of the banks which is less risky of EBL and NABIL.

- The average of net profit to total deposit ratio is 2.18% for EBL and 2.83% for NABIL. Similarly, the return on assets is 1.85% for EBL and 2.45% for NABIL. This indicates that the return on assets for the banks is satisfactory.

- There is positive relationship between the total deposit and total loan and advances of EBL and NABIL. By testing t-statistic, the result shows that the correlation between total loan and advances and total deposit of EBL and NABILare significant since calculated value of't' is greater than tabulated value at 5% level of significance and 3 degree of freedom.

- By testing t-statistic, the result shows that the correlation between total loan and advances and investment of EBL is insignificant and NABIL is significant since calculated value of't' is less than tabulated value at 5% level of significance and 3 degree of freedom.

CHAPTER -V
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter includes the summary, conclusion and recommendation of the study in the following manner.

5.1 Summary

Banking sectors is the most essential and crucial sector of any economy.Bank has not just evolved as an institution where one can deposit money or acquire loan.The concept of banking has been changing into newer version. It has evolved to be an institution, which also provides other utility services such as agency services safe keeping of valuables, financial consultancy etc. however, the purpose of banking remains same and that is fund mobilization. The contribution of banking sector in capital creation, fund transfer, boosting of trade, providing employment has been very essential for the economic growth of a nation.

Today, banks are under great pressure to meet the objectives of their stockholders, employees, depositors, and borrowing customers, while somehow keeping government regulators satisfied that the bank's policies, loans, and investments are sound. The majority of the needs of the stakeholders are related with the profitability of the banks.Thus, the foremost objective of the banks is profit maximization. As other types of business entity, commercial banks are also inspired by the profit. In this age of great competition, only the profitable banks can sustain for a long time. Financial policies of any concern are directly or indirectly influenced by its profitability. Thus, it is a base for a bank's survival, growth and expansion.

The average cash and bank balance to total deposit ratio of EBL is 0.21 times. Similarly, the mean total loan and advances to total deposit ratio is 75.2% for EBL. Likewise, the mean investment to total deposit ratio is 0.14 times for EBL respectively.Likewise, the average total loan and advances to saving deposit ratio is

1.93 times for EBLon the other hand, the average credit risk ratio is 0.58% for EBL. This ratio of EBL is less than 1% in all fiscal years. However, according to NRB directives NPL should not be more than 5% of total loan and advances and it is better to less than 1% for the sound financial performance. The average interest income to total loans and advances of this ratio is 9.39% for EBL.Likewise, the average net profit to total deposit ratio is 2.18% for EBL.Likewise, the average return on assets is 1.85% for EBL. This indicates that the return on assets for the bank is satisfactory.

The average cash and bank balance to total deposit ratio of NABIL is 0.114 times. Similarly, the mean total loan and advances to total deposit ratio is 70.58% for NABIL. Likewise, the mean investment to total deposit ratio is 0.28 times for NABIL respectively. Likewise, the average total loan and advances to saving deposit ratio is 1.67 times for NABIL on the other hand, the average credit risk ratio is 1.67% for NABIL. The average interest income to total loans and advances of this ratio is 9.69% for NABIL. Likewise, the average net profit to total deposit ratio is 2.83% for NABIL. Likewise, the average return on assets is 2.45% for NABIL. This indicates that the return on assets for the bank is satisfactory.

After the observation of the five year period, deposit position of the bank is increasing which shows that bank is able to collects deposit at the same time loan and advance of the bank is also is increasing trend where bank is able to mobilize the deposit in the form of loan and advances. This shows that loan management of the bank is satisfactory and bank has mobilized their funds in direct investment and other investment also.Finally, the relationship between total deposit and loan and advances is significant. Likewise, the relationship between investment and loan and advances is insignificant by testing t-statistic.

5.2. Conclusions

The loan management is the crucial part in banking industry. People are using banking services and depositing cash in commercial banks gradually rising. The loan and advances of the bank is in increasing trend. This shows that bank is able to

mobilize the deposit in the form of loan and advance.There is the relationship between total deposit and loan and advances is significant.Likewise,the relationship between total loan and advances and investment is insignificant.

The average credit risk ratio is 0.58% for EBL and 1.67% for NABIL. This ratio of EBL is less than 1% in all fiscal years. However, according to NRB directives NPL should not be more than 5% of total loan and advances and it is better to less than 1% for the sound financial performance. EBL has less than 1% in all years.

After loan and advance bank has mobilized their fund in investment with different instruments and other investment also. Investment in government securities and treasury bills are the second important tools of deposit mobilization. The ratio of investment shows that bank is liberal in investing in different financial tools. The liquidity position of the bank is also good.The interest income of the bank is also increasing every year. It shows that bank is able to earn more interest and thus profit. Finally, Everest Bank Limited and NABIL bank has high return on loan and advance ratio and in investment ratio.

5.3. Recommendations

The following recommendation has been made for the study.

- The interest income to total loan and advances of EBL and NABIL is moderate only. Hence, sample bank should increase the total loan and advances in order to increase itsinterest income.
- Before granting loan to the new client, the bank should be strictly and closely examined the client. Bank should adopt the conserving lending policies the risk hereby ensuring its term sustainability.
- Bank should modernize itself by providing the quality of services and satisfying the customers. So the bank should maintain the balance in its loan.
- Similarly, there total investment of the bank is in an average. Hence, bank should increase their investment in the profitable sectors.

- Similarly, bank should provide loan in microenterprises which helped to empower youth and women without collateral so that they are employed themselves.

APPENDICES

Appendix-I

Summary of the Financial Transactions of EBL from FY 2012/13 to 2016/17 (In millions)

Details	2012/13	2013/14	2014/15	2015/16	2016/17
Total Deposit	57720	62108	83094	93735	95094
Total Loans &Advances	44198	48450	55363	68911	77287
Non-Performing loan	276	470	367	264	198
Total assets	65741	70445	99153	113885	116510
Net Profit After Tax	1471	1549	1574	1730	2006
Shareholder equity	4667	5337	6770	8394	11464
Interest Income	4937	5177	4996	5057	6747
Cash and bank balance	11216	13173	25117	11096	21383
Investment	9265	6504	15102	13356	11964
Interest Expenses	2179	2258	2117	1828	3009
Fixed Deposit	14104	14529	19784	25999	36311
Saving deposit	20870	25665	32604	38650	35555
Current deposit	8099	6490	7081	8629	8867

(Source: Annual Reports of EBL)

Summary of the Financial Transactions of NABIL from FY 2012/13 to 2016/17 (In millions)

Details	2012/13	2013/14	2014/15	2015/16	2016/17
Total Deposit	63609.82	75388.8	104237.96	110267.27	118896.16
Total Loans &Advances	46370	54692	65502	76106	89877
Non Performing loan	1015.18	1256.08	1220.82	889.04	728.06
Total assets	73241	87274	115986	127300	140332
Net Profit After Tax	2219	2320	2094	2819	3613
Shareholder equity	6691	7641	9486	11596	14095
Interest Income	5702	5636	5762	6156	8066
Cash and bank balance	5882	9993	16004	10263	13091
Investment	16332	18277	30972	36528	32594
Interest Expenses	2186	1940	2236	1830	2606
Fixed Deposit	10786.03	11854.88	15871.93	8868.61	24044.68
Saving deposit	23336.15	32601.84	42715.06	53437.51	51398.99
Current deposit	29487.64	30932.08	45650.97	47961.15	43452.49

(Source: Annual Reports of NABIL)

Cash and bank balance includes cash at bank, cash at NRB (Nepal Rastra Bank), Cash at banking and other financial institutions and money at call.

Calculation of Ratio:

Cash and bank balance to total deposit (EBL)

FY	2012/13	2013/14	2014/15	2015/16	2016/17
Cash and bank balance	11216	13173	25117	11096	21383
Total Deposit	57720	62108	83094	93735	95094
CB/TD	0.19432	0.2120983	0.30227	0.11838	0.2248

Cash and bank balance to total deposit (NABIL)

FY	2012/13	2013/14	2014/15	2015/16	2016/17
Cash and bank balance	5882	9993	16004	10263	13091
Total Deposit	63609.82	75388.8	104237.96	110267.27	118896.16
CB/TD	0.09247	0.132553	0.153533	0.093074	0.110104

Total loan and advances to total deposit (%)EBL

FY	2012/13	2013/14	2014/15	2015/16	2016/17
Total Loans &Advances	44198	48450	55363	68911	77287
Total Deposit	57720	62108	83094	93735	95094
TL/TD	0.76573	0.7800927	0.66627	0.73517	0.8127

Total loan and advances to total deposit (%) NABIL

FY	2012/13	2013/14	2014/15	2015/16	2016/17
Total Loans &Advances	46370	54692	65502	76106	89877
Total Deposit	63609.82	75388.8	104237.96	110267.27	118896.16
TL/TD	0.728975	0.725466	0.628389	0.690196	0.755929

Investment to total deposit (times) EBL

FY	2012/13	2013/14	2014/15	2015/16	2016/17
Investment	9265	6504	15102	13356	11964
Total Deposit	57720	62108	83094	93735	95094
I/TD	0.16052	0.1047208	0.18175	0.14249	0.1258

Investment to total deposit (times) NABIL

FY	2012/13	2013/14	2014/15	2015/16	2016/17
Investment	16332	18277	30972	36528	32594
Total Deposit	63609.82	75388.8	104237.96	110267.27	118896.16
I/TD	0.256753	0.242437	0.297128	0.331268	0.274138

Total loan and advances to saving deposit (times) EBL

FY	2012/13	2013/14	2014/15	2015/16	2016/17
Total Loans &Advances	44198	48450	55363	68911	77287
Saving deposit	20870	25665	32604	38650	35555
TL/SD	2.11778	1.8877849	1.69804	1.78295	2.1737

Total loan and advances to saving deposit (times) NABIL

FY	2012/13	2013/14	2014/15	2015/16	2016/17
Total Loans &Advances	46370	54692	65502	76106	89877
Saving deposit	23336.15	32601.84	42715.06	53437.51	51398.99
TL/SD	1.987046	1.677574	1.533464	1.424206	1.748614

Non-Performing loan to total loan and advances (%) EBL

FY	2012/13	2013/14	2014/15	2015/16	2016/17
Non Performing loan	276	470	367	264	198
Total Loans &Advances	44198	48450	55363	68911	77287
NPL/TL	0.00624	0.0097007	0.00663	0.00383	0.00256

Non-Performing loan to total loan and advances (%) NABIL

FY	2012/13	2013/14	2014/15	2015/16	2016/17
Non Performing loan	1015.18	1256.08	1220.82	889.04	728.06
Total Loans &Advances	46370	54692	65502	76106	89877
NPL/TL	0.021893	0.022966	0.018638	0.011682	0.008101

Interest income to total loan and advances (%) EBL

FY	2012/13	2013/14	2014/15	2015/16	2016/17
Interest Income	4937	5177	4996	5057	6747
Total Loans &Advances	44198	48450	55363	68911	77287
II/TL	0.1117	0.1068524	0.09024	0.07338	0.0872

Interest income to total loan and advances (%) NABIL

FY	2012/13	2013/14	2014/15	2015/16	2016/17
Interest Income	5702	5636	5762	6156	8066
Total Loans & Advances	46370	54692	65502	76106	89877
II/TL	0.122967	0.10305	0.087967	0.080887	0.089745

NPAT to total deposit (%) EBL

FY	2012/13	2013/14	2014/15	2015/16	2016/17
Net Profit After Tax	1471	1549	1574	1730	2006
Total Deposit	57720	62108	83094	93735	95094
NPAT/TD	0.02549	0.0249404	0.01894	0.01846	0.0211

NPAT to total deposit (%) NABIL

FY	2012/13	2013/14	2014/15	2015/16	2016/17
Net Profit After Tax	2219	2320	2094	2819	3613
Total Deposit	63609.82	75388.8	104237.96	110267.27	118896.16
NPAT/TD	0.034885	0.030774	0.020089	0.025565	0.030388

NPAT to total assets (%) EBL

FY	2012/13	2013/14	2014/15	2015/16	2016/17
Net Profit After Tax	1471	1549	1574	1730	2006
Total assets	65741	70445	99153	113885	116510
ROA	0.02238	0.0219888	0.01587	0.01519	0.0172

NPAT to total assets (%) NABIL

FY	2012/13	2013/14	2014/15	2015/16	2016/17
Net Profit After Tax	2219	2320	2094	2819	3613
Total assets	73241	87274	115986	127300	140332
ROA	0.030297	0.026583	0.018054	0.022145	0.025746

Appendix-II

Calculation of Mean, Standard deviation and Coefficient of Variation of EBL

FY	CB to TD(X)	X- mean	(X- mean)2
2012/13	0.19	0.02	0.0004
2013/14	0.21	0	0
2014/15	0.3	-0.09	0.0081
2015/16	0.12	0.09	0.0081
2016/17	0.22	-0.01	0.0001
Sum	**1.04**		**0.0167**

EBL	$\overline{X} = \dfrac{1.04}{5} = 0.21$	$(\sigma) = \sqrt{\dfrac{\Sigma\,(x - \overline{x})^2}{n}}$ $= \sqrt{\dfrac{0.0167}{5}}$ $= 0.06$	$(C.V.) = \dfrac{\sigma}{\overline{x}} \times 100$ $= \dfrac{0.06}{0.21} \times 100$ $= 28.57\%$

Calculation of Mean, Standard deviation and Coefficient of Variation of NABIL

FY	CB to TD(X)	X- mean	(X- mean)2
2012/13	0.09	-0.024	0.000576
2013/14	0.13	0.016	0.000256
2014/15	0.15	0.036	0.001296
2015/16	0.09	-0.024	0.000576
2016/17	0.11	-0.004	0.000016
Sum	**0.57**		**0.00272**

NABIL	$\overline{X} = \dfrac{0.57}{5} = 0.114$	$(\sigma) = \sqrt{\dfrac{\Sigma (x - \overline{x})^2}{n}}$ $= \sqrt{\dfrac{0.00272}{5}}$ $= 0.0233$	$(C.V.) = \dfrac{\sigma}{\overline{x}} \times 100$ $= \dfrac{0.0233}{0.114} \times 100$ $= 20.44\%$

 # Note: Similar procedures have been used and other values are directly presented in the following table.

EBL

FY	TL to TD(X)	X- mean	(X- mean)2
2012/13	76.57	-1.37	1.8769
2013/14	78.03	-2.83	8.0089
2014/15	66.63	8.57	73.4449
2015/16	73.52	1.68	2.8224
2016/17	81.27	-6.07	36.8449
Sum	**376.02**		**122.998**
Mean	**75.2**		
S.D.	**0.49**		
CV	**0.65**		

NABIL

FY	TL to TD(X)	X- mean	(X- mean)2
2012/13	72.89	2.31	5.3361
2013/14	72.55	1.97	3.8809
2014/15	62.84	-7.74	59.9076
2015/16	69.02	-1.56	2.4336
2016/17	75.59	5.01	25.1001
Sum	352.89		96.6583
Mean	70.58		
S.D.	4.40		
CV	6.23		

EBL

FY	Ito TD(X)	X- mean	(X- mean)2
2012/13	0.16	-0.02	0.0004
2013/14	0.1	0.04	0.0016
2014/15	0.18	-0.04	0.0016
2015/16	0.14	0	0
2016/17	0.13	0.01	0.0001
Sum	0.71		0.0037
Mean	0.14		
S.D.	0.02		
CV	14.29		

NABIL

FY	I to TD(X)	X- mean	(X- mean)2
2012/13	0.26	-0.02	0.0004
2013/14	0.24	-0.04	0.0016
2014/15	0.30	0.02	0.0004
2015/16	0.33	0.05	0.0025
2016/17	0.27	-0.01	0.0001
Sum	1.40		0.005
Mean	0.28		
S.D.	0.032		
CV	11.43		

EBL

FY	TL to SD(X)	X- mean	(X- mean)2
2012/13	2.12	-0.19	0.0361
2013/14	1.89	0.04	0.0016
2014/15	1.7	0.23	0.0529
2015/16	1.78	0.15	0.0225
2016/17	2.17	-0.24	0.0576
Sum	**9.66**		**0.1707**
Mean	**1.93**		
S.D.	**0.18**		
CV	**9.33**		

NABIL

FY	TL to SD(X)	X- mean	(X- mean)2
2012/13	1.98	0.31	0.0961
2013/14	1.68	0.01	0.0001
2014/15	1.53	-0.14	0.0196
2015/16	1.42	-0.25	0.0625
2016/17	1.75	0.08	0.0064
Sum	**8.36**		**0.1847**
Mean	**1.67**		
S.D.	**0.19**		
CV	**11.38**		

EBL

FY	NPL to TL (X)	X- mean	(X- mean)2
2012/13	0.62	-0.04	0.0016
2013/14	0.97	-0.39	0.1521
2014/15	0.66	-0.08	0.0064
2015/16	0.38	0.2	0.04
2016/17	0.26	0.32	0.1024
Sum	**2.89**		**0.3025**
Mean	**0.58**		
S.D.	**0.25**		
CV	**43.10**		

NABIL

FY	NPL to TL (X)	X- mean	(X- mean)2
2012/13	2.19	0.52	0.2704
2013/14	2.30	0.63	0.3969
2014/15	1.86	0.19	0.0361
2015/16	1.17	-0.5	0.25
2016/17	0.81	-0.86	0.7396
Sum	**8.33**		**1.693**
Mean	**1.67**		
S.D.	**0.58**		
CV	**34.73**		

EBL

FY	II to TL (X)	X- mean	(X- mean)2
2012/13	11.17	-1.78	3.1684
2013/14	10.68	-1.29	1.6641
2014/15	9.02	0.37	0.1369
2015/16	7.34	2.05	4.2025
2016/17	8.72	0.67	0.4489
Sum	**46.93**		**9.6208**
Mean	**9.39**		
S.D.	**0.14**		
CV	**1.49**		

NABIL

FY	II to TL (X)	X- mean	(X- mean)2
2012/13	12.29	2.6	6.76
2013/14	10.30	0.61	0.3721
2014/15	8.79	-0.9	0.81
2015/16	8.08	-1.61	2.5921
2016/17	8.97	-0.72	0.5184
Sum	**48.43**		**11.0526**
Mean	**9.69**		
S.D.	**1.49**		
CV	**15.38**		

EBL

FY	NPAT to TD (X)	X- mean	(X- mean)2
2012/13	2.55	-0.37	0.1369
2013/14	2.49	-0.31	0.0961
2014/15	1.89	0.29	0.0841
2015/16	1.85	0.33	0.1089
2016/17	2.11	0.07	0.0049
Sum	**10.89**		**0.4309**
Mean	**2.18**		
S.D.	**0.29**		
CV	**13.30**		

NABIL

FY	NPAT to TD (X)	X- mean	(X- mean)2
2012/13	3.48	0.65	0.4225
2013/14	3.07	0.24	0.0576
2014/15	2.00	-0.83	0.6889
2015/16	2.55	-0.28	0.0784
2016/17	3.03	0.20	0.04
Sum	**14.13**		**1.2874**
Mean	**2.83**		
S.D.	**0.51**		
CV	**18.02**		

EBL

FY	ROA (X)	X- mean	(X- mean)2
2012/13	2.23	-0.38	0.1444
2013/14	2.19	-0.34	0.1156
2014/15	1.59	0.26	0.0676
2015/16	1.52	0.33	0.1089
2016/17	1.72	0.13	0.0169
Sum	**9.25**		**0.4534**
Mean	**1.85**		
S.D.	**0.30**		
CV	**16.22**		

NABIL

FY	ROA (X)	X- mean	(X- mean)2
2012/13	3.02	0.57	0.3249
2013/14	2.65	0.2	0.04
2014/15	1.80	-0.65	0.4225
2015/16	2.21	-0.24	0.0576
2016/17	2.57	0.12	0.0144
Sum	**12.25**		**0.8594**
Mean	**2.45**		
S.D.	**0.42**		
CV	**17.14**		

Appendix-III

Correlation of total loan and advances and total deposit of EBL (In Million)

Year	Total loan and advances (X)	Total deposit (Y)	XY	X²	Y²
2012/13	44198	57720	2551108560	1953463204	3331598400
2013/14	48450	62108	3009132600	2347402500	3857403664
2014/15	55363	83094	4600333122	3065061769	6904612836
2015/16	68911	93735	6459372585	4748725921	8786250225
2016/17	77287	95094	7349529978	5973280369	9042868836
SUM	**294209**	**391751**	**23969476845**	**18087933763**	**31922733961**

Correlation of coefficient $r = \dfrac{n \sum XY - \sum X \times \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} . \sqrt{n \sum Y^2 - (\sum Y)^2}}$

$$= \dfrac{5 \times 23969476845 - 294209 \times 391751}{\sqrt{5 \times 18087933763 - (294209)^2}\sqrt{5 \times 31922733961 - (391751)^2}}$$

r= 0.9401

Coefficient Determinants, r² = (0.9401)² = 0.8838

For t-test

Null hypothesis H_0: There is no significance difference between total loan and advances and total deposit of EBL or the variables are uncorrelated.

Alternative hypothesis H_1 There is significance difference between total loan and advances and total deposit of EBL or the variables are correlated.

Under H_0, the t statistic is:

Calculation of t statistic:

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

$$t = \dfrac{0.9401}{\sqrt{1 - (0.9401)^2}} \times \sqrt{5 - 2}$$

$$t = 9.232$$

Degree of freedom =5-2 = 3

Tabulated/Critical value:

At 3 degree of freedom for two tailed test at 5% level of significance tabulated value of $t_{0.05,\ 3\ d.f.}$= 3.182

Decision: since calculated value of t is greater than tabulated value of t H_0 is rejected and H_1 is accepted. Hence, there is **significance difference** between total loan and advances and total deposit of EBL **or the variable are correlated**.

(**Decision**: if Calculated t is less than tabulated t H_0 is accepted and if calculated t is greater than tabulated t H_0 is rejected i.e. accept H_1. **Note:** similar method has been applied for the calculation of others).

Correlation between total deposit and Investment (EBL)

Year	Investment (X)	Total deposit (Y)	XY	X2	Y2
2012/13	9265	57720	534775800	85840225	3331598400
2013/14	6504	62108	403950432	42302016	3857403664
2014/15	15102	83094	1254885588	228070404	6904612836
2015/16	13356	93735	1251924660	178382736	8786250225
2016/17	11964	95094	1137704616	143137296	9042868836
SUM	**56191**	**391751**	**4583241096**	**677732677**	**31922733961**

Correlation of coefficient $r = \dfrac{n \sum XY - \sum X \times \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \cdot \sqrt{n \sum Y^2 - (\sum Y)^2}}$

r= 0.7578

Coefficient determination $(r^2) = 0.5743$

Correlation (r)	0.7578
r^2	0.5743
t_{cal}	2.012
t_{tab}	3.182
Result	Insignificant

Correlation of total loan and advances and total deposit of NABIL (In Million)

Year	Total loan and advances (X)	Total deposit (Y)	XY	X2	Y2
2012/13	46370	63609.82	2949587353	2150176900	4046209200
2013/14	54692	75388.8	4123164250	2991214864	5683471165
2014/15	65502	104237.96	6827794856	4290512004	10865552305
2015/16	76106	110267.27	8392000851	5792123236	12158870833
2016/17	89877	118896.16	10686030172	8077875129	14136296863
SUM	**332547**	**472400**	**32978577482**	**23301902133**	**46890400367**

Correlation of coefficient $r = \dfrac{n\sum XY - \sum X \times \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2}.\sqrt{n\sum Y^2 - (\sum Y)^2}}$

$$= \frac{5 \times 32978577482 - 332547 \times 472400}{\sqrt{5 \times 23301902133 - (332547)^2}\sqrt{5 \times 46890400367 - (472400)^2}}$$

r= 0.9536

Coefficient Determinants, r² = (0.9536)² = 0.9094

For t-test

Null hypothesis H_0: There is no significance difference between total loan and advances and total deposit of NABIL or the variables are uncorrelated.

Alternative hypothesis H_1 There is significance difference between total loan and advances and total deposit of NABIL or the variables are correlated.

Under H_0, the t statistic is:

Calculation of t statistic:

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

$$t = \frac{0.9536}{\sqrt{1-0.9094}} \times \sqrt{5-2}$$

$$t = 5.487$$

Degree of freedom =5-2 = 3

Tabulated/Critical value:

At 3 degree of freedom for two tailed test at 5% level of significance tabulated value of $t_{0.05,\ 3\ d.f.}$ = 3.182

Decision: since calculated value of t is greater than tabulated value of t H_0 is rejected and H_1 is accepted. Hence, there is **significance difference** between total loan and advances and total deposit of NABIL **or the variables are correlated**.

(**Decision**: if Calculated t is less than tabulated t H_0 is accepted and if calculated t is greater than tabulated t H_0 is rejected i.e. accept H_1. **Note:** similar method has been applied for the calculation of others).

Correlation between total deposit and Investment (NABIL)

Year	Investment (X)	Total deposit (Y)	XY	X2	Y2
2012/13	16332	63609.82	1038875580	266734224	4046209200
2013/14	18277	75388.8	1377881098	334048729	5683471165
2014/15	30972	104237.96	3228458097	959264784	10865552305
2015/16	36528	110267.27	4027842839	1334294784	12158870833
2016/17	32594	118896.16	3875301439	1062368836	14136296863
SUM	**134703**	**472400**	**13548359053**	**3956711357**	**46890400367**

Correlation of coefficient $r = \dfrac{n \sum XY - \sum X \times \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2}.\sqrt{n \sum Y^2 - (\sum Y)^2}}$

r= 0.9551

Coefficient determination $(r^2) = 0.9122$

Correlation (r)	0.9551
r^2	0.9122
t_{cal}	5.589
t_{tab}	3.182
Result	Significant