

CHAPTER I

INTRODUCTION

1.1 Background of the Study

The history of Nepalese banking industry goes back to 1937 A.D. with the establishment of Nepal Bank Limited, the first commercial bank of Nepal. In course of organizational development of commercial bank, realizing the need of banking services for overall balance development, Rastriya Banijya Bank was established in 1966 A.D. Nepal adopting financial liberalization policy which fuels the establishment of private and public bank and at the same time joint venture banks. Currently there are 26 commercial banks, 63 development banks, 77 financial institutions and 15 regional rural development banks.

The World Bank is originated from the Italian word 'banco' which means bench. In the earlier stage, bank was the place for keeping and lending money. But with the evolution of transaction and globalization, the meaning and function of bank is gradually changed.

As the public enterprise, banking made its first beginning around the middle of the twelfth century in Italy and bank of Venice founded in 1157 was the first public banking institution. Then , followed bank of Barcelona established in 1401, Bank of Genoa established in 1407, Bank of Amsterdam established in 1609 and bank of England which was established in 1694. The ancestors of modern day banks have been attributed to the merchants, the goldsmiths and the moneylenders.

National development of any country depends upon the economic development of that country and economic development is supported by financial infrastructure of any country. Banks constitute an important role in the economic growth of a country. Banking, when properly organized, aids and facilitates the growth of trade and industry and hence of national economy. In the modern economy, banks are to be considered not as dealers in money but as the leaders of development. "Banks are not just the storehouses of the country's wealth but are the reservoirs necessary for economic development."

Bank plays a significant role in the development of the nations. Economy bank is a financial institution which primary classes in borrowing and lending. Modern bank prefers

varieties of functions. Therefore, it is difficult to decide the function of a modern bank because of their complexity and versatility in operation. Various authors have defined the 'Bank' in different ways. A commercial bank is dealer in money and it substitutes for money such a cheque or a bills of exchange, it also provides a variety of financial service.

Investment pattern is an important ingredient of overall national economic development because it ensures efficient allocation of fund to achieve the materials and economic well being of the society as a whole. In this regard, investment policy of joint venture banks push drives to achieve priority of commercial sectors in the context of Nepal's economic development.

Nowadays there is very much competition in banking sector, but less opportunity to make investment. In this situation joint venture banks can take initiation in search of new opportunities to survive in the competitive market and earn profit. But investment is a very risky job. For a purposeful, safe and profitable investment the bank must follow sound investment policy. The fundamental principles of investment must be followed thoroughly for profitable investment. Investment pattern should ensure minimum risk and maximum profit. Good investment pattern ensures maximum amount of investment to all sectors with proper utilization. There is high liquidity in the market but there seems no profitable place to invest. At the same time, the banks and financial institutions are offering very low deposit interest rate. In this situation Nepalese commercial banks are required to explore new opportunities to make investment if they want to survive in the competitive market.

The prosperity of industry and trade is essential and more important for a country to step into development. Therefore, the banks must consider national interest and government emphasis for the economic growth of the country. Since, the prosperous economic condition of a country is represented by the development of industry, trade and business which is the main ground of the banks to conduct its activities and to fulfil its objective of profit making. The proper investment policy helps the commercial banks to make profitable investment and to develop country as well.

Investment pattern provides several inputs to the banks through which they can handle their investment operation efficiently ensuring the maximum return with minimum exposure to risk, which ultimately leads the bank to the path of success.

The commercial banks have its own role and contribution in the economic development. It is a source for economic development; it maintains economic confidence of various segments and extends credit to people. Commercial banks formulate sound investment policies, which eventually contribute to the economic growth of the country. The sound policies helps commercials banks maximize quantity to investment and thereby active the own adjectives of profit maximization and social welfare. The banking sector has to play development role to boost the economy by adopting the growth oriented investment policy and building up the financial structure for future economic development formulation of sound investment policies and planning effort pushed forward the force of economic growth.

1.1.1 Banking System in Nepal

Banking concept existed even in the ancient period when the goldsmiths and the rich people used to issue. The receipt to the common peoples against the promise of safe-keeping if their valuable items. On the presentation of the receipts, the depositors would get back their gold and valuables after paying a small amount for safe-keeping and saving. The goldsmiths and the moneylenders became bankers of those days who started performing two functions of modern banking accepting and advancing loans.

However, stage wise development of banking can be narrated as follows:

Ñ The first phase of Banking Development

Eight century, king “Gunkamdev” renovated the Kathmandu city by taking loan. At the end of same century merchant named “Shankhardhar” had started the “New year” Nepal Sambhat after freeing all people of Kathmandu form the debt.

In the 11th century, during Malla reigns, there was an evidence of professional money lender and buyer. Tejarath Adda, which provided loan at very low rate i.e. 5%, was established in 1877 AD.

Ñ The second phase of Banking Development

The modern banking of Nepal started with establishment of Nepal Bank Ltd in 1994 B.S. with the need of development of banking sector to help the government formulate monetary policies, Nepal Rastra Bank was set up in 2013 B.S. as the central bank of Nepal. In B.S. 2022, Government set Rastriya Banijya Bank as a fully government owned

commercial bank. The agricultural development bank was established in B.S. 2024. This bank was established with the objective of increasing the life standard of the people who are involved in agriculture.

Ñ The Third phase of Banking Development

The process of development of banking system in Nepal was not satisfactory. Nepal was observing the events that were taking places in the world also. The country can't change its status by using only its own capital in the country without importing in the new technology from foreign country and accordingly, law and policy have been enacted by the state to encourage the foreign investment on banking sector. From this, the real form to the development of the banking system started in Nepal. In order to establish and develop other joint venture commercial banks and other financial institution, Nepal adopted liberal free economic policy. Accordingly, Nepal is allowed to established different joint venture banks under the collaboration with foreign banks.

Ñ The fourth phase of Banking Development

From 2041 B.S., His Majesty's Government of Nepal established 5 rural development banks. They are as follows:

-) Eastern Rural Development Bank
-) Central Rural Development Bank
-) Western Rural Development Bank
-) Mid- Western Rural Development Bank
-) Far- Western Rural Development Bank

In order to establish and develop other joint venture commercial banks and other financial institution, Nepal adopted liberal free economic policy. After 2041 B.S., the government gradually liberalized and opened up the financial sector, resulting in the rapid entry of the foreign banks. Later, in 2041 B.S., with the grand opening of NABIL bank Ltd., other commercial banks started emerging in the private sectors. As a result, now there are altogether 25 commercial banks operating at different parts of the country. At present, the banking sector is more liberalized and there are various types of bank working on modern banking system. This includes central development and commercial banks. Evolutions of the information technology has revolutionized the banking sector is saving lots of time and

money by implementing IT. Technology has changed the traditional method of the services of bank. Invention of different bank such as banking software, ATM, E-Banking , Mobile Banking and credit card ,Debit Card, Prepaid Card etc which helps the customer as well as banks to operate and conduct their activities more efficiently and effectively. This helps bank to generate more customers, goodwill and profit.

1.2. Focus of the Study

This study fills a research gap on the study of investment policy of commercial banks. A deep and through study of it is always necessary and acceptable. We know that the commercial banks can effects the economic condition of the whole country, so effort is made to highlight the investment policy of commercial banks expecting that this study also provides information to the management of the bank that would help them to take collective action. Investor basic reason for investment activity is to maximize their personal happiness or utility. From the study we would be able to provide information to the shareholders to make decision while making investment on shares of different commercial bank.

This study deals with the liquidity, assets management efficiency, profitability and risk and growth position of bank. The study highlight overall investment portfolio of bank.

1.3. Introduction of the Banks under Study

Nabil Bank Limited

Nabil Bank Limited, the first foreign joint venture bank of Nepal, started operations in July 1984. Nabil was incorporated with the objective of extending international standard modern banking services to various sectors of the society. Pursuing its objective, Nabil provides a full range of commercial banking services through its 19 points of representation across the kingdom and over 170 reputed correspondent banks across the globe.

Nabil continues to be among the largest tax payers in the industry, with the payment of NRs. 321 million corporate taxes during 2006/07. Nabil bank is one of the top ten tax payer in fiscal year 2008/9 as well. Operations of the bank including day-to-day operations and risk management are managed by highly qualified and experienced management team. Bank is fully equipped with modern technology which includes ATMs, credit cards, state-

of-art, world-renowned software from Infosys Technologies System, Bangalore, India, Internet banking system and Tele-banking system. Nabil has 32 branches across the country.

Similarly, we issue the widest range of credit and debit cards under the brands of Visa and MasterCard to our account holders as well as non-account holders. Nabil Bank has the state of art technology in cards to provide online services.

Everest Bank Limited

Everest bank limited (EBL) started its operation in 1994 with a view and objective of extending professionalized and banking services to various segments of the society. EBL joined hands with Punjab National bank (PNB), India as its joint venture partner in 1997. EBL has steadily growing in its size and operations and establish itself as a leading private sector Bank. It has been providing customer friendly services through a network of 35 branches across the nation.

Largest Network among private sector banks spread across Nepal and all connected with ABBS HDFC bank India whereby instant payment is done on presentation of the instrument.

Direct account credit in PNB branches connect with Central Banking System and RTGS member bank via speed remittance. There are more than 170 remittance payout location in Nepal with strong Joint Venture Partner providing Technical Support and representative office in India to facilitate remittance from India for Direct Drawing arrangement with PNB.

Bank of Kathmandu Limited

Bank of Kathmandu Limited has become a prominent name in the Nepalese banking sector. Bank of Kathmandu Limited (BOK) has today become a landmark in the Nepalese banking sector by being among the few commercial banks which is entirely managed by Nepalese professionals and owned by the general public.

BOK started its operation in March 1995 with the objective to stimulate the Nepalese economy and take it to newer heights. BOK also aims to facilitate the nation's economy and to become more competitive globally.

With the aim of providing banking services at the customer's fingertips, BOK is starting Internet Banking and Alert Service very soon. In Internet Banking, BOK will provide

Consumer e-banking (Core, Retail and Bill Payment) as well as Corporate e-banking facilities (Trade financing and web based Cash Management).

1.4 Statement of Problem

Investment is the most important factor from the shareholder and banks' management point of view. Though several commercial banks have been established in Nepal with in short period of time, sufficient return cannot have been earned and strong, stable and appropriate investment policy has not been followed. In the one hand, these bank collected huge amount of deposits where as in the other hand investment opportunities are comparatively very low. Due to less investment opportunity bank used to discourage deposits by reducing the interest on deposits and increasing the minimum shareholders' balance. Such condition may cause the highly liquid market and can impact the condition of the whole economic sector negatively. Due to throat cut competition of financial environment bank seem to be ready to grant deposit, unsecured loan and investment may cause the liquidation of those banks. If the funds are wrongly invested without thinking any financial risk, business risk and related facts, the bank cannot obtain return as well as it should sometimes loss its principal.

It seems that commercial banks are not properly utilized due to lack of sound lending policy. So, this condition will lead the commercial banks to the position of liquidation, the lack of knowledge on financial risk, purchasing risk etc. Granting loan against insufficient deposit overvaluation of good pledge, land and building, mortgaged, risk averting decision regarding loan recovery and negligence in recovery of overdue loan are some of the basic lapse and the result of unsound investment policy sighted in the bank.

Commercial banks are trying to formulate and implement new investment policies to survive in the current competitive market. Commercial bank's investment has been found to have lower productivity, which is due to lack of supervision regarding whether there is proper utilization of their investment. Lack of farsightedness in policy formulation and absence of strong commitment towards its proper implementation has caused many problems to commercial banks. The main focus of the study is to seek the answer of the following specific problems related to the investment policy of the commercial banks.

-) What is the relationship between, loan and advances with total deposit, net profit and outside assets?
-) How can the collected funds are properly used?
-) What is the profitability position of the banks?

-) What is the trend position of banks in terms of deposits collection and net profit?
-) What is the effect of investment decision of profitability position of the banks?
-) Is there significant relationship between loan and advances, total interest earned to total outside assets etc?

1.5. Objectives of the Study

The general objective of the study is to analyze the investment policy adopted by the commercial banks in Nepal.

-) To evaluate the financial position and investment practices of the commercial banks in Nepal.
-) To examine the relationship between deposit and total investment, deposit and total loans & advances and net profit.
-) To identify and evaluate the investment priority sectors of sampled Commercial banks.
-) To analyze and forecast the trend and structure of deposit utilization and its projection for five (2008/09-2012/13) years of Commercial banks.
-) To suggest possible guidelines to improve investment pattern and its problems on the basis of study findings.

1.6. Significance of the Study

Despite the fact that commercial bank is the oldest and quantitatively the largest financial institution in any country. Commercial banks occupy an important place in the framework of every economy because it provides capital for the development of industry; trade and business banks render services to their customers in view of facility their economics of social life.

The study mainly fills a research gap on the study of commercial banks in Nepal. The study will provide useful feedback to the policy makers of the bank, and becomes a useful reference for other commercial banks of Nepal and central bank for the formulation of appropriate strategies.

The effort is made to highlight the investment pattern of commercial banks expecting that the study can be bridge which fulfils the gap between deposit and investment. On the other hand, the study would provide information to management of the bank that would help them to take corrective action and last but not least the study evaluated the investment

pattern of commercial bank and finds loopholes and significantly contributes to make the policy sound.

1.7. Limitations of the Study

Like every research study, this study also has some limitations. The basic factors are as follows;

1. Only three commercial banks that are the concern of the study due to the inadequate time period.
2. This study focuses on factors which are related with investment pattern only.
3. The study is mainly based on the secondary data and use of primary data as well.
4. The study duration is only of seven years (2001/2-2007/8) trend.
5. This study concentrates only on those factors that are related with investment.
6. There might be various recall biases from the side of the respondents which might have distorted my result of this thesis.

1.8. Organization of the Study

The study will be organized into five chapters each denoted to some aspects of the study of clearing and settlement system. The title of each chapter will be as follows;

Chapter I	: Introduction
Chapter II	: Review of Literature
Chapter III	: Research Methodology
Chapter IV	: Analytical Framework
Chapter V	: Summary, Conclusions & Recommendations

The introduction chapter will include the general background of the study, banking system in Nepal, statement of problem, objectives of the study, focus of the study, significance of the study, limitation of the study and organization of the study.

The second chapter will include the review of literature which includes review of books, review of journals and annual reports published by the bank and other authorities of related articles and previous thesis as well.

The third chapter will describe methodology employed to attain the objective of the research.

The fourth chapter will deal with analysis and presentation of data and information. It consists of descriptive as well as statistical analysis of data or information.

The last chapter will include summary, conclusions and recommendation of the study and bibliography and appendices will be listed at the end.

CHAPTER II

REVIEW OF LITERATURE

This chapter includes the various reviews of literature concern with the study. The chapter has been divided into two main sections. The first section of the chapter implies the review of previous studies. And the second chapter helps to take adequate feed back to broaden the information based on study.

2.1 Conceptual Review

Traditional approach of financial management was limited to the extent of raising funds from outside and administration of those funds. It never looked at the possibility of the funds that can be generated internally. It was viewed that the problem of financial management was related to corporate enterprises only. With the introduction of the concept of financial management, its scope has been broadened. According to the modern concept, financial management covers both acquisitions of funds its allocation. Apart from acquiring external funds, it looks after the efficient and useful allocation of funds to various uses.

Financial management is the function of investment decision, financing decision, dividend decision to create value. The decisions are related to overall valuation of a firm. Financial management maximizes value of the firm. Selection of the best means of financing determines the firm's financing cost of different sources of financing. There are also financing risks while selecting optimum financing mix. The risks can be covered against the possible losses with the help of hedging device.

Financial management is a skilful control, planning and execution of financial resources. Finance functions are long-term asset-mix decision, capital mix-decision, profit allocation decision and short-term asset-mix (liquidity) decision. If the firm does not invest adequate funds in current assets, it may become illiquid. Meanwhile, it may be losing profit on the idle current assets, as it does not earn anything. Financial managers are searching a technique of managing current assets that estimates firm's need and make sure that funds would be made available when needed.

The financial institutions of the country have neither been effortful to mobilize resources nor have they been able to invest available resources. On one hand, the major parts of their commercial loans are concentrated among the few individuals whereas the small traders and entrepreneurs are facing difficulties to receive loans on other. The only solutions of this problem are to encourage competition in banking sector.

2.1.1 Concept of Commercial bank

“Commercial bank is a corporation which accepts demand deposits subject to check and makes short term loans to business enterprises, regardless of the scope of this other services” (American Institute of banking,1972:325).

commercial bank act 1975AD (2031BS)defines, “A commercial bank is one which exchange money, deposits money, accepts deposits, grant loans and performs commercial banking functions and which is not a bank meant for co- operative, agriculture, industries or for such specific purpose”.(Commercial bank Act 2031BS).

The commercial bank has its own role and contributions in the economic development. It is a resource for the economic development; it maintains economic confidence of various segments and extends credit to people. (Grywinshki, 1991:87).

“A bank is a business organization that services and holds deposits of funds from others make loans or extends credits and transfer funds by written order of depositors.” (Encyclopedia, The world Book, Grolier incorporated, Vol.3. 1984)

“The business in banking is one of the collecting funds from the community and extending credit (making loans) to people for useful purpose. Banks have played a pivotal role in moving money from lenders to borrowers. Banking is a profit seeking business not a community charity. As a profit seeker, it is expected to pay dividends and other wise add to wealth of its shareholders.”(Edmister.O.Robert, ph.D.,”Financial institution,” 1980:73)

Commercial bank deals with others money. They have to find ways of keeping their asset liquid so that they could meet the demand of their customers. Liquidity is the lifeline of bank. Any bank perceived to be illiquid cannot attract deposit from the public. Inadequate liquidity does damage credit standing of those organizations, but if banks fail to repay the deposits on demand, the bank loses the trust of the public. This leads to “runs” is the bank

and probably bankruptcy thereof. Trade off between liquidity and profitability is thus a crucial task for any bank. Satisfactory trade off is possible through correct prediction of liquidity need and judicious distribution of resources in various forms of liquid and high earning assets.

The main functions of commercial bank is concerned with the accumulation of the temporarily idle money of the general public to advance it to deficit sections i.e. trade and commerce for expenditure. Its main functions are:

-) Accepting various types of deposits
-) Lending money in various productive sectors
-) Letter of credit (LC)
-) Guarantee (G'tee)
-) Remittance
-) Bills
-) Others

2.1.2 Function of Commercial Banks

There are many functions of commercial banks. The following are the main functions performed by the commercial banks.

(A) Accepting Deposits

Commercial bank accepts deposits in three forms, namely –current, saving, and fixed deposit.

i. Current Deposits

Current deposit is also known as demand deposits. Under this any amount may be deposited in this account. The bank does not any interest on such deposits.

ii. Saving Deposits

Saving deposit is one of the deposits collected from small depositors and low income depositors. The bank usually pays small interest to the depositors against their deposits. This is also called saving account.

iii. Fixed Deposits

Fixed deposits is the one in which a customer is required to keep a fixed amount with bank for a specific period generally by those who do not need money for a stipulated period. The bank pays the higher interest on such deposits.

(B) Advancing Loans

Commercial bank provides loans and advances from the money, which it receives by way of deposits. Direct loans and advances are given to all types of persons against the security of movable and immovable properties. Banks in four forms grant loans, namely:

-) Overdrafts,
-) Direct Loans,
-) Cash Credit, and
-) Discounting Bills of Exchange

(C) Agency Services

Commercial bank undertakes the payment of subscriptions, insurance premium, rent etc. It collects Cheque, bills, dividends, interest, pensions etc. on behalf of the customers. The bank charges a small amount of commission for those services. It undertakes to buy and sell securities on behalf of its customers. Commercial bank also acts as a trustee, executor and administrator.

(D) Credit Creation

Credit creation is very important function of the commercial banks. They accept deposits and advance loans. When the bank advances loans, it opens an account to draw the money by Cheque according to his needs. By granting loans, the bank creates credit or deposit.

(E) Other Functions

Other functions of commercial banks can be explained as follows

i. Assist in Foreign Trade

Commercial bank discounts the bills of exchange drawn by Nepalese exporters or the foreign importers and enables the exporters to receive money in the native currency. Similarly, the bank also accepts the bills drawn by foreign exporters.

ii. Offers Security Brokerage Services

Many commercial banks have begun to market security brokerage services offering customers the opportunity to buy stocks, bonds and other securities without having to go to a security dealer or broker.

iii. Financial Advising

Many banks offer a wide range of financial advisory services from helping in financial planning and consulting business man.

2.1.3 Investment Pattern

An investment pattern is a design of commitment of money that is expected to generate additional money. Every investment pattern entails some degree of risk, it requires a present certain sacrifice for a future uncertain benefit. Investment by individuals, business and government involves a present sacrifice of income to get on expected future benefit. As a result investment raises a nation's standard of living. Investment is the flow of resources into the production of new capital. It is the labour, steel and other inputs devoted to the construction of factories, warehouses, railroads and other pieces of capital during a period of time. Investment is the utilization of money with the expectation of future return in the form of income or capital gain. And also the creation of more money through the use of existing capital, money in the form of property of other venture with the expectation of making a profit, with sufficient security to return and protect the capital; not speculation. The act of investing, laying out money or capital in an enterprise with the expectation of profit can be understood as investment. Investment can be understood in brief as money that is invested with an expectation of profit which creates more money through the use of existing capital. The use of capital to create more money usually includes the idea that safety of principal is important.

A bank receives funds in the following ways:

Capital fund, borrowing, deposits other liabilities.

These funds are invested in following assets:

Cash and Bank balance, Investment.

Loan, Advances and bills purchased / Discounted (Credit), Fixed Assets, Other Assets.

Lending is the primary function and major sources of income of bank so it is very vital to understand the lending risk associated with the advance made to the borrower. In order to access the lending risk, the lender should know how the business of borrower operates and how they can be evaluated in terms of lending risks.

2.1.4 Features of Sound Lending and Investment Policy

The income and profit of a financial institution depends upon its lending procedure, lending policy and investment of its fund in different securities. A sound lending and investment policy is not only pre-requisite for bank's profitability but also of utmost significance for the promotion of commercial savings of an under developed and backward country like Nepal.

The factors that banks must consider for sound lending and investment policies are explained as under:

) *Safety and security*

Banks should buy investment rated securities only. It should obtain form investing its fund in those securities, which are subject to greater depreciation and fluctuation for example common stock, since a little difference may result in a great loss. It must not advance its funds to speculative business, which may earn millions in a minute or may become bankrupt the next minute. Since risk is overpriced during recession and under priced during boom banks should invest in medium grade and high-grade securities during recession and boom respectively. Banks should buy securities, which are commercially durable, marketable and have high market price. In this regard, "MAST" should be followed while investing,

Where, M = Marketability

A = Ascertainability

S = Stability

T = Transferability

) *Liquidity*

Liquidity is defined as bank's capacity to pay cash in exchange of deposits. People deposit their money in banks because they believe that the bank will repay their money on demand. In order to retain good credit standing and trust and confidence of its customers every banks must maintain enough liquidity to meet its various obligations.

) *Profitability*

Commercial banks can maximize its volume of wealth through maximization of return on their investment and lending. They must invest their fund in viable sector where they can

earn maximum profit. Their return depends upon the interest rate, volume of loan, duration of the loan and nature of investment in different securities.

) *Purpose of loan*

It is very important to know that most of the bank failures in the world are due to shrinkage in the value of loan and advances. The first substantive question a banker must examine is how loan proceeds will be used. If the loan purpose conflicts with commercial policy, such as loan for some speculative purpose not acceptable to the banker such loans should not be processed. If customers misuse their borrowings, there is risk involved in repayment and the bank will incur heavy bad debts. Detailed information about the plan and scheme of project should be collected and examined before borrowing.

) *Diversification*

Investment and credit concentrated on same geographical region, same sector of business and few customers increase the risk. Hence the policy should fix a cap on all these aspects. As the saying goes "A bank should not put all its eggs in the same basket", therefore, in order to minimize the risk, a bank should diversify its investment in different securities. This diversification or portfolio investment helps to earn return and at the same time minimize the risks and uncertainty.

) *Legality*

A commercial bank must follow the rules and regulations and statutory directives issued by Nepal Rastra Bank, ministry of finance and others while issuing securities and mobilizing their funds. In Nepal, NRB restricts financial institutions licensed by it to invest in securities in each other.

Meaning of some important Terminology

a) Assets

Assets, representing economic resources are the valuable possessions owned by the firm. These possessions should be capable of being measured in monetary terms. Assets are the future benefits. They represent:

Stored purchasing power (e.g. cash)

Money claims (e.g. receivables stock) and

Tangible and intangible assets

Tangible assets are those that can be sold or used in business to generate earnings. Tangible items include land building, plant equipment or stocks of materials and finished goods and all such other items, which have physical value. Intangible items do not have physical existence, but they have value to the firm. They include patents, copyrights, trade name or goodwill. Assets may be current asset or long-term assets. Current assets are those assets that are expected to be converted into cash within the accounting period. Long term assets normally include fixed assets, long-term investment and other non-current assets that are held for longer periods for use in business.

b) Advances

Advances are amount of money, which are paid or lent before any actual benefit has been derived. It could be expressed in advance, advance for current suppliers or advances against acquisition of capital assets.

c) Balance sheet

Balance sheet is one of the most significant financial statements, which is prepared at the end of each accounting period that indicates the financial condition or the state of affairs of a business at a given moment of time. More specifically, balance sheet contains information about the assets liabilities and ownership equity capital.

d) Bond

A bond is the source of long term financing issued by an organization in written form under which the organization or the borrower agrees to pay principal and interest to the lender on specific date. It may be secured i.e. mortgage bond with fixed assets pledged as security or unsecured like debenture bond.

e) Deposit

Deposits are the main source of fund of the financial institution. It is the sum total of money collected from the depositors in various accounts.

f) Liquidity positions

Liquidity assets are those assets that can be quickly converted into cash. Liquid assets determine the liquidity position of the organization. Higher the liquid assets better the

liquidity position. Liquidity position refers to state of owning things of value that can easily be changed into cash.

g) Share

The part of capital owned by a shareholder is called share. Any person can become a member of a company by purchasing the certificates of investment of the company also called shares, and can withdraw his/her membership by transferring his/her shares. Shares are major sources of long- term financing.

h) Securities

Securities are the main source of long term financing. They consist of shares and debentures issued by government or any company, which may or may not be redeemable with interest in the future.

i) Income statement

It is a statement, which presents the summary of revenue expenses and net income or net loss of a firm at a given period of time. Thus, it serves as a measure of firm's profitability. Revenues are amounts, which the customers pay to the firm for providing them goods and services. The firm uses economic resources in providing goods and services to customers. The costs of economic resources are called expenses. Net income is the amount by which revenues earned during a period exceeds expenses incurred during that period.

j) Retained Earning

It represents total undistributed earnings. It is that portion of firms earning, which is kept for future use and contingencies. It is also an internal source of financing.

k) Liability

Liabilities are debts payable in future by the firm to its creditors. They represent economic obligations to pay cash or provide goods or services in some future period. Generally, borrowing money or purchasing goods or services on credit creates liabilities. Examples of liabilities are creditors, bills payable, wages and salaries payable, taxes payable etc.

l) Off -Balance Sheet Transaction

Off- Balance Sheet transactions are future agreements concerning bills purchase, letter of credit and guarantees. They are also treated as liabilities.

m) Standard deviation

Standard deviation is the positive square root of the mean of the deviations taken from the arithmetic mean, which measured the variability of set observations. It is denoted by 'σ' and measures risk.

n) Variance

The square of standard deviation is called variance. It is generally denoted by 'σ²'. It is one of the statistical tools used in the analysis of data for this study.

o) Coefficient of Variation

Coefficient of Variation (C.V) is the proportion of standard deviation with mean multiplied by 100 mathematically.

$$C.V = \frac{S.D}{Mean} | 100$$

p) Mean

A mean is the average value or sum of all the observation divided by the number of observation. It is denoted mathematically by:

$$A.M = \frac{x}{N}$$

q) Correlation

Correlation is a statistical tool, which represents the relationship between two variables. Under correlation two variables are correlated if a change in one variable results in a corresponding change in the other. It does not however explain the causes and effects of the change in variables. It is of two types' positive correlation and negative correlation.

r) Ratio Analysis

The relationship between two accounting figures, expressed mathematically, is known as ratio. Ratios help to summarize the large quantities of financial data and to make qualitative judgment about the firm's financial performance. In financial analysis, a ratio is used as a benchmark for evaluating the financial position and performance of a firm.

s) Loan and advances

Earning from loan and advances occupy a major space in income statement of the bank loan from commercial banks are secured against the assets of the borrower.

2.2 Review of Related Studies

Banks are such types of institutions, which deals in money and substitute for money. They deal with credit and credit instruments. The most important think for the bank is good circulation of credit. Fluctuate flow of credit and week decision harms the whole economy and the bank as well. Thus to collect fund effectively and its utilization is the very challenging task for the bank. The decision of an investment of fund may be the question of life and death for the bank.

Pyakural,(1987) Bishowambhar Pyakural in his article, “The present changing context of the economy calls for a sustained revitalization of the resources. How much they have gained over the years depends chiefly on how far they have been able to utilize their resource in an efficient manner. Therefore, the task of utilization of resource is as much crucial as the mobilization. The under utilization of resource not only result in loss of income but also goes further to discourage the collection of deposits.” Thus in his paper he has emphasized on proper utilization of mobilized resource and profitability increment.

F. Morrios,(1990) in his discussion paper, “Latin America’s banking system in the 1980s” has concluded that most of the banks concentrated on compliance with central banks rules on reserve requirements credit allocation and interest rates. It is found that loan portfolio quality, operating efficiency and soundness of bank investment management has largely been over looked. The huge losses of the bank’s portfolio in many developing countries and testimony to the poor quality of this oversight investment function.

He further adds that management in financial institutions has involved inadequate and over optimistic loan appraisal, tax loan recovery, high risk diversification of lending and investment, high risk concentration, connected and insider lending loan mismatching. This has led many banks of developing countries to the failure in 1180’s.

Shrestha; (2047) Ramesh Lal Shrestha in his article “A study on deposits and credits of commercial bank in Nepal” concluded, “The credit deposit ratio would be 51.30percent other things remaining the same in 2004 AD, which was the lowest under the period of

review. So he has strongly recommended that the commercial banks should try to give more credit earning new filed as far as possible. Other wise, they might not be able to absorb even its total expenses.

Bajracharya; (2047) Bodhi B. Bajracharya in his article has concluded “Mobilization of domestic saving is one of the prime objectives of the monetary policy in Nepal and commercial banks and the more active financial intermediary for generating resource in the form of deposit of private sectors and providing credit to the investor in the different sectors of the economy.”

Bista; (2048) Bhagat Bista in his research paper, “Nepalma Adhunik Banking Byabastha” has made an attempt to highlight some of the important indicators, which have contributed to the efficiency and performance of joint venture banks in the field of commercial banking. He has concluded that the establishment of joint venture banks a decade ago marks beginning of modern banking era in Nepal. The joint venture banks have brought in many new banking techniques such as computerization hypothecation, consortium finance and modern fee based activities into the economy. These are indeed significant milestones in the financial development process to the economy.)

Shrestha; (1993) Sunity Shrestha expressed her view on research “Investment planning of commercial banks of Nepal.” has made remarkable efforts to examine the investment planning of commercial banks in Nepal on the basis of the study she concludes that the banks portfolio (loan and investment) of commercial banks has been influenced by the variable security rates. Investment planning of commercial banks in Nepal is directly traced to fiscal policy of government and heavy regulatory procedure of the central Bank so, the investment are not made in professional manners. Investment planning and operation of commercial bank of Nepal has not been found satisfactory in term of profitability. To overcome this problem, she suggested, “commercial bank should take their investment function with proper business attitude and should perform lending and investment operation efficiently with the proper analysis of the project.”

Pradhan, (1994) Dr. Radhe S. Pradhan has conducted his research on “financial managment and practices in Nepal”. This survey mainly dealt with the financial functions, sources and types of financing, financing decisions involving debt, effect of change in taxes on capital structure, financial distress, dealing with banks and dividend policy.

The major findings of the study concerned with financial management are given as:

- a) Bank borrowing and retained earnings are the two most widely used financing sources.
- b) The enterprises have a definite performance for bank loans at a lower level of debt.
- c) Most enterprises do not borrow from one bank only and they do switch between banks, which ever offer best interest rates.
- d) Most enterprises find that banks are flexible in interest rates and convenience.
- e) Generally, there is no definite time to borrow the issue stocks that is majority of respondents are unable to predict when the interest rate will be lower or will go up. They are unable to predict when the stock when the stock will go up or down.

Pradhan; (2053: 9)Shekhar Bahadur Pradhan, in his article “Deposit mobilization, its problem and prospects” has presented that deposits is the life-blood of every financial institutions, be it commercial banks, finance company, co-operative or non-government organization. He further adds in consideration of most of banks and finance company, the latest figure does produce a strong feeling that a serious review must be made of problems and prospects of deposit sectors. Leaving few joint venture banks, other organizations rely heavily on the business deposit and credit disbursement.

Mr. Pradhan has highlighted following problems of deposit mobilization in Nepalese context.

Most of the Nepalese people do not opt for saving in institutional manner due to the lack of good knowledge. However, they are very much familiar about saving be it in the form of cash or ornaments. Their reluctance to deal with institutional system in governed by the lower level of understanding about financial organization process, withdrawn system, availability of depositing facilities and so on.

Unavailability of the institutional services in rural areas.

Due to lesser office hours of banking system people prefer holding the cash in the personal possession.

There isn't much mobilization and improvement of the employment of deposits and the loan sectors.

Mr. Pradhan also has recommended for the prosperity of deposit mobilization, which are as follows:

1. By providing sufficient institutional service in the rural areas.
2. By cultivating the habit of using rural banking units.

3. by adding service hour system to bank.
4. Nepal Rastra Bank could also organize training program to develop skilled manpower.
5. by spreading co-operatives to rural areas to develop mini branch services.

Shrestha, (2055) Shiva Raj Shrestha, Deputy Chief Officer, of Nepal Rastra bank, banking operation Department has given a short glimpse on the “Portfolio management in commercial bank, theory and practice.”

Mr. Shrestha has highlighted following issue in the article. The portfolio management is a most important thing for both individuals and as well as institutional investors. All the investors would like to select a best mix of investment assets subjected to following aspects.

Higher returns than other alternative opportunities, which is available according to the same risk class to the investor.

- ❖ High liquidity with adequate safety and profitability of investment.
- ❖ Maximum concession of tax.
- ❖ Certain capital gain.
- ❖ Flexibility of investment
- ❖ Economic, efficient and effective investment mix etc.

According to above aspects, some following strategies are adopted:

- a) Do not put all the eggs in the same basket i.e. don't hold any single securities, try to have a folio of different securities.
- b) Diversify the investment for adequate safety, liquidity and profitability.
- c) Decided such a portfolio of securities, which ensure maximum return with minimum risk or lower of return but added of wealth maximization.

However Mr. Shrestha has also presented following approach to be adopted for designing a good portfolio and its management.

- ❖ To find out the assets to investment (generally known as securities) having scope for better returns depending upon individuals characteristics like age, health, need deposition, liquidity, tax liability etc
- ❖ To develop alternative investment strategies for selecting a better portfolio will ensures a trade-off between risks and return so as to attach the primary objective of wealth maximization at lower risk.
- ❖ To find out the risk of the securities depending upon attitude of investor towards risk.

- ❖ To identify securities for investment to reduce volatility of return and risk.

Mr. Shrestha has also presented two types of investment analysis techniques i.e. fundamental analysis and technical analysis to consider any securities such as equity debenture and bonds and other money and capital market instruments. He has suggested that the banks having international network can also offer access to global financial markets. He has pointed out the requirements of skilled manpower, research and analysis team and proper management information system in any commercial banks to get success in portfolio management and customer's confidence. At last, Mrs. Shrestha has put out following concluding remarks:

- a) The survival of every bank depends upon its own financial health and various activities.
- b) In order to develop and expand the portfolio management activities successfully the investment management methodology of a portfolio manager should reflect high standards and give their clients the benefits of global strength, local insights and prudent philosophy.
- c) With the disciplined and systematic approach to the selection of appropriate countries, financial assets and the management of various risks, the portfolio manager could enhance the opportunity for each investor (client) to earn superior returns over time.
- d) The Nepalese banks having greater network and access to national and international capital markets have to go for portfolio management activities for the increment of their fee based income as well as to enrich the client base and to contribute in national economy.

Pradhan,(1999) Mr. K.pradhan has pointed out some major issue in local commercial banks in comparison of recently established joint venture banks through his article "Nepalma Banijaya Bank,upalabdhi tatha chunauti."(Pradhan .K. Banijaya Bankharu Pragamika chhetrama lagani Garna Bhandar Harjana Tirna Tayar.1999. Nepal Samachar Patar.)

The study deals with the completely commercial banking system of Nepal in respect of their performance and profitability. Some of his findings relevant to this study are summarized as;

-) The deposit collection rate of local banks is very poor in comparison to joint venture banks

-) The patterns of deposit are also different between these banks. The ratio of current deposit on local banks is 9.34% only where the same as the joint venture banks is 52%. However, the fixed ratio is very high in local banks.

Kshetry,(2001) Mr Dipendra B. Kshetry has given the present scenario of Nepalese commercial banks as well as lending and investment overview in his article” Banking Industry: Magnet for investor,” According to him the commercial banks in operation, Nepal bank limited the pioneer bank and Rastriya Banijaya Bank dominate in case of opening the branches, deposit mobilization and lending. Over 60% of deposits with the banking system go to two commercial banks further. He further said that commercial banks are becoming urban areas, which is manifested from the trend of withdrawing rural branches of government and semi-government banks on the plea of unsuitable security situation. While the joint venture banks limit their branches at the most of the periphery of urban areas. Until January 2000, the bank branches numbered 513 units. Concentration of banking units into urban areas is growing overtime. In total 27 branches of are closed due to the political change. Among them 15 branches were from rural areas.

According to this article just 8.3% of branches are working in rural areas belongs to Agriculture Development Bank of Nepal and joint venture banks, rest 91.7% of the branches are related to NBL and RBB.

Shrestha; (2005) in her article has presented the objective to analyze the contribution of commercial banks lending to the Gross Domestic product (GDP) of Nepal. She has set hypothesis that there has been positive impact of lending of commercial banks to the GDP. In research methodology “She has considered GDP as the depended variable and various sectors of lending viz. Agriculture, commercial, service, and general and social sectors and independent variables. A multiple regression technique has been applied to analyze the contribution.

The multiple analyses have shown that all the variables expect service sectors lending have positive impact on GDP. Thus, in conclusion she has accepted the hypothesis i.e. there is positive impact on GDP by the lending of commercial banks in various sectors of economy, expert service sector investment.”

2.3 Review of Thesis

Thapa (2002) has conducted a research entitled “**Investment Policy of Commercial banks in Nepal**” with the objective to:

Discuss fund mobilization and investment policy of EBL in respect to its fee based off-balance sheet transaction and fund based on balance sheet transaction of NABIL and BOK.

- ❖ To evaluate the liquidity, efficiency, profitability and risk position.
- ❖ To evaluate the growth ratios of loans and advances and total investment with other financial variables.
- ❖ To analyze the trends of deposits utilization towards total investment and loan and advances and its projection for next five years.
- ❖ To conduct the hypothetical test to find out whether there is significant difference between the important ratios of EBL, NABIL, & BOK.
- ❖ To provide packages of workable suggestions and possible guidelines to improve investment policy of EBL and other banks.

His major findings are enumerated below:

- a) EBL is comparatively better than NABIL and BOK in terms of liquidity.
- b) EBL has been less successful than NABIL and BOK in its on balance sheet operation as well as off balance sheet activities.
- c) The profitability position of EBL is worse than NABIL and BOKL.
- d) EBL is exposed to more credit risk and capital risk, but lower interest rate risk than NABIL and BOKL.
- e) EBL has maintained high growth rates in total deposit, loan and advances but it has moderate position in investment.
- f) There is significant relationship between deposit and loan and advances and outside assets and net profit of EBL.

Khaniya (Banjade) (2003) has conducted a thesis research entitled “**Investment Portfolio of JVB’s**”.

The specific objectives of the study were:

- ❖ To analyze the risk and return ratios of commercial banks.
- ❖ To evaluate the financial performance of JVB’s.
- ❖ To provide suggestion package based on the analysis of data.
- ❖ To study portfolio structure of NABIL in investment as compared to other JVB’s.

- ❖ To study portfolio structure of NABIL in investment as compared to other JVB's.

Preference given by NABIL for investment between,

- ❖ Loan investment.
- ❖ Investment in real fixed assets.
- ❖ Investment in financial assets.

The main findings of the study were:

- SCBNL has the highest return on shareholders fund and total assets. It has also been successful in mobilizing its deposits as investments. NABIL and EBL have invested high amounts of deposits as loan and advances in comparison to SCBNL, NABIL and HBL.
- Among the JVB's, looking at the investment portfolio, EBL has investment highest amount of funds in government securities, NBB has invested highest amount of funds on shares and debentures and NABIL has invested highest amount of funds in NRB bonds in comparison to other JVB's.
- SCBNL has the highest EPD and EBL the lowest EPS among the JVB's.

Joshi (2004) in his thesis entitled “**A comparative study of investment policy of SCBNL & EBL**” has made an endeavour to examine and interpret the investment policy adopted by SCBNL in comparison to EBL.

The objective of the research was:

- ❖ To compare the investment policies of concerned banks and discuss the fund mobilization of the sample banks.
- ❖ To fine out empirical relationship between total investment, deposit and loan and advance and net profit and outside assets and compare them.
- ❖ To analyze the deposit utilization and projection for next five years of SCBNL and EBL.
- ❖ To evaluate comparatively the profitability and risk position liquidity asset management efficiency of SCBNL and EBL.
- ❖ To provide a package of possible guidelines to improve investment policy, its problems and way to solve some problems and provide suggestions and recommendation on the basis of the study.

The main findings of the study were as follows:

- a) Both the banks have good deposit collection. EBL has higher but fluctuating liquidity position. It is in a good position to meet daily cash requirement and current obligation.
- b) SCBNL has successfully maintained and managed its assets towards different income generating activities. SCBNL has invested high portion of total working fund in government securities and share and debentures of other companies.
- c) The profitability position of SCBNL is comparatively better than EBL.
- d) The liquidity risk ratio, credit risk ratio of SCBNL is lower than that of EBL.
- e) SCBNL has not been successful to increase its sources of funds and its mobilization i.e., loan and advances and total investment.

Raya (2005) has conducted a thesis research entitled “**Investment policy and Analysis of commercial banks in Nepal** “(A comparative of SCBNL with NIBL and NBBL)

The following objectives were considered in the study:

- ❖ To discuss fund mobilization and investment policy of SCBNL in respect to its fee best off-balance sheet transaction with NIBL and NBBL.
- ❖ To evaluate the liquidity, efficiency, profitability and risk position of the sample banks.
- ❖ To evaluate the growth ratios of loan and advances, total investment with other financial variables.
- ❖ To analyze the trends of deposit utilization toward total investment and loan and advances and its projection for next five years.
- ❖ To find out whether there is significant difference between various important ratios of SCBNL with the ratios of NIBL and NBBL.
- ❖ To provide package of workable suggestions and possible guidelines to improve investment policy of the sample banks.

The findings of the study were:

- a) SCBNL has good deposit collection, has made enough investment in government securities, but has provided less advances and loans to total deposits ratio.
- b) SCBNL has been successful in its on balance sheet operations but NIBL and NBBL have been more successful in off-balance sheet operations.
- c) The profitability position of NIBL is higher than the other JVB's in the sample.
- d) The credit risk ratio, capital risk ratio of SCBNL is lower than NIBL and NBBL.

- e) SCBNL has maintained higher growth in investment and net profit and moderate growth in loans and advances, and deposits.
- f) There is significant relationship between deposit and loans and advances and between outside asset and net profit of SCBNL.

Dhital (2005) has conducted a thesis research on “**A comparative study on investment policy of SCBNL and BOKL.**”

The major objectives of the research were:

- ❖ To find out relationship between total investments, deposits, loan and advances, net profit and outside asset and compare them.
- ❖ To compare investment policies of concerned banks and discuss the fund mobilization of sample banks.
- ❖ To analyze the risk position of SCBNL and BOKL.
- ❖ To analyze the deposit utilization trend and its projection for five years of SCBNL and BOKL.
- ❖ To provide package of a workable suggestion and possible guidelines to improve investment policy, its problems and way to solve some problems and provide suggestion and recommendation on the basis of the study.

The major findings of the study were:

- a) SCBNL has better liquidity position than BOKL, but BOKL is in a better position to meet daily cash requirement. SCBNL has invested more in government securities than BOKL; SCBNL has utilized lesser portion of deposit and current assets as loan and advances.
- b) SCBNL has invested a high portion of total working fund in government securities and shares and debenture of other companies.
- c) The profitability position of SCBNL is better than BOKL.
- d) SCBNL has lower liquidity risk, and credit risk than BOKL.
- e) The growth rate of deposits and loans, and advances of SCBNL is less than that of BOKL, but SCBNL has witnessed high growth in investment and net profit over the period of study in comparison of BOKL.
- f) There is significant relationship between deposit and loan and advances, deposit and total investment, deposit and interest earned, total working fund and net profit for both the banks. There is also a significant relationship between outside asset and net profit

deposit and net profit total working fund and net profit for SCBNL, but the same are not significant in the case of BOKL.

Pandit (2007) has conducted a research entitled “**investment policy Analysis of joint venture bank.** (With special reference to NSBIL and EBL)

The objectives of the study were as follows:

- ❖ To evaluate the liquidity management, assets management efficiency, profitability position, risk position and investment practices of NSBIL, BOKL & EBL.
- ❖ To find out the relationship between deposit and total investment, deposit and loan and advance, net profit and outside assets.

His major findings are enumerated below:

- a) NSBIL has better liquidity position. It is in a good position to meet its daily cash requirement and current obligation. Liquidity position of EBL & BOKL has not satisfactory.
- b) NSBIL’s loan and advance to total deposit ration is lower than EBL and BOKL. It does not seem to follow any definite policy regarding the management of its assets.
- c) The profitability position of all the banks is not satisfactory. The banks have not adopted sound investment policy in utilizing their surplus funds.
- d) BOKL & EBL are exposed to high credit risk and capital risk.
- e) NSBIL & BOKL have not been successful to increase their source of fund. EBL has been successful in maintaining its higher growth rat of total deposit.
- f) There is significant relationship between deposits and total investment of BOKL & EBL but the same is not significant in case of NSBIL.

Nakarmai (2008) has conducted a research entitled “**Investment patter of commercial Bank**” (with especial reference to Everest Bank Ltd. And Bank of Kathmandu.)

The objectives of this study are as follows:

- ❖ To make comparative study of Everest Bank Ltd. & Bank of Kathmandu LTD on Investment Pattern.
- ❖ To analyze deposit utilization and its projection.
- ❖ To make the comparative study of investment, deposit loan and advances, and net profit.
- ❖ To provide the suggestion and recommendations of listed commercial banks on the basis of findings of the analysis.

Her major findings are as follows:

- a) From the analysis of current ratio, it is found that the mean ratio of both banks is not much different comparatively risk factor of EBL is more than BOKL. The ratio of EBL is less consistent than BOKL.
- b) The mean ratio of Cash & Bank balance to total deposits of EBL is higher than EBL & BOKL. It states that the liquidity position of EBL is better in this regard. And the ratio of EBL is more variable than that of BOKL.
- c) The mean ratio of investment on government securities to current ratio of EBL is higher than that of BOKL. EBL has satisfactorily invested its more portion of current asset as government securities because its CV is lower than BOKL which is less consistent than BOKL.
- d) The mean ratio of cash & bank balance to current asset of EBL is higher than BOKL. It states that the liquidity position of EBL is better than BOKL. And the ratio of EBL is less variable than that of BOKL.
- e) The mean ratio of loan & advance to current assets of EBL is lower than BOKL. EBL has maintained variability of ratio which is lower than BOKL. It indicates that the liquidity position of is more consistent.

2.4 Research Gap

Investment in different sectors is made on the basis of the directives and circulars of Nepal Rastra Bank as well as the investment guidelines and policy of the concerned commercial bank. Commercial banks should follow these directives and circulars. Furthermore, their own investment guidelines and policies should be in line with NRB directives and circulars. So the up to date study over the change of time frame is a major concern for the researcher and concerned organization as well as a whole. This study covers the more recent financial data, NRB circulars and guidelines than that of studies previously conducted.

The optimum diversification of loan and advances reduced the default risk of credit. It is a major concern of stakeholders to know the portfolio behaviour of the bank. This study puts its effort to find out the proportion to total loan and advances of the bank disbursed to different sectors of the economy and to analyze the diversification of its investment.

No case study has yet been shown about regression analysis on this topic that is investment pattern. Here I have tried my best to define simple regression analysis. It is used to describe the nature of relationship and to make predictions. Simple regression has one prediction

variable prediction one criterion variable, whereas multiple regressions have two or more independent variable predicting one dependent variable.

So, this study will be fruitful to those interested persons, parties, scholars, teachers, businessman, civil society and government for academically as well as policy perspectives.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction

Research Methodology describes the methods and process in entire study. It sequentially refers to the various steps to be adopted by a researcher. “Research methodology is the process of arriving at the solution of the problem through planned and systematic dealing with the collection, analysis and interpretation of facts and figures. Research is a systematic method of finding right solutions for the problem where as research methodology refers to the various sequential steps to adopt by a researcher in studying a problem with certain objectives in view.” (Kothari, 1998:102)

The basic objective of the study is to evaluate the investment pattern of Everest bank, Nabil bank and bank of Kathmandu. In order to reach and accomplish the objectives of the study, different activities are carried out and different stages are crossed during the study period. This chapter includes research design, population and sample, nature and sources of data, analysis of data etc.

3.2 Research Design

Research design is a plan, structure and strategy of investigation conceived so as to obtain answer to research questions and to control variances. It is the arrangement of conditions for collection and analysis of data. To achieve the objective of this study, descriptive and analytical research design has been used. Some financial and statistical tools have been applied to examine facts and descriptive, techniques have been adopted to evaluate the investment pattern of Nabil Bank Limited, Bank of Kathmandu Limited and Everest Bank Limited.

3.3 Population and Sample

The time limit and unavailability of the relevant data had forced me to make research on the few CBs even though there are altogether 26 commercial banks functioning all over the kingdom and most of their stocks are traded actively in the stock market. In this study investment pattern of three different banks are selected from population as follows:

List of Licensed Commercial Banks

S/N	Commercial banks	Established Date (B.S)	Head office
1	Nepal Bank ltd.	1994/07/30	Kathmandu
2	Rastriya Banijya Bank	2022/10/10	Kathmandu
3	Agriculture Bank Ltd.	2024/10/7	Kathmandu
4	Nabil Bank Ltd.	2041/03/29	Kathmandu
5	Nepal Investment Bank Ltd.	2042/11/16	Kathmandu
6	Standard Chartered Bank Nepal Ltd.	2043/10/16	Kathmadu
7	Himalayan Bank Ltd.	2049/10/05	Kathmandu
8	Nepal Bangladesh Bank Ltd.	2050/02/23	Kathmandu
9	Nepal SBI Bank Ltd.	2050/03/23	Kathmandu
10	Everest Bank Ltd	2051/07/01	Kathmandu
11	Bank of Kathmandu	2051/11/28	Kathmandu
12	Nepal Credit and Commerce Bank	2053/06/28	Siddhartha Nagar
13	Lumbini Bank ltd	2055/04/01	Narayanghat
14	N I C bank ltd.	2055/04/05	Biratnagar
15	Kumari Bank ltd	2056/08/24	Kathmandu
16	Machhapucchre Bank ltd.	2057/06/01	Pokhara
17	Laxmi Bank ltd	2958/06/11	Birgunj
18	Siddhartha Bank ltd.	2058/06/12	Kathmandu
19	Global Bank Ltd	2063/09/18	Birgunj
20	Citizen Bank ltd	2064/01/7	Kathmandu
21	Prime Bank Ltd	2064/06/7	Kathmandu
22	Sunrise Bank ltd.	2064/06/25	Kathmandu
23	Bank of Asia	2064/06/25	Kathmandu
24	NMB Bank ltd	Effective from 2008	Kathmandu
25	DCBL Bank	Effective from 2008	Kathmandu
26	KIST Bank	Effective from 2009	Kathmandu
	Population = 26		

Among them, only three commercial banks via NABIL, RBL and BOK have taken into account for research purpose as samples in this study to compare their investment pattern.

They are the best performing banks in Nepal. Their profit per share, dividend payout ratio and net profit are growing rapidly. They are equipped with research and analysis team, proper MIS, sufficient capital, skill manpower.

3.4 Nature and Source of Data

This study conducted on the basis of primary and secondary data. Secondary data relating to “Investment” e.g. deposit, loan and advances and profit/loss that have been directly obtained from the balance sheet and the P/L a/c of concerned banks annual reports , collected from the number of institution and authorities like NRB budget speech, NRB published books, bank bulletin, newspaper, previous studies, security exchange board, Nepal stock exchange ltd. All the secondary data are observed, processed and tabulating in the time as per need and objectives. Various data and information are collected from the economic journal, periodicals, bulletins magazines and other published and unpublished reports and documents from various sources.

Primary data is a data which has not been used by other. Collected fresh and first hand is primary data. It can be prepared by different sources like opinion poll, sampling, through correspondents etc. in this study, primary data has been collected by using questionnaire method , for this interview and structured questionnaire method have been used, questions were asked to the executive level staff of the relate bank. The questions raised are of three types, yes/no questions, multiple, choice questions and open end questions.

3.5 Data Collection Procedure

Primary data analysis has been conducted through interview and structured questionnaires methods have been used. Ten questions were put by means of 40 copies of questionnaires to related commercial banks. The questions are mainly three types i.e. Yes/No questions, Multiple choice questions(open end) and question of questionnaire are to find out the option of the bankers about investment practice and others. The annual reports of Everest Bank, Nabil Bank and Bank of Kathmandu Ltd for the study periods are obtained from their head office. The data on same aspects of the bank has also been obtained from the publications and websites of Nepal stock Exchange. Some supplementary data and information and literature review have been collected from different campus and NRB

publications, different journals, magazines and other published and unpublished reports documented by the concern authorities.

3.6 Data Analysis Tools

In this study various financial as well as statistical tools have been used to achieve the objective of study. The analysis of data is done according to the pattern of available. The various tools applied in this study are presented as follows:

3.6.1 Financial Tools

Financial analysis is the process of identifying the financial strength and weakness of the firm by properly establishing relationship between the items of the balance sheet.

Financial tools are used to examine the financial strength and weakness of the bank. In these study financial tools like ratio analysis has been used.

3.6.1.1 Ratio Analysis

An arithmetic relationship between two figures is known as ratio. It is completed by dividing one item of relationship with the other. Ration simply means one number expressed in terms of another. Financial ratio analysis is a part of whole process of analysis of financial statement of any business or industrial concern especially to take out pt and credit decisions. Thus ratio analysis is used to compare a firm's financial performance and status to that of other firms or to itself overtime. The qualitative judgment regarding financial performance of a firm can be done with the help of ratio analysis. Even though there many ratios only those ratios have been covered in this study. Which are related to investment operation of the bank? This study contains following ratio:

(1) Liquidity Ratios

The ability of a firm to meet its obligation in the short term is known as liquidity. Liquidity ratio is used to the ability of the banks to meet its short-term liabilities that are likely to mature in the short period. From them such insights can be obtained into present cash solvency in the event of adversities. It is the measurement of speed with which bank assets

can be converted into cash to meet deposit withdrawal and other current obligations the following ratio is evaluated under liquidity ratio:

a) Current Ratios

This ratio shows the banks short term solvency. It shows the relationships between current assets and current liabilities. A current asset includes cash and bank balance money at call or short notice loans and advances overdrafts, bills purchased and discounted and miscellaneous current assets. Similarly, current liabilities include deposits and other short term loan, bills payable, tax provision, staff bonus, dividend payables and other miscellaneous current liabilities.

$$\text{Current ratio} = \frac{\text{current assets}}{\text{Current liabilities}}$$

The widely acceptable standard of current ratio is 2:1 but accurate standard depends on circumstances in the case of seasonal business ratio and the nature of business.

b) Cash and Bank Balance total Deposit Ratio

Cash and bank balance are the most liquid current assets. This ratio measures the percentage of the most liquid fund with the bank to immediate payment to the depositor; this ratio is computed by dividing cash and bank balance by total deposit. This can be presented as,

$$\text{Cash and bank balance total deposit ratio} = \frac{\text{cash and bank balance}}{\text{Total deposits}}$$

Hence cash and bank balance includes cash in hand foreign cash on hand cheques and other cash items, balance with domestic banks and balance held in foreign banks. The total deposit encompasses current deposits, saving deposits, fixed deposits, money at call or short notice and other deposits.

c) Cash and Bank Balance to Current Assets Ratio

This ratio measures the proportion of most liquid assets of bank. Higher ratio shows the bank's ability to meet demand for cash. This ratio is computed by dividing cash and bank balance by current assets. This can be stated as:

$$\text{Cash and bank balance to current assets ratio} = \frac{\text{cash in bank balance}}{\text{Current assets}}$$

d) Investment on Government Securities to Current Assets Ratio

This ratio is calculated to find out the percentage of current assets invested in government securities i.e. treasury bills and development bonds. This ratio is computed by dividing investment on government securities by current assets. We state it as,

This ratio is calculated to find out the percentage of current assets invested in government securities i.e. treasury bills and development bonds. This ratio is computed by dividing investment on government securities by current assets. We state it as,

$$\text{Investment on govt. Securities to current assets ratio} = \frac{\text{Investment on govt. securities}}{\text{Total Current assets}}$$

e) Loan and Advances to Current Assets Ratio

Loan and advances includes short and long term, overdraft revolving overdraft, stand by credit, line of credit and other lending. The ratio is computed as:

$$\text{Loan and advances to current assets ratio} = \frac{\text{loan and advances}}{\text{Current assets ratio}}$$

(2) Assets Management ratio

Asset management ratio measures how efficiency the banks manages the resources at its command. The following ratios are used under this asset management ratio.

a) Loan and Advances to Total Deposit Ratio

This ratio is calculated to find out how to successfully the banks are utilizing their total deposits on loans and advances for profit generating purpose. This can be obtained by dividing loan and advances by total deposits which can be stated as,

$$\text{Loan and advances to total deposit ratio} = \frac{\text{loan and advances}}{\text{Total Deposits}}$$

b) Total Investment to Total Deposits Ratio

Investment is one of the credited to earn income. This implies the utilization of firms deposit on investment government securities and shares debenture to other companies and bank. This can be mentioned as,

$$\text{Total investment to total deposits ratio} = \frac{\text{Total investment}}{\text{Total deposits}}$$

The numerator consists of investment of government securities investment on debenture and bonds shares in other companies and other investment.

c) Loan and Advances to Working Fund Ratio

Loan and advances is the major component in the total working fund (total assets). This indicates the ability of the bank to channelise its deposits in the form of loan and advances to earn high return. This ratio is computed by dividing loan and advances by total working fund. This stated as,

$$\text{Loan and advances to working fund ratio} = \frac{\text{Loan and advances}}{\text{Total working fund}}$$

Here the denominator included all assets as of on balance sheet items. In other words this includes current assets, net fixed assets, loans for development banks and other miscellaneous assets but excludes off balance sheet items like letter of credit, letter of guarantee etc.

d) Investment on Government Securities to Working Fund Ratio

This ratio shows that banks investment on government securities in comparison to the working fund. This ratio is calculated by dividing investment on government securities by total working fund. This is presented as,

$$\text{Investment to govt. Securities ratio} = \frac{\text{Investment on govt. Securities}}{\text{Total working fund}}$$

e) Investment on Shares and Debenture to Total Working Fund Ratio

This ratio shows the banks investment in share and debenture of and other companies. This ratio can be derived by dividing investment on shares and debenture by total working fund. This can be mentioned as,

$$\text{Fund ratio} = \frac{\text{Investment on shares and debentures}}{\text{Total working fund}}$$

The numerator included investment on debentures, bonds and shares of other companies.

f). Loan loss ratio

This ratio shows the possibility of loan default of a bank. It indicted how efficiency it loan and advances and makes effort for loan portfolio. Dividing loan loss provision from total loan and advances derives this ratio. Hence the number indicated the amount of provision for possible loss. This can be calculated as follows:

$$\text{Loan loss ratio} = \frac{\text{Total loss provision}}{\text{total loan advances}}$$

3. Profitability Ratio

Profitability ratios are calculated to measure the efficiency of operating of a firm in tern of profit. It is the indicator of the financial performance of any institution. This implies that higher the profitability ratio, better the financial performance of bank and vice versa. Profitability position can be evaluated through following different ways:

a) Return on loan and advance ration

This ratio indicates how efficiently the bank has employed its resources in the form of loan and advances. This ratio is computed by dividing net profit (loss) by loan and advances. This can be expressed as

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

b) Return on equity

Net worth refers to the owner claim of a bank. The excess amount of total assets over total liabilities is known as net worth. This ratio measures how efficiently the banks have to use the funds of owners. This ratio is calculated by dividing net profit by total capital (net worth). This can be stated as follows:

$$\text{Return on equity ratio (ROA)} = \frac{\text{Net Profit}}{\text{Total equity capital}}$$

Here total equity capital included shareholder reserve including P/L a/c and share capital i.e. ordinary share and preference share capital.

c) Return of total working fund ratio

This ratio measures the overall profitability of all working funds i.e. total assets. It is also known as return on an asset (ROA). A firm has to earn satisfactory return on assets or working fund for its survival. This ratio is calculated by dividing net profit (loss) by total working fund. This can be mentioned as

$$\text{Return on total working fund ratio (ROA)} = \frac{\text{Net Profit (loss)}}{\text{Total working fund}}$$

The numerator indicates the portion of income left to the internal equities after all costs, charges and expenses have been deducted.

d) Total interest earned to total outside assets ratio

This ratio measures the interest earning capacity of the bank through the efficient utilization of outside assets. Higher ratio implies efficient use of outside assets to earn interest. This ratio is calculated by dividing total interest earned by total outside assets and can be mentioned as,

$$\text{Total interest earned to total outside assets ratio} = \frac{\text{Total interest earned}}{\text{Total outside assets}}$$

The Denominator includes loan and advances, bills purchased and discounted and all types of investment. The numerator comprises total interest income from loans, advances, cash credit and overdrafts, government securities inter bank and other investments.

e) Total interest earned to total working fund ratio

The ratio is calculated to find out the percentage of interest earned to total assets (working fund). Higher ratio implies better performance to the bank its terms of interest earning on its total working fund. This ratio is calculated by dividing total interest earned by total working fund. This is stated as,

$$\text{Total interest earned to total working fund ratio} = \frac{\text{Total interest earned}}{\text{Total Working fund}}$$

4. Risk ratios

Risk taking is the prime business of the banks investment management. It increases effectiveness and profitability of the bank. These ratios indicate the amount of risk associated with various banking operation which ultimately influences the banks investment policy. The following ratios are evaluated under this topic.

a) Liquidity Risk Ratio

The liquidity risk ratio of the bank defines its liquidity need for deposits. The cash and bank balance are the most liquid assets and they are as banks liquidity sources and deposit as the liquidity needs. The ratio of cash and bank balance to total deposits is and indicator of banks liquidity needs. The risk is low if funds are kept idle or as cash and bank balance, but this effects profitability and if bank make loan, its profitability increases and also the risk. Thus higher liquidity ratio indicates less risk and less profitability bank and vice versa.

$$\text{Liquidity Risk Ratio} = \frac{\text{Cash and Bank balance}}{\text{Total Deposit}}$$

b) Credit Risk Ratio

Credit risk ratio is measures the possibility that loan not be rapid or that investment will deteriorate in quality or go into default with consequent loss to the bank. By definition

credit risk ratio is expressed as the percentage of non-performing loan to total loan and advances. Here dividing total loan and advances by total assets devices this ratio. This can be stated as,

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

c) Growth Ratios

To examine and analyze the expansion and growth of the banks businesses following growth ratios are calculated in this study.

Growth ratio of total deposits

Growth ratio of loan and advances

Growth ratio of total investment

Growth ratio of net profit

this ratio can calculated by dividing the last year figure by the first year figure then referring to the compound interest table.

3.6.2 Statistical Tools

Some important statistical tools are used to achieve the objectives of this study. In this study statistical tools such standard deviation coefficient of variance least square linear trend and hypothesis testing have been used. They basic analysis is written in point blow:

a) Co – efficient of correlation Analysis

The correlation coefficient determines the relationship between the two or more variables. N is the case of highly correlated variable, the effect on the variable may have effect on other correlated variable. When two elements have zero correlation with each other then they are unrelated in any way and have zero variance. Positive correlation implies positive covariance.

$$r = \frac{xy}{\sqrt{x^2} \sqrt{y^2}}$$

b) Trend analysis

This topic analysis the trend of deposit loan and advances investment and net profit of NB bank and the JVBs from 2053-2058 and makes the forecast for the next five years till 2063. Under this topic following subtopic has been presented.

Trend analysis of total deposits

Trend analysis of loan and advances

Trend analysis of total investment

Trend analysis of net profit

c) Arithmetic Mean

Arithmetic Mean is the sum of all the observations divided by the number of observations. Arithmetic mean is calculated to find the mean of financial ratio. The arithmetic mean can be computed as

$$A.M = \frac{\sum \epsilon}{N}$$

d) Standard Deviation

The measurement of the scatter ness about an average is known as dispersion. The S.D. means a high degree of uniformity of the observations as well as homogeneity of the series. A large S.D means just the opposite. In this study S.D of different ratios are calculated. It is computed as:

$$\text{Standard Deviation (S.D)} = \sqrt{\frac{\sum \epsilon^2}{N} - \left(\frac{\sum \epsilon}{N}\right)^2}$$

e) Co-efficient of Variation (C.V)

The co-efficient of variation is the relative measure of dispersion comparable distribution, which is defined to the mean expressed in percent. It is calculated as

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

f. Test of Hypothesis

Hypothesis is the pre-assumed answers to the problem of the research. They provide the directions to the activities done or to be done by the researcher.

The objectives of this test are the significance regarding the parameters of the population on the basis of sample drawn from the population. This test has been conducted on the various ratios related to the banking business.

Test of Hypothesis on loan and advances to total deposit ratios of JVs bank.

Test of Hypothesis on total investment to total deposit ratios of JVs bank.

Test of Hypothesis on Government securities to current assets ratios of JVs bank.

Test of Hypothesis on loan and advances to current assets ratios of JVs Bank.

Test of Hypothesis on return of loan and advances ratios of JVs banks.

Test of Hypothesis on total interest earned to total outside asset ratios of JVs bank.

CHAPTER –IV

PRESENTATION AND ANALYSIS OF DATA

This is an analytical chapter, where an attempt has been made to analyze and evaluate major financial items, which have an impact on investment management and fund mobilization of NABIL, BOK and EBL. There are many types of financial ratios. In this study those ratios are calculated and analyzed that are crucial in evaluating fund mobilization of commercial banks.

4.1 Presentation and Analysis of Primary Data

This section provides interpretation and analysis of primary data. On this study only secondary data analysis has not been sufficient to cover objectives.

Sector Considered More Appropriate for Making Investment:-

Regarding the question, prioritized area for the purpose of making investment.60% of the respondents replied in the favour of banking sector, 20% of the respondents stand in favour of service sector, rest 15% stand in favour if Finance companies and rest 5 % are in favour of manufacturing sector. From the table 4.1 is clear that most of the respondents are in favour of investing in banking sectors.

Table 4.1
Prioritized sector for making investment

S/N	Research variables	Number of Respondent	% of Respondents
1	Service sector	8	20
2	Finance Companies	6	15
3	Banking sector	24	60
4	Manufacturing sector	2	5
Total		40	100

Source field survey, Questionnaire No 1

Reason of Investing Major Portion of Deposit in Loan and Advance:-

Regarding the question reason of major portion of deposit investing in loan and advance 50% of the respondents replied in favour of profitability,25% of the respondents are in favour of market demand,15% of the respondents are in favour of quick return and the rest 10% respondent's stand in favour of Security. From the table 4.2, it is clear that the most of the respondents are in favour if profitability.

Table No. 4.2

Reason of investing major portion of deposit in loan and advance

S/N	Research variables	Number of respondents	% of Respondents
1	Quick return	6	15
2	Security	4	10
3	Profitability	20	50
4	Market demand	10	25
	Total	40	100

Source: field survey, Questionnaire No 2

Major Problem of Commercial Banks are Facing While Making Investment:-

Regarding the question, major problem joint venture banks are facing .60% of the respondents replied in favour of political instability, 17.5% of the respondents stand for limited opportunity, 15% respondents stand for market competition and rest 7.5 % of the respondents are in favour of interest rate. Thus form table 4.3, it can be concluded that, the major problem of commercial banks are facing political instability.

Table 4.3

Major Problem Joint Venture Banks are facing

S/N	Research variables	No. of Respondents	% of Respondents
1	Limited opportunity	7	17.5
2	Market competition	6	15
3	Interest rate	3	7.5
4	Political instability	24	60
	Total	40	100

Source: field survey, Questionnaire No. 3

To What Extent Banks are Responsible for This Problem?

Regarding this questions 50% said don't know about the problem, 30 % of the respondents are in favour of little bit problem and 20 are said that there is more problem.

Table 4.4
What extent banks are responsible for this problem?

S/N	Research variable	No of Respondents	% of respondents
1	Little bit	12	30
2	More	8	20
3	Don't know	20	50
Total		40	100

Source: field survey, Questionnaire No 4

Why Banks Invest In Government Securities?

Regarding the question reason behind investing in government securities 50% of the respondents replied in favour of profitability and 37.5% replied in favour of security and 12.5% of the respondents are in favour of Legality. From this study it can be concluded that reason behind investing in government securities is profitability.

Table No. 4.5
Research behind investing in government securities

S/N	Research variables	No of respondents	% of Respondents
1	Profitability	20	50
2	Marketability	-	-
3	Security	15	37.5
4	Legality	5	12.5
Total		40	100

Source: field survey, Questionnaire No 5

4.1.6 Most of the Banks are focusing Their Business in Urban Areas?

Regarding the question, most of the banks are focusing their business in urban areas. 62.5 % of the respondents replied in favour of market, 25% of the respondents stand for

security, 7.5% of the respondent are in favour of infrastructure and the remaining 5% stand in favour of other, thus from the table no 4.6, it is clear that commercial banks are situated in urban areas for grabbing more opportunities.

Table 4.6
Most of the banks are focusing their business in urban areas

S/N	Research variables	No of respondents	% of Respondents
1	Market	25	62.5
2	Security	10	25
3	Infrastructure	3	7.5
4	Other	2	5
Total		40	100

Source: field survey, questionnaire No.6

4.1.7 Nepal Rastra Bank's Policies and Guidelines are Comfortable for Proper and Smooth Operation of Commercial Bank?

Regarding the policies and guidelines of Nepal Rastra Bank, the Bankers were asked whether the policies and guidelines of Nepal Rastra Bank are enough for the proper and smooth operation banks. 37.5% of the respondents said no, 25% respondents said yes, and rest 12.5% respondents said don't know. Thus it can be concluded that the policies and guidelines of Nepal Rastra Bank is not enough for smooth and proper operation of commercial banks.

Table 4.7
Comfortability of NRB's policies and guidelines

S/N	Research variables	No of respondents	% of Respondents
1	Yes	10	25
2	No	15	37.5
3	Don't know	5	12.5
Total		40	100

Source: field survey, Questionnaire no 7

Reason for Increasing in Bank Interest Rate:-

Regarding the question, reason for increasing in bank interest rate is satisfactory or not. 67.5% of the respondent replied lack of liquidity, 20% of the respondent are in favour of competition, 10% of the respondent are in favour of increasing opportunities and rest 2.5% of the respondent said international trend. Thus it can be concluded that the reason behind increasing in bank lack of liquidity.

Table 4.8
Reason for increasing in bank interest rate

S/N	Research variables	No of respondents	% of Respondents
1	Competition	8	20
2	Lack of liquidity	27	67.5
3	International trend	1	2.5
4	Increasing opportunity	4	10
Total		40	100

Source: field survey, Questionnaire no 8

Prevailing Interest Rate on Deposit/Lending is Satisfactory:-

Regarding the question, prevailing interest rate on deposit / lending is satisfactory or not. 72.5 of respondent's relied no. 27.5% replied yes. Thus it can conclude that the prevailing interest rate on deposit/ lending is not satisfactory for the commercial banks.

Table 4.9
Prevailing interest rate on Deposit/ Lending

S/N	Research variables	No of respondents	% of Respondents
1	Yes	11	27.5
2	No	29	72.5
Total		40	100

Source: field survey Questionnaire No 9

Factor Considered While Taking Investment Decision:-

Regarding the question, which factors would you consider while taking investment decision, 8 marks were given in profitability, 6 marks were given to security, 3 marks were given to political situation, 2 marks were given to level of income and 1 mark was given to government policy. Thus according to the respondents the main factor considered while taking investment decision is profitability and security.

Table No 4.10
Factors considered while taking investment Decision

S/N	Research variables	Mark obtained	Rank
1	Profitability	8	1 st
2	Security	6	2 nd
3	Level of income	2	4 th
4	Government policy	1	5 th
5	Political environment	3	3 rd

Source: field survey, questionnaire No 10

4.2 Presentation and Analysis of Secondary Data

Financial analysis is the process of identifying the financial strength and weakness of the firm by properly establishing relationship between the items of the balance sheet. Here relevant ratio is calculated and appropriate interpretations are made. Analysis of the financial ratio shows the performance of the concern banks.

Various financial ratios related to investment management and fund mobilization, have been presented and discussed in order to evaluate and analyze the performance of the banks. The ratios are designed and calculated to highlight the relationship between financial items and figures. These calculations are based on financial statements of concerned JVB's. The financial ratios that are calculated for the purpose of this study are:

A : Liquidity ratio

B : Asset Management ratio

C : Profitability ratio

D : Risk ratio

4.2.1 Liquidity Ratios

Liquidity ratios measure the firm's ability to meet its current obligation. The following ratios which measure the liquidity position of banks are calculated.

4.2.1.1 Current Ratio

It is the relationship of current assets and current liabilities. Current assets can be converted in to cash with in short period of time normally not exceeding one year. Current liabilities are those obligation which are payable within short period. Current assets consist of cash and bank balance, money at call or short terms notice, loan & advances, investment in government securities and other interest receivable and other miscellaneous current assets. Current liabilities consist of deposits, loan and advances, bills payable, tax provision, staff bonus, dividend payable and miscellaneous current liabilities.

Table 4.11
Current Ratio (Times)

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8			
EBL	1.05	1.06	1.05	1.09	1.03	1.07	1.07	1.04	0.0655	6.29 %
NABIL	1.27	0.92	0.94	1.08	1.08	1.06	1.06	0.909	0.382	42.024%
BOK	1.06	1.05	1.06	1.06	1.07	1.06	1.08	0.927	0.3354	36.18 %

(Source: Appendix 1)

In table 4.1, current ratio of commercial bank is analyzed. The table reflects that the current assets of all commercial banks have exceeded the current liabilities during the seven years period. In general it can be said that all the banks have sound ability to meet their short term obligations in other words bank is capable for discharging the current obligations.

In case of EBL, the current ratios are increasing in 2001/2 & 2002/3 but it has slightly decreasing in the year 2003/4 by 0.01. and in fiscal year 2004/5 the ratios increase up to 1.09 than decrease by 0.06 on 2005/6 and the ratios are constant and increase by 0.04 in

fiscal year 2007/6 and 2007/8. Similarly Nabil has maintained lower current ratios while state that the liquidity position of Nabil is fair. BOK has a fluctuating trend ratio in an average. The value of coefficient of variation of EBL is 6.29% which is lower than NABIL and BOK. i.e. $6.29\% < 42.024\% > 36.18\%$. It can be said that current ratio of EBL is more consistence than Nabil and BOK.

4.2.1.2 Cash and Bank Balance to Total Deposit Ratio

Cash and bank balance are assets that constitute the banks first live of defence and consist of cash and hand foreign cash on hand cheque and other cash items balance with domestic banks and balance help aboard. This ratio measures promotion of most liquid assets i.e. cash and balance among the total current asset of bank. Higher ratio shows the bank ability to meet demand for cash.

The table below shows cash and bank balance to total deposit ratio of EBL, NABIL and BOK from the fiscal year 2001/2 to 2007/8.

Table 4.12
Cash and Bank Balance to Total Deposit Ratio (%)

(Rs in million)

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8			
EBL	10.84	17.02	7.61	10.4	11.25	13.15	11.13	11.36	2.674	22.99
NABIL	6.78	8.51	6.87	3.83	3.26	6.00	8.37	6.32	2.064	32.66
BOK	11.95	11.23	10.11	8.28	6.95	10.62	9.1	9.75	1.617	16.59

(Source: Appendix No. 2)

The table 4.2 shows the percentage of cash and bank balance to total deposit ratio position of EBL, NABIL and BOK. The mean standard deviation and coefficient of variation of cash and bank balance to total deposit ratio of all banks are better. The above table reflects EBL has a fluctuating trend like wise 10.84%, 17.02%, 7.61%, 10.4%, 11.25%, 13.15% and 11.13% from the fiscal year 2001/2 to 2007/8 respectively. It has maintained highest ratio in the fiscal year 2002/3 and lowest ratio on FY 2003/4. Similarly NABIL has a fluctuating ratio it maintained highest ratio on FY 2002/3 and FY 2007/8 and lowest ratio on FY 2004/5 and FY 2005/6. BOK also maintained fluctuating trend from fiscal year 2001/ 2 to 2007/8. In an

average EBL has highest cash and bank balance to total deposit ratio than BOK and NABIL. It states that the liquidity position of EBL is better in this regard.

The above analysis helps to conclude that the cash and bank balance position of NABIL with respect to deposits is not better against the readiness to serve its customers deposits than that of the EBL. So NABIL may invest in more productive sectors like short –term marketable securities, treasury bills etc ensuring enough liquidity which will helps the bank to improve its profitability. But BOK has slightly better ratio than NABIL.

4.2.1.3 Cash and Bank Balance to Current Assets Ratio

This ratio measures the proportion of most liquid assets i.e. cash and bank balance among the total current assets of bank. Higher ratio indicated the banks ability to meet the daily cash requirement of their customers’ deposit. Bank has to balance the cash and bank balance to adequate cash for the customers demand against deposit when required and less interest is required to be paid against the cash deposit.

The table below shows the cash and bank balance to current assets ratio of EBL, NABIL and BOK from FY 2001/2 to FY 2007/8.

Table 4.13
Cash and Bank Balance to Current Assets Ratio

(Rs in million)

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8			
EBL	8.97	14.15	6.77	8.95	9.73	11.16	9.83	9.94	2.1126	21.26
NABIL	7.9	8.25	6.81	3.28	2.82	5.14	7.19	5.91	2.0339	34.41
BOK	11.04	9.59	8.36	7.95	5.93	9.03	8.13	8.58	1.4618	17.04

(Source Appendix No: 3)

This table 4.3 shows the mean, standard deviation and coefficient of variance of cash and bank balance to current assets ratio of all three banks are in fluctuating trend during the study period. They show the ability to manage the deposit withdrawals from the customers. EBL has maintained highest ratio than NABIL and BOK has maintained better ratio than NABIL. Similarly CV is more consistence of BOK than NABIL and slightly more consistence than EBL.

The analysis reveals that EBL is better position during the study period as the bank shows the ability to manage the deposit withdrawals from the customers although it has the fluctuating trend.

4.2.1.4 Investment on Government Securities to Current Assets

The ratio examines portion of a commercial banks current assets which invested in different government securities i.e. treasury bills and government bonds. Commercial banks are interested to invest their collected fund in different securities issued by government to utilize their excess funds. Even governments securities are not so liquid as cash and bank balance of commercial bank, they can easily be sold in the market or it can also be converted into cash in other ways. The ratio is computed as:

Table 4.14
Investment in Government Securities to Current Assets Ratio

(Rs in million)

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8			
EBL	24.2	20.41	31.47	18.19	23.43	22.13	18	22.55	18.2	80.70
NABIL	30.95	25.88	25.78	14.48	10.46	17.98	12.72	19.75	7.231	36.61
BOK	12.72	20.91	25.33	22.26	22.03	16.37	12.19	18.22	5.6568	31.05

(Source Appendix No: 4)

The above table 4.4 reflects that investment in government securities to current asset ratio of EBL is in fluctuating trend , where BOK has increasing trend up to fiscal year 2005/6 than decreasing trend in 2006/7 and 2007/8. And NABIL is in decreasing trend.

The mean ratio of NABIL is lesser than EBL and higher than BOK. It means Nabil has invest it's as much as portion of its current assets as government securities as that EBL and less than BOK. The coefficient of variation of EBL is higher than NABIL and BOK. It shows that investment on government securities to current ratio assets ratio of BOK is more consistent than that of EBL and NABIL.

Lastly it can be concluded that it has invested its more of portion assets as government securities than other banks and investment made is consistence of coefficient of variation

reveals. But its liquidity portion is slightly poor than other banks in view point of investment on government securities.

4.2.1.5 Loans and Advances to Current Assets Ratio

Loan and advances include short and long term loan overdrafts and cash credit. Commercial banks should not kept its all collected funds as cash and banks balance in order to invest as loan and advances to the customers. If sufficient loan and advances cannot be granted, it should pay interest on those un-utilized deposits funds. Even high loan and advances may also effects to keep the bank in most liquid position because they can only be collected at the time of maturity. Thus, a bank must maintain its loan and advances on proper way.

Table 4.15
Loan and Advances to Current Assets Ratio

(Rs in million)

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8			
EBL	62.09	62.63	75.08	65.99	64.7	64.26	68.46	66.71	4.134	6.25
NABIL	55.87	55.93	57.5	63.38	58.71	58.13	58.49	58.287	2.3367	4
BOK	74.51	62.88	60.3	61.3	60.16	65.98	71.9	65.29	5.374	8.23

(Source Appendix No: 5)

The table shows the percentage of loan and advances ratio to current assets ratio position of EBL, NABIL and BOK. The loan and advances to current assets ratio of all banks are in fluctuating trend and the mean ratio of NABIL is less than EBL and slightly less than BOK. It reflect that loan and advances to current assets ratio of the EBL maintained highest ratio 75.08 on fiscal year 2003/4 similarly NABIL and BOK has maintained 58.71 and 74.51 on fiscal year 2006/7 and 2001/2 respectively.

The coefficient of variation among ratio is lower in case of NABIL it represent that NABIL has a more consistence than BOK and slightly more than EBL in comparison to others bank(4% < 6.25% < 8.23%). So it can be concluded that it is better to mobilize its

funds as loan and advances. It is better than that of other banks from the view point of mean ratios.

4.2.2 Asset Management Ratio

Commercial bank must be managed its assets very well to satisfy its customers to earn high profit and for its own existence. It measures the efficiency of the bank.

4.2.2.1 loan and advance to total deposit ratio

This ratio measures how successfully the banks are able to mobilize the total deposit on loan and advances for profit generating purpose. Higher the ratio indicates the better mobilization of total deposits, but too high is not be better from its liquidity point of view. The table 4.15 shows the percentage of loan and advances to total deposit ratios position of EBL, NABIL and BOK.

Table 4.16
Loan and Advances to Total Deposit Ratio

(Rs in million)

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2 (%)	2002/3 (%)	2003/4 (%)	2004/5 (%)	2005/6 (%)	2006/7 (%)	2007/8 (%)			
EBL	72.23	73.32	72.97	75.45	71.01	75.13	76.49	73.71	1.808	2.45
NABIL	47.97	57.68	58.01	72.57	66.79	66.6	66.94	62.37	7.6603	12.28
BOK	80.61	73.62	72.94	66.12	69.23	75.87	78.71	73.87	4.71	6.38

(Source Appendix No: 6)

The ratio of EBL and NABIL has in fluctuating trend where as BOK ratio is in decreasing trend up to 2006/7 than increasing on 2005/6 to 2007/8. In case of EBL has maintained highest ratio on 76.49% on fiscal year 2007/8 and lowest on fiscal year 2005/6. Similarly NABIL has maintained highest ratio 72.57% on fiscal year 2004/5 and lowest ratio 47.97% on fiscal year 2001/2. And BOK has maintained highest ratio 80.61 % on fiscal year 2001/2 and lowest ratio 78.71% on 2007/8. The mean value of EBL i.e. 73.71 is less than BOK and higher than NABIL i.e. 62.37. The CV of EBL is lower than that if the other banks which indicate that loan and advances of it is stable and consistent.

Lastly it can be concluded that EBL is in strong position or in better position regarding the mobilization of total deposits on loan and advances and acquiring higher profit in comparison with BOK and lower than NABIL. Higher ratio is not good from the view point of liquidity as the loan and advances are not a liquid as cash and bank balance.

Table 4.17
Correlation between Deposit and Loan and Advances

Banks	Evaluation Criteria			
	R	r ²	P.Er	6P.Er
EBL	0.99	0.98	0.00509	0.0305
NABIL	0.97	0.9409	0.0150	0.090
BOK	0.99	0.98	0.00509	0.0305

(Source: Appendix No.19)

The table 4.16 shows the value of r, r², P.Er, 6P.Er between deposit and loan and advances of EBL with comparison to BOK and NABIL from the 2001/2 to 2007/8. In case of EBL, it is found that coefficient of correlation between deposit and loan and advances is 0.99. It shows the positive relationship between two variables. The value of coefficient of determination (r²) is 0.98, which means 98% of the variation in the dependent variable (loan and advances), has been explained by the independent variable (deposit). Similarly, considering the value of 'r' i.e. 0.99 and comparing it with 6 P.Er i.e. 0.0305, it is greater than the value of 6 P.Er which reveals the value of 'r' is significant relationship between deposit and loan and advances.

4.2.2.2 Total investment to Total Deposit Ratio

The commercial banks must mobilize its deposit fund by investing in different securities issued by government and other financial, non financial sectors. This ratio measures the extent to which the banks are capable to mobilize their deposits on investment in various securities. This ratio is computed by dividing total investment by total deposit ratio. The table 4.8 shows the total investment to total deposit of the banks EBL, NABIL and BOK.

Table 4.18
Total Investment and Total Deposit Ratio

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2 (%)	2002/3 (%)	2003/4 (%)	2004/5 (%)	2005/6 (%)	2006/7 (%)	2007/8 (%)			
EBL	30.33	24.7	31.44	21.08	30.43	27.41	21.1	26.64	4.088	15.34
NABIL	52.88	44.85	41.33	29.31	31.93	38.32	31.14	38.54	7.908	20.52
BOK	11.66	29.43	32	29.05	32.18	24.15	20.24	25.53	6.93	27.135

(Source: Appendix No -7)

From the table 4.17, it is found that, total investment to total deposit ratio of all three banks are in fluctuating trend during the study period 2001/2 to 2007/8. The total investment to total deposit ratio of EBL is highest on fiscal year 2003/4 and lowest on 21.08 on fiscal year 2004/5. Similarly NABIL has highest ratio 52.88 on fiscal year 2001/2 and lowest 29.31 on fiscal year 2004/5. BOK has highest ratio 32.18 on fiscal year on 2005/6 and lowest on 11.66 on 2001/2.

In comparison with mean value, EBL has lesser than NABIL mean value and Higher than that a BOK i.e. $26.64 < 38.54 > 25.53$. Likewise the value of coefficient of variation on EBL is lower than that of both banks. After analysis it is clear that the investment policy of EBL is in better position in comparisons to both banks. The total investment to total deposits ratio of EBL is more homogenous because it has low coefficient of variation.

i) Relationship Between Deposit and Total Investment

Coefficient of correlation between deposit and total investment measures the degree of relationship between these two variables. Deposit is independent variables (X) and total investment is dependent variables (Y). The purpose of computing it is to find out whether deposit is significantly used as investment or not. the table 4.9 shows the value of 'r' , 'r²' , P.Er , 6 P.Er between deposit and total investment of EBL, NABIL and BOK for the study period 2001/2 to 2007/8.

Table 4.19
Coefficient of Correlation Deposit and Total Investment

Banks	Evaluation Criteria			
	R	r ²	P.Er	6P.Er
EBL	0.0790	0.0062	0.253	1.52
NABIL	0.80	0.64	0.091	0.546
BOK	0.77	0.593	0.104	0.623

(Source: Appendix 20)

The table 4.18 shows the value of 'r', 'r²', P.Er, 6 P Er between deposit and total investment of EBL with comparison of NABIL and BOK. From table, it is found that coefficient of correlation between deposit and total investment of EBL is 0.079. It shows the positive relationship between two variables i.e. deposit, independent (X) and total investment, dependent (Y). Moreover, when we consider the value of coefficient of determination (r²) it is 0.0062 and it means 0.62% of the variation in the dependent variable is explained by the independent variable. Similarly considering the value of value of 'r' and comparing with 6 P.Er, it is lesser than 6P.Er, which reveals that the value is not significant. Likewise in case of NABIL value of r is greater than 6P.Er so we can say that there is a significant relationship between total deposit and total investment. On the other hand, in case of BOK has a positive correlation between deposit and total investment.

The above analysis clears that in case of EBL there is not significant relation between total deposit and total investment because 'r' is less than 6P.Er. that means EBL has not able to follow the policy of maximizing the investment of their deposits. It has not certain investment policy to invest their deposit where there as BOK there is significant relationship between deposit and total investment. Lastly we can say that BOK has followed the policy of maximizing the investment of their deposits or BOK is successful in maximizing the investment of their deposit.

4.2.2.3 Loan and Advance to Total Working Fund Ratio

Loan and advances is the major components of the total working fund, which indicate the ability of banks to utilize its deposits in the form of loan and advances to earn high return. It is an appropriate level to generate profit. The ratio reflects the extent to which the

commercial banks are able to utilizing their assets loan and advances for the purpose of profit generation.

Total working fund is the total assets. It is composed up of current assets, fixed assets, miscellaneous assets and investment, loan and advance and interest receivable.

The table 4.10 shows the loan and advance to total working fund ratio of EBL, NABIL and BOK.

Table 4.20
Loan and Advance to Working Fund Ratio

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2 (%)	2002/3 (%)	2003/4 (%)	2004/5 (%)	2005/6 (%)	2006/7 (%)	2007/8 (%)			
EBL	59.76	60.96	61.24	64.94	61.41	63.75	67.55	62.80	2.5397	4.044
NABIL	41.85	44.25	49.45	62.04	57.87	57.04	57.54	52.86	7.13	13.48
BOK	72.58	61.02	59.46	59.98	59.12	64.51	70.32	63.86	5.11	8

(Source: Appendix 8)

This reflects that loan and advances to working fund ratio of EBL and NABIL is in fluctuating trend during the study period in fiscal year 2001/2 to 2007/8. In case of EBL the ratio 67.55 is highest on fiscal year 2007/8 and lowest ratio 59.76 on 2001/2. Similarly NABIL has highest ratio 62.04 on 2004/ 5 and lowest ratio 41.85 on fiscal year 2001/2. And BOK has in decreasing trend up to fiscal year 2005/6 than slightly increasing trend from fiscal year 2006/7 and 2007/8.

The mean value of EBL has maintained average loan and advance to total working fund ratio than that of NABIL and BOK. This regard, EBL is in better position among other banks. The coefficient of variation of EBL is lower than that of both banks i.e.4.044 % < 13.48% > 8% respectively, which clear that loan and advances to total working fund ratio is less variable than other banks.

4.2.2.4 Investment on Government Securities to Total Working Funds Ratio.

The commercial banks should never use all the total deposits resources and loan and advances and other credit from security and liquidity point of view. So to some extent

commercial bank seem to be interested to utilize their resources by purchasing government securities. This ratio reflects the relationship between the banks investment securities in comparison to the total working funds.

The table 4.11 shows the investment on government securities to total working fund ratio of EBL, NABIL and BOK.

Table 4.21
Investment on Government Securities to Total Working Fund Ratio

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2 (%)	2002/3 (%)	2003/4 (%)	2004/5 (%)	2005/6 (%)	2006/7 (%)	2007/8 (%)			
EBL	23.29	16.86	25.67	17.9	22.24	21.95	17.76	20.81	3.081	14.80
NABIL	23.19	20.47	22.17	14.17	10.31	17.64	12.51	17.20	4.63	26.93
BOK	8.22	20.29	24.98	21.78	21.65	16.01	11.92	17.84	5.580	31.78

(Source: Appendix 9)

The comparison of mean ratio of EBL with other two banks reveals that EBL is successful; to mobilize their working funds investment in government securities. Similarly EBL is also variability between ratios during the study period is greater mean value than of EBL and BOK.

The table 4.11 reflects that investment on government securities to total working fund ratio of all three banks are in fluctuating trend. Likewise the coefficient of variation is higher than that of other two banks i.e. 14.80 % < 26.93 % < 31.78%. This means EBL has its more portion of working funds in government securities as than other banks.

4.2.2.5 Investment on Share and Debenture to Total Working Fund Ratio

This ratio shows the banks investment in share and debenture of subsidiary and other companies. Now a day, Commercial banks are interested to invest its fund not on government securities. They are interested to invest in shares and debenture of different types of companies and also in most of commercial banks in Nepal have purchased shares

of regional development banks and some of them have purchased the share of other companies too.

This ratio reflects the extent in which the banks are able to mobilize their total assets on purchase of share and debenture of other companies to generate income and utilize their excess fund. A higher ratio indicates more portion of investment on shares and debenture out of total working fund. The table 4.12 shows the investment on shares and debenture to total working fund ratio of EBL, NABIL and BOK on fiscal year 2001/2 to 2007/8.

Table 4.22
Investment on Shares and Debenture to Total Working Fund Ratio

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2 (%)	2002/3 (%)	2003/4 (%)	2004/5 (%)	2005/6 (%)	2006/7 (%)	2007/8 (%)			
EBL	0.26	0.21	0.18	0.17	0.12	0.09	0.37	0.2	0.0837	41.83
NABIL	0.13	0.13	0.13	0.16	0.12	0.21	0.08	0.137	0.0316	23.08
BOK	0.6	0.31	0.24	0.23	0.6	0.44	0.48	0.414	0.145	35

(Source: Appendix 10)

The table shows that EBL has on decreasing trend up to fiscal year 2006/7 then increasing on 2007/8. And NABIL has maintained their position constant up to 2003/4 than it has a fluctuating trend up 2004/5 to 2007/8. Similarly BOK has maintained more fluctuating trend during the study period 2001/2 to 2007/8.

In an average, EBL has maintained medium investment on share and debentures to total working fund ratio than other banks. The coefficient of variation of EBL is higher than NABIL and BOK which indicates that EBL is more variable and less consistent.

4.2.2.6 Loan loss Relation

It is occurred when the debtors fail to pay their loan. Loss of the loan is not only the default of debtors' bur it is because of the failure of recovery of loan by the bank. Negligence in its part makes a negative impact in the earning and capital of a bank very badly. Greater loan loss provision is made in income statement if high loss is expected. But this will lead to

low profit and possible losses and produces low increase of decrease in capital. The loan loss ratio shows how efficiently the bank manages its loan and advances and makes effort for timely recovery of loan.

Table 4.23
Loan Loss Ratio

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2 (%)	2002/3 (%)	2003/4 (%)	2004/5 (%)	2005/6 (%)	2006/7 (%)	2007/8 (%)			
EBL	0.88	0.93	1.39	1.17	0.72	0.66	0.54	0.89	0.277	31.18
NABIL	0	0	0.01	0.08	0.03	0.09	0.3	0.073	0.1019	139.59
BOK	0.75	1.01	1.45	1.5	0.97	0.87	0.31	0.98	0.3789	38.67

(Source: Appendix 11)

The table 4.22 reflects that EBL has fluctuating trend, it has the maximum ratio of 1.39 in fiscal year 2003/4 and minimum ratio of 0.72 in the fiscal year 2005/6. Similarly, in case of NABIL is has made any provision in the fiscal year 2001/2 and 2003/4. It has also followed the fluctuating trend. Likewise in case of BOK, it has followed fluctuating trend. It has the maximum ratio of 1.5 on fiscal year 2004/5 and lowest on 2007/8.

The mean value of EBL is average, which indicated that its position is better in this regard. It has managed its loan and advances and makes effort for timely recovery loan. Similarly, the coefficient of variance of EBL is lower than BOK and NABIL. In an average, EBL has no highest loan loss ratio on comparing with two other banks. So it shows that its performance in terms of recovery of loan is satisfactory in comparison to NABIL and BOK.

4.2.3 : Profitability Ratio

Profitability ratios are useful to measure the efficiently of operation of a firm in term of profit. Profit is the indicator of the financial performance of any firm. Commercial banks acquire profit by providing different kinds. Higher the profitability ratio shows the efficiency of the management. Following profitability ratios are related to study under this heading.

4.2.3.1 Return on Loan and Advances Ratio

Return in loan and advances ratio measures the earning capacity of banks on its total deposits mobilized on loan and advances. Mostly loan and advances included loan, cash credit, and overdraft, bills purchased and discounted. In other words return on loan and advances ratio indicates how efficiently the banks have employed its resources in the firm of loan and advances.

Table 4.24
Return on Loan and Advances Ratio

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2 (%)	2002/3 (%)	2003/4 (%)	2004/5 (%)	2005/6 (%)	2006/7 (%)	2007/8 (%)			
EBL	2.16	0.7	2.44	2.21	2.42	2.17	2.46	2.08	0.578	27.77
NABIL	3.65	5.37	5.56	4.91	4.92	4.34	3.49	4.605	0.748	16.25
BOK	0.2	1.81	2.26	2.36	2.79	2.79	2.9	2.159	0.877	40.64

(Source: Appendix 12)

The table 4.23 reveals that EBL return on loan and advances ratio has in fluctuating trend. EBL has lowest ration 0.7 on fiscal year 2002/3 and maintained highest ratio 2.46 on fiscal year 2.46 on fiscal year 2007/8. Similarly NABIL has also maintained fluctuating trend. And BOK has maintained increasing ratio during the study period 2001/2 to 2007/8.

The mean of EBL is lowest then EBL and NABIL i.e. $2.08 < 2.159 < 4.605$ respectively. The standard deviation of EBL is also lowest then both banks. Similarly the coefficient of variation of EBL is higher then NABIL and lower than BOK. i.e. $27.77 > 16.25 < 40.64$. It shows that NABIL is more consistent than BOK and slightly more than EBL. Thus it can be concluded that EBL is in average position in earning loan and advances in comparison to NABIL and BOK.

4.2.3.2 Return on Total Working Fund Ratio

This ratio measures the profit earning capacity by mobilizing available resources (total assets). The bank has to earn satisfactory return on assets. Working fund are well managed and are efficiently utilized, maximizing taxes within the legal options available will also

improve the available will also improve the return or return will be higher. Net profit includes the profit that is left to the internal equities after all charge and expenses cost. The table below shows the return on assets of EBL, NABIL and BOK.

Table 4.25
Return on Total Working Fund Ratio

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2 (%)	2002/3 (%)	2003/4 (%)	2004/5 (%)	2005/6 (%)	2006/7 (%)	2007/8 (%)			
EBL	1.29	0.42	1.49	1.43	1.49	1.38	1.66	1.308	0.382	29.21
NABIL	1.53	2.37	2.75	3.05	2.85	2.47	2.01	2.433	0.49	20.18
BOK	0.15	1.1	1.34	1.42	1.65	1.8	2.04	1.357	0.57	42.00

(Source: Appendix 13)

The table 4.24 reflects that EBL has a fluctuating trend which indicates that its profitability ratio is not consistence. It has highest profit ratio is 1.49 % in the fiscal year 2003/4 and 2005/6 and minimum profit ratio is 0.42 in fiscal year 2002/3. Similarly NABIL has maintained increasing trend profit ratio up to fiscal year 2005/6 after that the profit has slightly decrease in fiscal year 2006/7 and 2008/9. BOK has maintained its profit ratio on increasing trend during the study period.

If the values are observed on three banks mean value of EBL has lower than that two banks whereas Nabil has highest mean value. i.e. $1.308 < 2.433 > 1.357$ respectively. The coefficient of variation of EBL is higher than NABIL and lower than BOK i.e. $29.21 > 20.18 < 42.00$ it indicate that return in total working fund ratio of EBL is stable and consistence in comparison to NABIL and BOK. The analysis clear that the profitability ratio of NABIL is more consistence than other two banks and it also shows that profitability ratio with respect to financial resources investment of EBL is better as well as stable.

4.2.3.3 Total Interest Earned to Total outside Assets Ratio

It measures the interest earning capacity of the banks through efficient utilization of all the out side assets. Higher the ratio indicates better us of outside assets of a commercial bank. Total outside assets includes loan and advances, investment on government securities, share and debenture and other all types of investment.

The table below exhibits total interest earned to total outside assets ratio of EBL, BOK and NABIL.

Table 4.26
Total interest Earned to Total outside Assets Ratio

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2 (%)	2002/3 (%)	2003/4 (%)	2004/5 (%)	2005/6 (%)	2006/7 (%)	2007/8 (%)			
EBL	1.29	0.42	1.49	1.43	1.49	1.38	1.66	1.308	0.382	29.21
NABIL	1.53	2.37	2.75	3.05	2.85	2.47	2.01	2.433	0.49	20.18
BOK	0.15	1.1	1.34	1.42	1.65	1.8	2.04	1.357	0.57	42.00

(Source: Appendix 14)

The comparison of mean ratios of EBL with NABIL and BOK banks reveal that total interest earned to total outside assets ratio of EBL is lowest, which indicate that it has not able to use its fund (outside assets) to earn high interest income in comparison to other two banks. NABIL has highest mean ratio than BOK and EBL i.e. $1.308 < 2.433 > 1.357$. The total interest earned to total outside assets ratio of NABIL, BOK, and EBL is on fluctuating trend. It is also reveals that the coefficient of variance of EBL, NABIL, BOK is $29.21 > 20.18 < 42.0$ respectively. It indicates that NABIL has more consistency in total interest earned to total outside assets ration than BOK and slightly more consistence than EBL.

From the above analysis, it can be concluded that EBL has inefficiently failed to use its fund (outside assets) to earn high interest income in comparison to other two banks.

4.2.3.4 Total Interest Earned to Total Working Fund Ratio

The ratio of total interest earned to total working fund depicts the extent on which the banks are successful in mobilizing their total assets to generate high income as interest. This ratio is calculated to find out the percentage of interest earned to total assets. Higher ratio implies better performance of the bank in terms of interest earning on its total working fund.

Table 4.27**Total Interest Earned to Total Working Fund Ratio**

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2 (%)	2002/3 (%)	2003/4 (%)	2004/5 (%)	2005/6 (%)	2006/7 (%)	2007/8 (%)			
EBL	6.72	6.46	6.84	6.13	5.66	5.34	5.71	6.12	0.529	8.646
NABIL	6.31	5.81	6.05	6.26	5.87	5.83	5.33	5.92	0.3	5.067
BOK	7.45	6.67	5.97	6.16	5.85	5.62	5.84	6.22	0.59	9.511

(Source; Appendix 15)

The above table 4.26 shows that the ratio of EBL is in fluctuating trend. EBL has maintained highest ratio 6.84 % on 2003/4 and lowest ratio 5.71 on fiscal year 2006/7. Similarly NABIL is in also fluctuating trend it maintain highest ratio 6.31 on fiscal year 2001/2 and lowest on ratio 5.33 on fiscal year 2007/8. And BOK is in decreasing trend. After observing the mean ratio, it is found that the mean ratio of EBL is more than NABIL and less than BOK i.e. $6.12 > 5.92 < 6.22$. The coefficient of variance of EBL is higher than NABIL and lower than BOK. It can be concluded that NABIL is more consistent than other two banks and EBL is less consistence in total interest earned to total working fund ratio than BOK.

4.2.3.5 Total Interest Paid to Total Working Fund Ratio

The ratio of total interest paid to total working fund measures the percentage of total interest paid against the working fund. A high ratio indicates the higher interest expenses on total working fund and vice- versa. The table below reflects the mean SD and CV of total interest paid to total working fund ratio.

Table 4.28**Total Interest Paid to Total Working Fund Ratio**

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2 (%)	2002/3 (%)	2003/4 (%)	2004/5 (%)	2005/6 (%)	2006/7 (%)	2007/8 (%)			
EBL	3.89	3.82	3.29	2.55	2.52	2.41	2.33	2.97	0.63	21.21
NABIL	2.6	1.81	1.71	1.43	1.6	2.04	2.04	1.89	0.359	19
BOK	4.48	3.72	3.01	2.45	2.51	2.33	2.36	2.98	0.766	25.71

(Source; Appendix 16)

The table 4.27 shows that the interest paid to total working fund ratio of EBL has maintained in decreasing trend during the study period. On other hand NABIL also maintained in decreasing trend up to fiscal year 2005/6 than after the trend is slightly increasing on fiscal year 2006/7 and 2007/8.

The mean ratio of EBL and BOK is nearly similar during the study period and mean ratio of NABIL is less than both banks. On the other hand coefficient of variation of NABIL is less than EBL and BOK i. e $21.21 < 19 < 25.71$. It can be concluded that NABIL is in better position from the payment of interest point of view. It seems NABIL is successful to collect its working fund from less expensive sources in comparison to others.

4.2.3.6. Risk Ratio

The possibility of risk makes banks investment a challenging task. Bank has to take risk to get return on investment. The risk taken is compensated by the increase in profit. A bank has to take high if it expects high return on its investment. So, the banks opting for high profit has to accept the risk and manage it efficiency. Through following ratio, effort has been made to measure the level of risk.

4.2.3.7 Credit Risk Ratio

It is very essential for a bank to scrutinize two projects i.e. the risk involved in it to avoid default of non- payment of loan before making investment on them. Bank makes investment by utilizing its collected fund. The risk behind making investment or granting loan or providing is measured by credit risk ratio. Actually credit risk ratio shows the proportion if non- performing assets in total loan and advances of a bank. But due to unavailability of related data, the ratio is calculated with the help of loan and advances and total assets.

Table 4.29
Credit Risk Ratio

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2 (%)	2002/3 (%)	2003/4 (%)	2004/5 (%)	2005/6 (%)	2006/7 (%)	2007/8 (%)			
EBL	59.76	60.96	64.88	64.94	61.41	63.75	67.55	63.32	2.536	4
NABIL	55.87	55.93	57.5	62.04	57.87	57.04	57.54	57.68	1.920	3.30
BOK	74.51	62.88	60.3	63.51	59.12	64.51	70.32	65.02	5.10	7.85

(Source: Appendix 17)

The above table 4.28 shows that EBL has maintained an increasing trend up to 2004/5 then a decrease in 2006/7 after that it is in an increasing trend i.e.

59.76<60.96<64.88<64.94>61.41<63.75<67.55. On the other hand NABIL also maintained its credit risk ratio in an increasing trend up to the fiscal year 2005/6. It decreased on fiscal year 2006/7 and it maintained on a similar range up to 2007/8 i.e.

55.87<55.93<57.5<62.04>57.87>57.04<57.54. Similarly BOK has also maintained a fluctuation trend i.e. 74.51>62.88>60.3<63.51>59.12>64.51<70.32.

The mean ratio of EBL is between NABIL and BOK where EBL has an average credit ratio in comparison to both banks. The coefficient of variance is 4% of EBL, 3.30% of NABIL and 7.85 % of BOK. Among three banks NABIL has less CV; it indicates that its credit policy is more consistent than other banks.

4.2.3.8 Liquidity Risk Ratio

The liquidity risk of the bank defines its liquidity need for deposit. A higher liquidity indicates less risk and a less profitable bank and vice-versa. The ratio of cash and bank balance to total deposit is the indicator of the bank liquidity needed. The cash and bank balance are the most liquid assets and they are considered as bank liquidity sources and deposits as the liquidity needs.

Table 4.30
Liquidity Risk Ratio

Bank	Fiscal Year							Mean	S.D	C.V %
	2001/2 (%)	2002/3 (%)	2003/4 (%)	2004/5 (%)	2005/6 (%)	2006/7 (%)	2007/8 (%)			
EBL	10.84	17.02	7.61	10.4	11.25	13.15	11.13	11.53	2.67	23.19
NABIL	6.78	8.51	6.87	3.83	3.26	6	8.37	6.23	1.89	30.41
BOK	11.95	11.23	10.11	8.28	6.95	10.62	9.1	9.75	1.62	16.60

(Source: Appendix 18)

In the table below shows the percentage of liquidity risk ratio of EBL, NABIL and BOK. The table reflects the liquidity risk ratio of EBL, NABIL and BOK is in a fluctuating trend i.e. 10.84<17.02>7.61<10.4<11.25<13.15>11.13. Similarly NABIL and BOK is also

maintain liquidity risk ratio in fluctuating trend i.e. $6.78 > 8.51 > 6.87 > 3.38 > 3.26 < 6 < 8.37$ and $11.95 > 11.23 > 10.11 > 8.28 > 6.95 < 10.62 > 9.01$ respectively.

While comparing the mean ratio of three banks, BOK is in between, EBL has highest mean ratio and NABIL has lowest mean ratio as compare to three banks. The coefficient of variance of three banks are $23.19 < 30.41 > 16.60$. It shows that BOK has lowest coefficient of variance so that it is more consistence than other two banks.

4.2.3.9 Growth Ratio

Growth ratio is directly related to the fund mobilization and investment management of a commercial bank. It represents how well the commercial bank maintaining the economic and financial position. Under this topic, four types of growth ratios are studied which are as follows:

- i) Growth Ratio of Total Deposit
- ii) Growth Ratio of Total Loan and Advances
- iii) Growth Ratio of Total Investment
- iv) Growth Ratio of Total Net Profit

Table 4.31
Growth Ratio of Total Deposit

Bank	Fiscal Year							Growth rate (%)
	2001/2 (%)	2002/3 (%)	2003/4 (%)	2004/5 (%)	2005/6 (%)	2006/7 (%)	2007/8 (%)	
EBL	5466.61	6694.95	8063.9	10097.69	13802.44	18186.25	23976.29	28.59
NABIL	15506.43	13447.66	14119.06	14586.66	19347.40	23342.25	31915.05	13
BOK	5723.28	6170.70	7741.64	8942.75	10485.36	12388.90	15833.70	19

(Source: Appendix 34)

The above table shows that the growth rate of EBL is higher than NABIL and BOK i.e. $28.59 > 13 < 19$. It means the performance of EBL to collect greater deposit compared to NABIL and BOK. Performance of EBL is better year by year.

Table 4.32
Growth Ratio of Loan and Advances

Bank	Fiscal Year							Growth rate (%)
	2001/2 (%)	2002/3 (%)	2003/4 (%)	2004/5 (%)	2005/6 (%)	2006/7 (%)	2007/8 (%)	
EBL	3948.48	4098.46	5884.12	7618.67	9801.31	13664.08	18339.08	29.8
NABIL	7437.89	7755.95	8189.99	10586.17	12922.5	15545.8	21365.05	19.6
BOK	4613.7	4542.7	5646.7	5912.58	7259.08	9399.32	12462.6	19.2

(Source: Appendix 34)

The above table shows that EBL growth ratio on loan and advances is greater than other two banks. i.e. $29.8 > 19.6 > 19.2$ and NABIL and BOK is almost similar on growth ratio. It can be concluded that the performance of EBL is better than two banks.

Table 4.33
Growth Ratio of Total Investment

Bank	Fiscal Year							Growth rate (%)
	2001/2 (%)	2002/3 (%)	2003/4 (%)	2004/5 (%)	2005/6 (%)	2006/7 (%)	2007/8 (%)	
EBL	1657.87	1653.97	2535.65	2128.93	4200.52	498.31	5059.55	22
NABIL	8199.51	6031.18	5835.95	4275.5	6178.53	8945.31	9939.8	3.5
BOK	667.46	1816.15	2477.41	2598.25	3374.71	2992.4	3204.06	32

(Source: Appendix 34)

The above table shows that growth rate on total investment of BOK is higher than EBL and NABIL. NABIL has very low growth ratio on investment i.e. $22 > 3.5 < 32$. It can be concluded that BOK is in better position on investment or utilization its fund.

Table 4.34
Growth Ratio of Total Net Profit

Bank	Fiscal Year							Growth rate (%)
	2001/2 (%)	2002/3 (%)	2003/4 (%)	2004/5 (%)	2005/6 (%)	2006/7 (%)	2007/8 (%)	
EBL	85.33	34.17	143.56	168.2	237.3	296.4	451.2	33
NABIL	271.64	416.24	455.31	520.1	635.3	673.96	746.5	19.6
BOK	9.28	82.13	127.48	139.52	202.44	262.39	361.5	19.2

(Source: Appendix 34)

4.2.4 Trend Analysis

Under this topic an effort has been made to calculate the trend value of the deposit, loan and advance, investment and net profit of EBL, NABIL and BOK from the year 2001/2 to 2007/8 and make forecast base on the following 7 years i.e. till 2011/2012. The forecast base on the following assumptions:

- a) The forecast will be true only when the limitation of least square method is followed.
- b) The other things that affects to it directly or indirectly will remains constant.
- c) The central bank (NRB) will not change its directions and guidelines to commercial banks.
- d) The bank will remain in present situation
- e) The economy will remain in the present stage.

4.2.4.1 Trend Value Analysis of Total Deposit

Table 4.35

Trend Value of Total Deposit of EBL, NABIL and BOK

Fiscal Year	Trend value of EBL	Trend value of NABIL	Trend Value of BOK
2001/2	3300.0	8176.37	4736.07
2002/3	6308.98	10827.92	6361.49
2003/4	9317.92	13479.47	7986.91
2004/5	12326.86	16131.02	9612.33
2005/6	15335.80	18782.57	11237.75
2006/7	18344.74	21434.12	12863.17
2007/8	21353.68	24085.67	14488.59
2008/9	24362.62	26737.22	16114.01
2009/10	27371.56	29388.77	17739.43
2010/11	30380.50	32040.32	19364.85
2011/12	33389.44	34691.87	20990.27
2012/13	36398.38	37343.42	22615.69

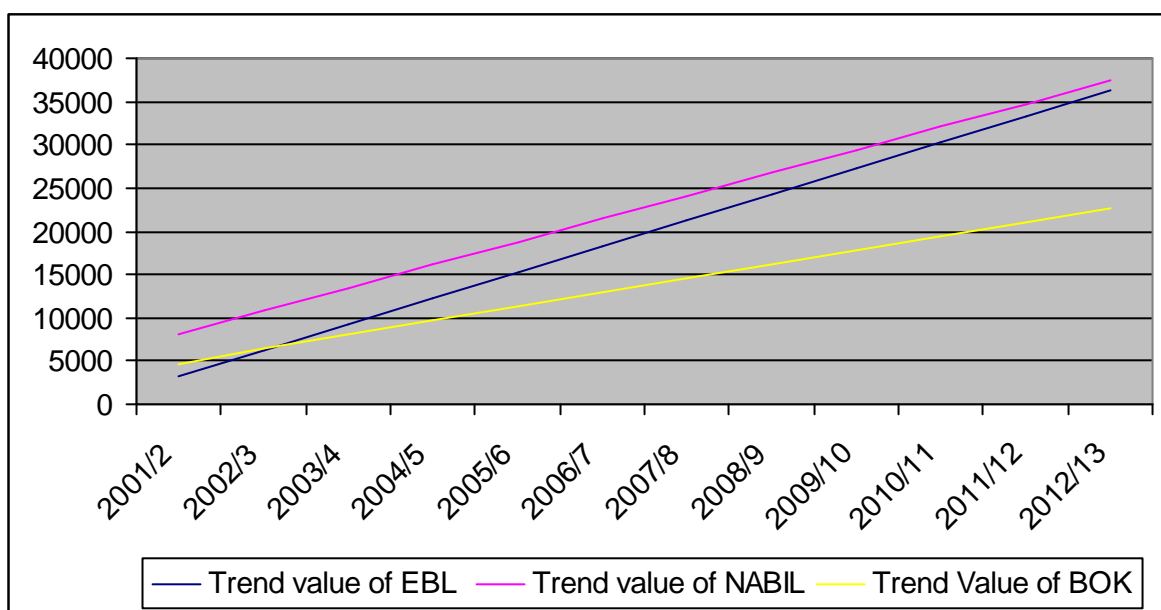
(Source: Appendix 27)

The table 4.35 shows the trend value of total deposit from 2007/8 to 2012/13 of three banks. The total deposits of EBL, NABIL and BOK have in the increasing trend. If all the other things are remain the same. The total deposits of the NABIL will be highest deposit

among the three banks, under the study period. Same as the total deposit of EBL will be 36398.38 million in the mid July 2012/13. Similarly the total deposit of BOK will be 22615.69 million in the mid July 20012/13,

By analyzing the above trend value, it is found that the total deposit position collection of NABIL is better incomparision to EBL and BOK. The deposit position NABIL, EBL and BOK are in increasing in the same proportion.

Figure 4.1
Trend Value of Total Deposit of EBL, NABIL and BOK



4.2.4.2. Trend Value Analysis of Loan and Advance

Here the trend values of loan and advances of EBL, NABIL and BOK have

Table 4.36

Trend Value Analysis of Loan and Advance

Fiscal Year	Trend value of EBL	Trend value of NABIL	Trend Value of BOK
2001/2	1955.6	5324.8	3383
2002/3	4320.6	7540.5	4628.53
2003/4	6685.6	9756.2	5874.03
2004/5	9050.6	11971.9	1245.5
2005/6	11415.6	14187.6	8365.03
2006/7	13780.6	16403.3	9610.53
2007/8	16145.6	18619.0	10856.03
2008/9	18510.6	20834.7	12101.53
2009/10	20875.6	23050.4	13347.03
2010/11	23240.6	25266.1	14592.53
2011/12	25605.6	27481.8	15838.03
2012/13	27970.6	29697.5	17083.53

(Source: Appendix 27)

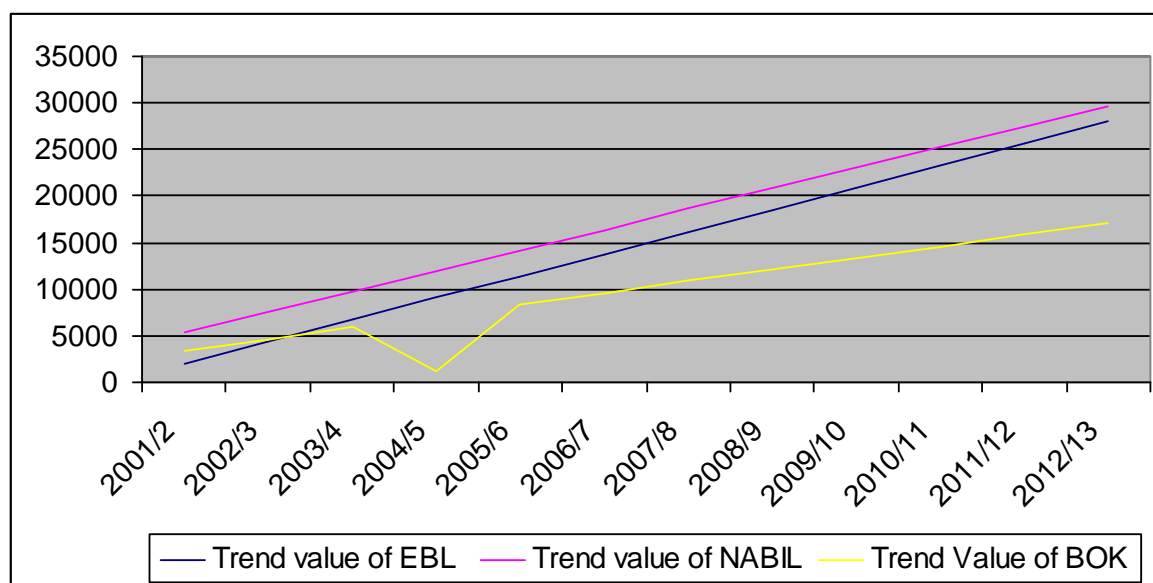
The table 4.36 shows the trend value of total deposit from 2007/8 to 20012/13 of three banks.

The total deposits of EBL, NABIL and BOK are in increasing trend. If all other things are remain constant the total deposits of the NABIL will be the highest deposit among the three banks under the study period. On the other hand total deposit of EBL will be 27970.6 in the mid July 2013. Similarly BOK will be 17083.53.

By analyzing the above trend value, it is found that the total deposit collection of NABIL will be in better position. Deposit position of EBL, NABIL and BOK are increasing in the same proportion.

Figure 4.2

Trend Value Analysis of Loan and Advance



4.2.4.3 Trend Analysis of Total Investment

In this topic, an effort has been made to calculate the trend values of total investment for the fiscal year 2001/2 to 2007/8 have been calculated and forecasted from 2008/9 to 2012/2013. The table below 4.27 shows the trend values of total investment from 2001/2 to 2012/2013 of the EBL, NABIL and BOK.

Table 4.37

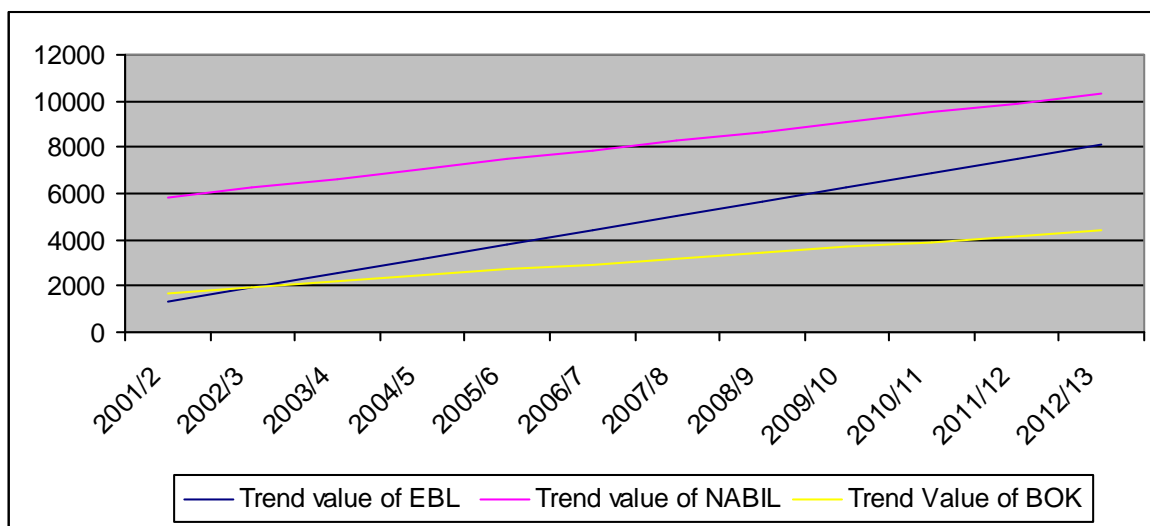
Trend Analysis of Total Investment

Fiscal Year	Trend value of EBL	Trend value of NABIL	Trend Value of BOK
2001/2	1324	5837	1707.5
2002/3	1940.8	6244	1954
2003/4	2557.6	6651	2200.5
2004/5	3174.4	7058	2447
2005/6	3791.2	7465	2693.5
2006/7	4408	7872	2940
2007/8	5024.8	8279	3186.5
2008/9	5641.6	8686	3433
2009/10	6258.4	9093	3679.5
2010/11	6875.2	9500	3926
2011/12	7492	9907	4172.5
2012/13	8108.8	10314	4419

(Source: Appendix 27)

Total investment of EBL, NABIL and BOK has in the increasing trend value. The total investment of NABIL will be high on fiscal year 2012/13. Similarly EBL will be 8108.8 and BOK 4419. The total investment trend of NABIL is satisfactory among the two banks. From the above analysis it can be concluded that BOK has not maintained well investment as compare to EBL and NABIL.

Figure 4.3
Trend Analysis of Total Investment



4.2.4.4 Trend Analysis of net profit

Under this topic an effort has been made to analyze net profit of EBL, NABIL and BOK from the fiscal year 2001/2 to 2007/8 and forecast the trend from the fiscal year 2008/9 to 2012/2013. The table below shows that the trend value of net profit 2001/2 to 2012/13.

Table 4.38

Trend Analysis of net profit

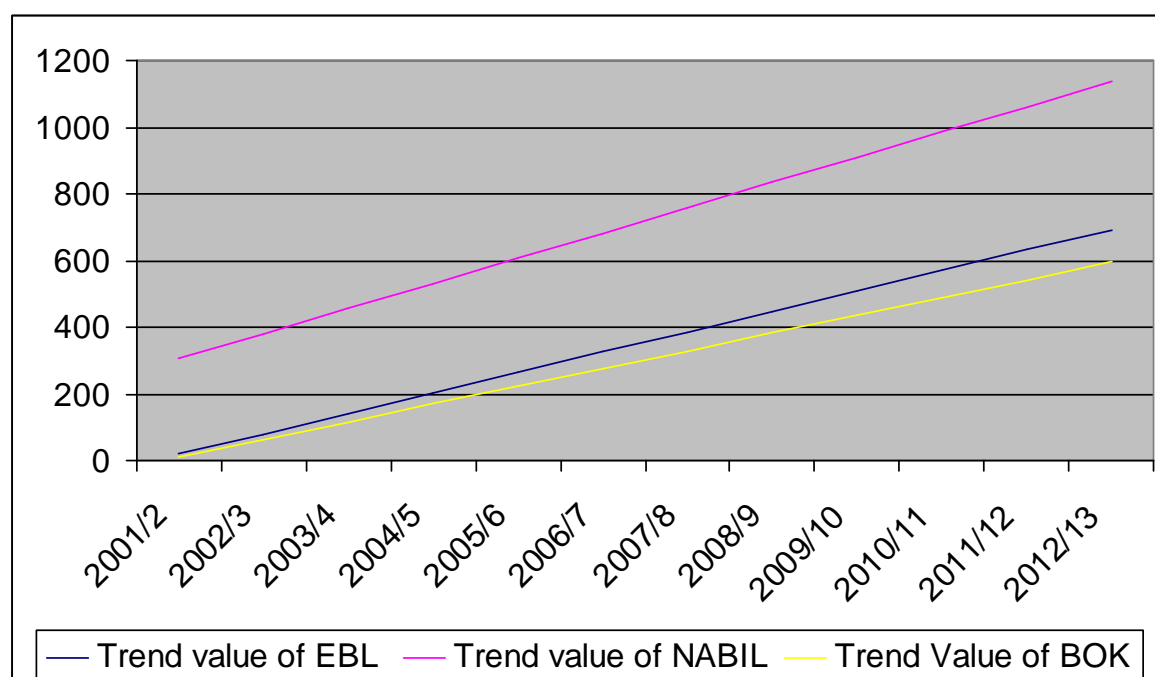
Fiscal Year	Trend value of EBL	Trend value of NABIL	Trend Value of BOK
2001/2	18.4	304.2	9.3
2002/3	79.7	379.9	62.6
2003/4	141	455.6	115.9
2004/5	202.3	531.3	169.2
2005/6	263.6	607	222.5
2006/7	324.9	682.7	275.5
2007/8	386.2	758.4	329.1
2008/9	447.5	834.1	382.4
2009/10	508.8	909.8	435.7
2010/11	570.1	985.5	489
2011/12	631.4	1061.2	542.3
2012/13	692.7	1136.9	595.6

(Source: Appendix 27)

The above table shows that the net profit of all three banks have the increasing trend value. The net profit of EBL will be 692.7 in fiscal year 2012/2013. Similarly the net profit NABIL will be 1136.9 and BOK will be 595.6. From the above table net profit NABIL will high in comparing to others two banks.

Figure 4.4

Trend Analysis of net profit



4.2.5. Statistical Analysis

Some statistical tools such as coefficient of correlation analysis between different variables like deposits and loan and advances, net profit and total investment etc, trend analysis of deposits mobilization and its projection of next 5 years and test of hypothesis etc are studied under this analysis.

Coefficient of Correlation Analysis

Karl Pearson's coefficient of correlation has been used to find out the relationship between deposit and loan and advances, deposit and investment and outside assets to net profit. Value to coefficient of correlation lays between -1 to +1. If value of coefficient of correlation is positive then there is positive relation between dependent variable and independent variable, i.e. as increment in independent variable dependent variable also increase and vice versa. If value of coefficient of correlation is negative then there is negative relation between dependent variable and independent variable, i.e. increment in independent variable dependent variable decreases and vice versa.

4.2.5.1 Coefficient of Correlation between Outside Assets and Net Profit

It measures the degree of relationship between two variables. Here outside assets(X) are independent variables and net profit is dependent variables(Y). The objective of computing coefficient of correlation between outside asset and net profit is to find out whether net profit is significantly correlated with respect to total assets or not. The table below shows the value of 'r', r^2 , P.Er, 6P.Er between outside assets and net profit of EBL, NABIL and BOK.

Table 4.39
Coefficient of Correlation between Outside Assets and Net Profit

Banks	Evaluation criterions			
	R	r^2	P.Er	6P.Er
EBL	0.98	0.96	0.010	0.061
NABIL	0.91	0.81	0.048	0.29
BOK	0.90	0.81	0.05	0.29

(Source: Appendix 22)

The table 4.29 shows the value of 'r', r^2 , PEr, 6PEr between outside assets and net profit of EBL, NABIL and BOK for the study period 2001/2 to 2007/8. From this table it has been found that the coefficient of correlation between total outside assets i.e. independent variable and net profit dependent variable is 0.98 in case of EBL. It shows Positive relationship between these variables. By considering the value of coefficient of determination (r^2), is 0.96 indicated that 96% of the variation in the dependent variable has been explained by the independent variable. Similarly considering the value of r is greater than the value of 6PEr, which reveals EBL is capable to earn net profit by mobilizing in total assets.

The coefficient of correlation between total outside assets and net profit in case of NABIL and BOK are 0.91 and 0.90. Again when we consider the value of coefficient of determination (r^2) i.e. 0.81 and 0.81 respectively in the independent variable has been explained by the independent variable.

On the basis of comparisons between the value of 'r' and 6PEr there is no significant correlation between the two variables the value of 'r' i.e.0.98, 0.91 and 0.90 is higher than 6PEr 0.061,0.29 and 0.29. The above analysis clear that there is significant correlation between outside assets and net profit in other words all banks have a significant correlation between mobilization of funds and returns.

4.2.5.2 Coefficient of Correlation between Deposit and Net Profit

The coefficient of correlation between deposit and net profit measures the degree of relationship between these two variables. Here deposit(X) in independent variable and net profit (Y) is dependent variable. The objectives of computing between these two variables are to justify whether net profit is significantly correlated with deposits or not. The following table 4.30 shows the value of 'r', ' r^2 ' per, 6P.Er between deposit and net profit of EBL, NABIL and BOK during the study period.

Table 4.40**Coefficient of correlation Between Deposit and Net Profit**

Banks	Evaluation criterions			
	R	r²	P.Er	6P.Er
EBL	0.83	0.689	0.079	0.473
NABIL	0.173	0.029	0.25	1.48
BOK	0.41	0.17	0.212	1.27

(Source: Appendix 23)

From the above table it has been found that the coefficient of correlation between total deposit and net profit in case of EBL the value of r is 0.83, which indicated that the relationship between deposit and net profit is positive similarly NABIL and BOK has 0.173 and 0.41, it also shows that NABIL and BOK also have a positive relationship between deposit and net profit. The coefficient of determination (r^2) is 0.689, which indicates 68.9% of the variation of the dependent variable has been explained by the independent variable. Similarly the value of $6P.Er$ is lesser than value of ' r ' i.e. $0.83 > 0.473$, which clear that there is exists a significant relationship between deposits and net profit.

In case of NABIL the value of (r^2) is 0.029 which is 2.9% of the variation of the dependent variable has been explained by the independent variable. And the value of r is lesser then the value of $6P.Er$ i.e. $0.173 < 1.48$ which indicates that there is no significant correlation between deposit and net profit.

Similarly in case of BOK the value of (r^2) is 0.17 which indicates 17% of the variation of the dependent variable has been explained by the independent variable. And the value of $6P.Er$ is greater than value of r i.e. $0.41 < 1.27$, where we can conclude that there is no significant correlation between deposit and net profit in case of BOK.

The above analysis clear that, the value of r in case of EBL is significant relationship between deposit and net profit. And NABIL and BOK show lower percentage of dependency than EBL. Due to effective mobilization of fund BOK and NABIL can increase in net profit. NABIL and BOK are not been more successful as EBL in mobilization of its deposits.

4.2.5.3 Coefficient of Correlation between Deposits and Interest Earned

The coefficient of correlation between deposits and interest earned measure the relationship between these two variables. Deposits are independent variables(X) and an interest earned is dependent variable(Y). The objectives of calculating r between two variables are to justify whether deposit is significantly used to earn interest or not. The table 4.31 shows the value of 'r', r², P.Er and 6P.Er of EBL, NABIL and BOK during the study period.

Table 4.41
Coefficient of Correlation between Deposits and Interest Earned

Banks	Evaluation criterions			
	R	r ²	P.Er	6P.Er
EBL	0.49	0.24	0.19	1.164
NABIL	0.997	0.994	0.0016	0.0096
BOK	0.997	0.994	0.0015	0.009

(Source: Appendix 23)

The coefficient of correlation 'r' between deposit and interest earned in case of EBL, NABIL and BOK is 0.49, 0.997 and 0.997 which indicates there is a positive relationship between these variables. When deposits increase the interest earned subsequently increased and when it decreases the interest earned also decreases. The coefficient of determination (r²) is 0.24 which indicates that 24% of the variation of dependent variable has been explained by independent variable. Similarly considering the value of 'r' and comparing with 6P.Er it has been found that the value of r is less than the value of 6P.Er i.e. $0.49 < 1.164$, which indicates there is no significant correlation between deposit and interest earned by the EBL.

In case of NABIL and BOK the coefficient of determinant (r²) is 0.994 i.e. 99.4% and 0.994 i.e.99.4% respectively, the variation of dependent variable has been explained by independent variable. Similarly considering the variable of r the value of 'r' of both bank is higher than 6P.Er of these bank i.e. $0.997 > 0.0096$ and $0.997 > 0.009$ respectively. It can be clear that there is significant correlation between deposit and interest earned of both banks.

4.2.5.4 Coefficient of Correlation between loan and advances and Interest paid

It measures the relationship between these variables. Here, loan and advances is independent variables (X) and interest paid in dependent variable (Y). The purpose of calculating 'r' between these variables is to established whether increase in loan and advances has play any role in decreasing in interest expenses.

The table 4.32 shows the values of 'r' r², P.Er and 6 P.Er of EBL, NABIL and BOK during the study period.

Table 4.42
Coefficient of Correlation between loan and Advances and Interest Paid

Banks	Evaluation criterions			
	R	r ²	P.Er	6P.Er
EBL	0.98	0.96	0.01	0.60
NABIL	0.83	0.69	0.079	0.474
BOK	0.34	0.116	0.22	1.34

(Source: Appendix 25)

The coefficient of correlation between loan and advances and interest paid in case of EBL, NABIL and BOK is 0.98, 0.83 and 0.34 respectively it shows that there is positive relationship between two variables. The coefficient of determinant (r²) in case of EBL a 0.69 i.e. 69% of, the variation of dependent variable has been explained by independent variable. By considering the value of r is greater than 6P.Er it means there is a significant correlation between loan and advance in case of EBL.

On the other hand, in case of NABIL bank the value of 'r' is greater than 6P.Er i.e. 0.83>0.474. There is also significant correlation between loan and advance and interest paid .Similarly the r value of BOK is 0.34 which is less than the value of 6P.Er which is 1.34. It shows that there is no significant correlation between loan and advance and interest paid.

In conclusion, it can be clear that the relationship between loan and advances and interest in case if EBL and NABIL are significant and BOK has not significant.

4.2.5.5 Coefficient of Correlation between Total Working Fund and Net Profit

The coefficient of correlation between the total working fund and net profit measures the degree of relationship between them. Here, total working fund is taken as independent variable(X) and net profit is taken as dependent variable (Y). The main purpose of calculating 'r' is to justify where total working fund is significantly used to generate earning or in other words whether these variables are significantly correlated or not.

The table 4.33 shows the value of 'r', r^2 , P.Er and 6P.Er between these two variables of EBL, NABIL and BOK.

Table 4.43
Coefficient of Correlation between Total Working Fund and Net Profit

Banks	Evaluation criterions			
	R	r^2	P.Er	6P.Er
EBL	0.53	0.28	0.18	1.09
NABIL	0.81	0.66	0.09	0.53
BOK	0.11	0.011	0.25	1.51

(Source: Appendix 26)

The coefficient of correlation 'r' between total working fund and net profit in case of EBL is 0.53 which indicates positive relationship between these variables. Similarly the value of 'r' of NABIL and BOK is 0.81 and 0.11 respectively. It also shows that there is a positive relationship between these two variables. The coefficient of determination (r^2) is 0.28 which states 28% of the variation of the dependent variable has been explained by independent variable. Similarly by considering the value of 'r' 0.53 and comparing the value of 6P.Er is 1.09. Where the value of 'r' is less than the value of 6P.Er i.e. $0.53 < 1.09$. It shows that there is no significant correlation between total working fund and net profit.

Similarly, by considering the value of ' r^2 ' of NABIL and BOK is 0.66 and 0.011. In case of NABIL it indicates that 66% of the variation of the dependent variable has been explained by independent variable and on the other hand NABIL has 0.011 which indicates 1.1% of the variation of the dependent variable has been explained by independent variable. And by considering the value of 'r' of both banks, in case of NABIL value of 'r' is greater than 6P.Er i.e. $0.81 > 0.53$. It shows that there is significant in correlation between

total working fund and net profit. And BOK has small 'r' value than 6P.Er i.e. $0.11 < 1.51$ which indicates that there is no significant correlation between total working fund and net profit.

After the analysis the conclusion can be drawn that EBL and BOK are in not significant relation between total working fund and net profit and NABIL has a significant relation between total working fund and net profit.

4.2.6 Test of hypothesis

The following are some of main hypothesis tests calculated and decision is made.

4.2.6.1 Test of hypothesis on Loan and advances to total deposit ratios between EBL, NABIL and BOK

a) Test of significance of difference between EBL and NABIL:

To test the significance relationship between EBL and NABIL under statistical tool T-Test has been done.

Decision, since the calculated value of t is 3.56 higher than the tabulated value 2.179. The null hypothesis H_0 is rejected i.e. there is significance difference between mean ratios of loan and advances to total deposit ratio of EBL and NABIL.

b. Test of significance difference between EBL and BOK

To test the significance relationship between EBL and BOK under statically tool, T- test has been done.

Decision, since the calculated value of t is -0.034 is less than tabulated value 2.179, the null hypothesis (H_0) is accepted. This means there is no significant difference between ratios of loans and advances to total deposit of EBL and BOK.

4.2.6.2 Test of hypothesis on total investment to total Deposit ratio.

a) Test of hypothesis Difference between EBL and NABIL

To test the significance relationship between EBL and NABIL under statistical tool, T-test has been done.

Decision,

Since the calculated value of t is -3.278 is less than the tabulated value i.e. 2.179. The null hypothesis is accepted. That means there is no significance difference between mean ratios of total investment to total deposit of EBL and NABIL.

b) Test of significance Difference between EBL and BOK

To test the significance relationship between EBL and BOK under statistical tool T-test has been done.

Decision,

Since the calculated value of t i.e. 0.338 is less than the tabulated value 2.179. So the null hypothesis is acceptable i.e. there is no significance difference between mean ratio of total investment to total deposit of EBL and NABIL.

4.2.6.3 Hypothesis test of investment of government securities to current assets ratios.

To test the significance relationship between EBL, NABIL and BOK under statistical tool T-test has been done.

a) Test of hypothesis Difference between EBL and NABIL

To test the significant relationship between EBL and NABIL under statically tool, T- test has been done.

Decision, since the calculated value of t i.e. 0.8163 is less than the tabulated value of t i.e. 2.179. The null hypothesis is accepted. That means there is no significance difference between mean ratio of investment on government securities to current assets ratio of EBL and NABIL.

b) Test of significance Difference between EBL and BOK

To test the significant relationship between EBL and BOK under statistical tool, T-test has been done.

Decision,

Since the calculated value of 1.4983 is less than the tabulated value i.e. 2.179. The null hypothesis is accepted. This means there is no significance difference between mean ratio of investment on government securities to current assets ratio of EBL and BOK.

4.2.6.4 Hypothesis test of loans and advances to current assets ratios.

To test the significance relationship between loans and advances of EBL, NABIL and BOK under statistical tool, T-test has been done.

a) Test of Significance of difference between EBL and NABIL.

To test the significance relationship between EBL and NABIL under statistical tool, T-test has been done.

Decision,

Since the calculated value of t is 2.097 is less than the tabulated value 2.179. So the null hypothesis is accepted i.e. there is no significance difference between mean ratio of loan and advances to current assets ratio of EBL and NABIL.

b) Test of Significance of Difference between EBL and BOK.

To test the significance relationship between EBL and BOK under statistical tool, T-test has been done.

Decision,

Since the calculated value of t 0.318 is less than the tabulated value 2.179. So the null hypothesis is accepted i.e. there is no significance difference between mean ratio of loan and advances to current assets ratio of EBL and NABIL.

4.2.6.5 Hypothesis test of return on loan and advances of EBL, NABIL and BOK

The ratios of return on loans and advances of EBL, NABIL and BOK are taken and under t-test of significance difference.

Let, Return on loans and advances ratio of EBL, NABIL and BOK are x_1 , x_2 and x_3 respectively.

a) Test of Significance of difference between EBL and NABIL

To test the significance relationship between EBL and NABIL under statistical tool, T-test has been done.

Decision,

Since the calculated value of t (-6.571) is less than the tabulated value (2.179). So the null hypothesis is accepted i.e. there is no significance difference between mean ratio of return on loan and advances ratio of EBL and NABIL.

b) Test of significance difference between EBL and BOK.

To test the significance relationship between EBL and BOK under statically tool, T-test has been done.

Decision,

Since the calculated value of $t = -0.187$ is less than the tabulated value 2.179. So the null hypothesis is accepted i.e. there is no significance difference between mean ratio of return on loan and advances ratio of EBL and BOK.

4.2.6.6 Hypothesis test of total interest earned to total outside assets ratio of EBL, NABIL and BOK.

The ratio of total interest earned to total outside assets of EBL, NABIL and BOK are taken and carried out under T-test of significance difference.

Let, total interest earned to total outside assets ratios of EBL, NABIL and BOK are x_1 , x_2 and x_3 respectively.

a) Test of Significance of difference between EBL and NABIL

To test the significance relationship between EBL and NABIL under statistical tool, T-test has been done.

Decision,

Since the calculated value of t (-2.523) is less than the tabulated value i.e. 2.179. So the null hypothesis is accepted i.e. there is no significance difference between mean ratio of total interest earned to total outside assets ratio of EBL and NABIL.

b) Test of significance difference between EBL and BOK.

To test the significance relationship between EBL and BOK under statically tool, T-test has been done.

Decision,

The calculated value of t (-4.644) is less than the tabulated value 2.179. So, null hypothesis is accepted. That means there is significance difference between mean ratio of total interest earned to total outside assets ratio of EBL and BOK.

4.3 Major Findings of the Study

Having completed the basis analysis required for this study, the final and the most important task of the researcher is to enlist the findings. It will give meaning to the desired result. A comprehensive summary of the major findings of the study is presented below.

A small primary survey was conducted using structural questionnaire method. It was found that joint venture banks invest their major portion of deposit in lain and advance to increase profitability. They consider the manufacturing sector more appropriate for making investment. Major problem being faced by the joint venture banks are facing is limited investment opportunities. The policies and guidelines of joint venture banks are not satisfactory for smooth operation of the banks. Profitability is the major factors being considered by the joint venture banks while taking investment decision. Increase cash and bank balance to meet current obligation and loan demand.

a) Liquidity Ratio

The liquidity position of EBL, NABIL and BOK reveals that:

) From the analysis of current ratio it is found that the mean ratio of BOK is higher than NABIL and EBL. The ratio of EBL and BOK are highly consistent. But NABIL is slightly lower current ratio in fiscal year 2002 and 2003 but it has maintained better current ratio i.e. more than 1. And BOK and EBL also maintain the mean current ratio greater than one.

) The mean ratio of cash and bank balance to total deposits is highest than BOK and less higher than NABIL. EBL has better liquidity position than BOK and NABIL because of high percentage of liquid assets. Thus it shows EBL is more able to meet its customer requirement than BOK and NABIL. In this case NABIL look poor to meet customer requirements. On a contrary, a high liquidity also indicates the inability of the bank to mobilization its current assets. The ratio of NABIL is more consistence than BOK and EBL.

) The mean ratio of cash and bank balance to current assets of EBL is higher than BOK and NABIL is very lowest than both bank. It shows that EBL and BOK's have greater capacity to meet its customer's daily cash requirements than NABIL. The ratios of NABIL are fewer variables and more consistence than EBL and BOK.

) The mean ratio of investment on government securities to current assets of EBL is higher than BOK and higher than NABIL. It shows that EBL has invested more of its fund in government securities than NABIL and BOK. The ratios of NABIL and BOK are fewer variables and more consistence than EBL.

) The mean ratio of loan and advances to current assets of BOK is comparatively better than NABIL and EBL. The variability of ratios of NABIL and EBL is slightly greater than BOK.

From the above findings, we can conclude that the liquidity position of EBL is comparatively better than NABIL and BOK. It has highest cash and bank balance to total deposit, cash and bank balance to current asset, EBL is in better position to meet its daily cash requirement. BOK has a higher current ratio, which justify that it is also capable to enough to meet its current obligations. And the mean ratio of Loan and advance to current assets of BOK is higher than NABIL and BOK. EBL investment in government securities is better than NABIL and BOK. The higher degree of variability in investment on

government securities of EBL during the study period shows lack of concrete policy of the bank in this regard.

b) Asset Management Ratio

The asset management ratio of EBL, NABIL and BOK reveals that:

-) The mean ratio of loan and advances to total deposit ratio of BOK is higher than EBL and NABIL. In terms of consistency both have been stable in their ratios.
-) The mean ratio of total investment to total deposits of NABIL is higher than EBL and BOK. The ratio of BOK is more consistent and less variable than EBL and NABIL.
-) The mean ratio of loan and advances to total working fund of NABIL is higher than EBL and BOK. The ratios of EBL are fewer variables and more consistency than BOK and NABIL.
-) The mean ratio of Investment in government securities to total working fund ratio of EBL is higher than NABIL and BOK. The ratios of NABIL are less variable and more consistency than NABIL.
-) The mean ratio of investment in shares and debenture to total working fund ratio of BOK is higher than EBL and NABIL. NABIL ratios are more variable and consistency than BOK and EBL.

From the above findings we can conclude that BOK has been more successful in mobilization of its total deposits and working fund as loan and advances. On the other hand NABIL also appears to be stronger in mobilization of total deposits and working fund as investment in risk free government securities. EBL has in better position to investment in government securities and BOK is able to invest their total working fund to purchase share and debenture of other companies, but all three banks have invested marginal amount under this heading. All the three banks have successfully managed their assets towards different income generation activities.

c) Profitability Ratios

The profitability ratios of EBL, NABIL and BOK reveal that,

-) The mean ratio of loan loss of BOK is higher than NABIL and EBL. NABIL maintain good position in loan loss provision or NABIL is more consistence than EBL and BOK.
-) The mean ratio of return on total loan and advances of NABIL has been found significantly greater than BOK and EBL. The ratios of EBL are less variable and more consistence than NABIL and BOK.
-) The mean ratio of return on total working fund of NABIL is higher than EBL and BOK. The mean ratio of EBL and BOK are slightly similar. The ratios of EBL and BOK are less consistent and more variable than NABIL.
-) The mean ratio of total interest earned to total outside assets of EBL and BOK look in similar position or the mean ratio is higher than NABIL. EBL and BOK's ratio are more stable and less variable than NABIL.
-) The mean ratio of total interest earned to total working fund of BOK is higher than EBL and NABIL. BOK's ratio is more stable and less variable than EBL and NABIL. But all three banks are maintained total interest earned to total working fund is in satisfactory.
-) The mean ratio of total interest paid to total working fund BOK and EBL is looks similar their mean ratio is higher than NABIL. NABIL ratio is more variable than EBL and BOK.

On the basis of above analysis, we can conclude that BOK has been suffering high loan loss ratio. NABIL is able to maintain good position on return on loan and advances and total working fund. Similarly EBL and BOK are able to maintain good position on total interest earned to total outside assets and BOK is maintain its higher position on total interest earned to total working fund during the study period among the three banks. Similarly BOK and EBL pay more interest on total working fund than NABIL. Whereas, NABIL collects funds from cheaper source than EBL and BOK.

d) Risk Ratio

The risk ratio of EBL, NABIL and BOK reveals that,

-) The mean ratio of credit risk of NABIL is lower than EBL and BOK. BOK has little high credit risk ratio than other two banks. But all the banks have been fairly consistent in their ratios.
-) The mean ratio of liquidity risk ratio of NABIL is lower than BOK and EBL. On the contrary, NABIL's ratios are more uniform than EBL and BOK.

Based on the above findings we can be conclude than NABIL has lower liquidity risk and Credit risk than BOK and EBL. EBL and BOK have greater exposure to risk in its financial operations than NABIL.

e) Co- efficient of correlation Analysis

Co-efficient of correlation analysis between different variables of EBL, BOK and NABIL reveals that:

-) EBL and BOK have a similar value and they have a higher than NABIL value of coefficient of correlation between deposit and loan and advances.
-) The coefficient of correlation between deposit and total investment of NABIL is higher than BOK and EBL.
-) The coefficient of correlation between outside assets and net profit of EBL is higher than NABIL and BOK.
-) The coefficient of correlation between total deposit and net profit of EBL is higher value than NABIL and BOK.
-) The coefficient of correlation between deposits and interest earned in case of NABIL and BOK is same value and EBL has lower than that of NABIL and BOK.
-) The coefficient of correlation between loan and advances to interest paid of EBL is higher than NABIL and BOK.
-) The coefficient of correlation between total working fund and net profit of NABIL is higher than EBL and BOK.

In conclusion, we can say that there is a significant relationship between deposit and loan and advance, deposit and total investment, deposit and net profit , outside assets and net profit, total deposit and interest earned and total working fund and net profit in case of EBL, NABIL and BOK.

c) Trend Analysis and Projection for Next Five Years

The trend analysis of deposits, loan and advances, total investment and net profit and its projection for next five years of EBL, NABIL and BOK are as follows.

-) The deposits of three banks have an increasing trend. The total deposit of EBL is predicted to be 36398.38 million, NABIL to be predicted 37343.42 million and BOK to be 22615.69 million at the end of 2012/13. The deposit collection of NABIL is much better than other two banks.
-) The loan and advances of all three banks have in increasing trend. The total loan and advances of EBL is predicted to be 27970.6 million. Similarly NABIL has predicted to be 296970.5 million and BOK has been predicted to be 17083.53 million at the end of 2012/2013. The loan and advances of NABIL is much better as compared to other two banks.
-) The total investment of all three banks has an increasing trend. The total investment of EBL is predicted to be 8108.8 million. Similarly NABIL has been predicted to be 10314 million and BOK is to be predicted 4419 by the end of fiscal year 2012/13. NABIL seems to have a much focused policy with regard to total investment than EBL and BOL.
-) The net profit of all three banks is in an increasing trend. The net profit of EBL is to be 692.7 million. Similarly NABIL has been predicted to be 1136.9 million and BOK to be predicted 595.6 million. The position of NABIL with regard to utilization of the fund to earn profit is better than EBL and BOK.

g) Test of Hypothesis

The test of significance regarding the parameter of the population, on the basis of sample drawn from the population reveals that:

-) There is significance difference between mean ratios of loan and advances to total deposit ratio of EBL and NABIL.
-) There is no significant difference between ratios of loans and advances to total deposit of EBL and BOK
-) There is no significance difference between mean ratios of total investment to total deposit of EBL and NABIL.

-) There is no significance difference between mean ratio of total investment to total deposit of EBL and BOK.
-) There is no significance difference between mean ratio of investment on government securities to current assets ratio of EBL and NABIL.
-) There is no significance difference between mean ratio of investment on government securities to current assets ratio of EBL and BOK
-) There is no significance difference between mean ratio of loan and advances to current assets ratio of EBL and NABIL
-) There is no significance difference between mean ratio of loan and advances to current assets ratio of EBL and BOK.
-) There is no significance difference between mean ratio of return on loan and advances ratio of EBL and NABIL
-) There is no significance difference between mean ratio of return on loan and advances ratio of EBL and BOK.
-) There is no significance difference between mean ratio of total interest earned to total outside assets ratio of EBL and NABIL.
-) There is no significance difference between mean ratio of total interest earned to total outside assets ratio of EBL and BOK.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Commercial banks play an important role for economic development of a country as they provide capital for the development of industry, trade and business by investing the savings collected as deposits from public. They provide various services to their customers, facilitating their economic and their social life. They are the most important ingredients for integrated and speedy development of a country. Therefore, a comparative and reliable banking system is essential to every country for the development and economic upliftment. This chapter consists of the summary, conclusions and recommendations from this study.

5.1 Summary

Commercial banks are major financial institutions, which occupy quite an important place in the framework of every economy because they provide capital for the development of industry, trade and business and other resources. Deflecting the savings collected as deposits, commercial banks, by playing an active role, have changed the economic structure of the world. Commercial banks have their own role and contribution in the economic development; they maintain economic confidence of various segments and extend credit to people.

Investment operation of commercial banks is quite a risky one. It is the most important factor from the viewpoint of shareholders and bank management. For this, commercial banks have to pay due consideration while formulating investment patterns. A healthy development of any commercial bank depends upon its investment pattern. A good investment pattern attracts both borrowers and lenders, which helps to increase the quality and quantity of deposits, loans and investments.

The major source of income of banks is interest income from loans and investments and fee-based income. As loans and advances dominate the asset side of the balance sheet of any bank, similarly, earnings from such loans and advances occupy a major space in the income statement of the bank. However, it is very important to be reminded that most of the bank failures in the world are due to the shrinkage in the value of loans and advances. Hence, loans are known as risky assets and investment operation of commercial banks is a risky one. Risk of non-payment of loans is known as credit risk or default risk. Performing loans

have multiple benefits to the society by helping for the growth of economy while nonperforming loans erode even existing capital.

Though several commercial banks have been established in our country within short period of time, stable, strong and appropriate investment has not been followed by the commercial banks to earn sufficient return. They have not been able to utilize their funds more efficiently and productively. Thus proper utilization of the resources has become relevant and current issue for the banks. The directions and guidance provided by Nepal Rastra Bank are the major policy statements for Nepalese commercial Banks.

The main objectives of the study are investment pattern of commercial bank (with reference to EBL, NABIL and BOK) and to suggest measures to improve the investment pattern of the bank. The study has been constrained by various common limitations and study is based on secondary and primary data from Fiscal Year 2001/2 to 2007/8. The data have been basically obtained from annual reports and financial statements, official records, periodicals, journals and bulletins, various published and unpublished reports and relevant unpublished master's degree thesis. Besides this discussions information's with the concerned authorities of the banks were held to obtain the additional information on the related problem.

Financial as well as statistical tools have been used in order to analyze and interpret the data and information. Under financial analysis, various financial ratios related to the investment function of commercial banks i.e. liquidity ratio, assets management ratio, profitability ratio have been analyzed and interpreted. Under statistical analysis, some relevant statistical tools i.e. coefficient of correlation and trend analysis have been used. This analysis gives clear picture of the performance of the bank with regard to its investment operation.

5.2 Conclusion

Based on the analysis and interpretations on chapter 4, the following conclusions have been drawn which are summarized below:

-) In this study, the financial tools ratio analysis VIZ. Liquidity ratio, assets management ratio, profitability ratio, risk ratio, growth ratio are used. The statistical tools like percentage, mean standard deviation, co-efficient of variation,

co-efficient of correlation, trend analysis and test of hypothesis have been used for the analysis and interpretation of the data. The data which we employed in this research are Primary and secondary in nature. They are obtained from annual reports of the concerned banks likewise, the financial statement of five years (from fiscal year 2001/2 to 2007/8) were selected for the purpose evaluation.

-) The analysis of liquidity position of these commercial banks shows different position. The current ratio measures only rupees worth of current assets and total rupees worth of current liabilities, i.e. it indicates the availability of current asset in rupees for everyone rupee of current liabilities. A ratio greater than one means the firm has more current assets than current liabilities claims against them. Generally, the current ratio of 2 is referred as acceptable, but acceptability of the value depends on the industry in which a firm operates. For the banks and the utility firms, a current ratio of 1 or above would be considered acceptable.
-) The liquidity position of the BOK is comparatively better than that of NABIL and EBL. EBL has maintained highest cash and bank balance ratio to meet the customer demand. EBL has good deposit collection and has made enough investment in government securities but it has maintained investment pattern on loan and advances.
-) From the analysis of assets management ratio it can be found that, in case of loan and advances to total deposit ratio NABIL is in better position and BOK also shows better position in loan and advances and total working fund ratio. EBL has highest portion of total working fund on government securities as compared to NABIL and BOK. Due to more efficient loan policy, NABIL suffers less from loan loss provision. It takes low credit risk and has sufficient deposits of none bearing interest which can be used in a certain period. Investment on share and debenture to total working fund ratio is higher in BOK.
-) The interest earned to total outside assets and return on total working fund ratio of BOK is higher than all two banks. But overall analysis of profitability ratios, EBL is average profitability in comparison to other compared bank i.e. BOK and NABIL.
-) The return on loan and advances ratio and return on total working fund of NABIL is in better position. The ratio suggests that the earning capacity of the banks loan and advances is satisfactory. The return on assets of the bank is good in average; it indicates the good earning capacity of the bank assets and good utilization of its assets.

-) The total interest paid to working fund ratio of NABIL is less than other two banks. Lowest interest paid shows it is profitable position as it is getting higher return than interest cost.
-) The degree of risk of BOK is higher than those two banks. And EBL has a highest liquidity risk ratio.
-) Trend analysis of loan and advances, total investment, net profit and total deposit are in increasing trend of all banks.
-) Test of hypothesis concludes that there is no significance difference between mean ratio of loans and advances to total deposit, total investment and investment on government securities to current assets, loan and advances to current asset, interest earned to total outside asset and return on loan and advance of EBL , NABIL and BOK.
-) EBL shows better performance among three banks during the study period (fiscal year 2001/2 to 2007/8)

5.3 Recommendations

On the basis of analysis and findings the following recommendations can be suggest to overcome the weakness, inefficiency and to improve present fund mobilization , banks quality and last but not least investment pattern.

-) In commercial banks the liquidity position affects external and internal factors such as saving for investment situations, central banks requirements, the leading policies management capacity etc. In this study it should try to lower the current liabilities to improve its liquidity position. Current ratio of all three banks is not satisfactory. It is below its standard rate 2:1. So the banks are suggested to improve current assets. The ratio of cash and bank balance to total deposit and current assets of EBL is higher than that of NABIL and BOK. It means EBL has higher cash and bank balance which decrease profit of bank. So it is recommended to mobilize cash and bank balance in profitable as loan and advances.
-) From the study it is found that NABIL and BOK have not invested their much fund in government securities. Investment on government securities increase in profitability of the banks and it is less risky than other investment. So NABIL and BOK are recommended to invest its fund in government securities. The percentage of

investment on share and debenture of NABIL is lowest. So it suggested investing more of its fund in share and debenture of different companies.

- J EBL and BOK have high loan loss ratio during the study period. So these banks are recommended that before providing the loan makes sure that your clients is in good character and able to pay its loan. BOK has invested much of its fund in total outside assets but it has not achieved the desired result. So BOK should play tactfully while investing its fund keeping in mind in interest rate.
- J NABIL has taken low credit risk during the study period. If banks mobilize their credit carefully it will generate good interest rate. So it can be recommended that NABIL should increase their credit risk by keeping in mind” Higher the risk Higher will be the return”
- J The investment policy of EBL is good in every aspect as studied above but the consistency in the above investment sectors is in equilibrium states. It is found that at time bank focuses much of its attention to one sector leaving other sector untouched, so, it is recommended to touch the entire sector and balance it effectively as to have the optimal performance of the bank.

To get success itself and to encourage financial and economic development of the country through industrialization and commercialization of commercial bank must mobilize its fund and debentures of other financial and non financial companies. And if other sectors go up positively than bank can utilize its fund more and more by providing them loan or getting sufficient dividend on their share or interest on their debentures. Commercial bank needed to strengthen its economic structure to achieve piped overall development. They have to resort to innovative approach of banking there by bringing professionalism in their business. If they follow those suggestions they can have better reach to the modern innovative and competitive banking markets.

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RESEARCH QUESTIONNAIRES

Dear Respondents,

I have been writing thesis on the study of the financial performance of commercial Banks (Everest Bank limited, Nabil Bank Limited and Bank of Kathmandu) for the partial fulfilment of the requirement of Master of Business Studies (MBS). So for this I would like to request you to kindly fill up the attached questionnaires prepared for collection of your views as valuable resource for my research work. The views provided by you will be taken as input of this research only. If respondents are interested the findings would be shared.

The Commercial Banks of the respondents shall be highly appreciated.

Thank you!

Kamala Sharma

(Researcher)

Master of Business Studies
Global College of Management

QUESTIONNAIRE

Name :

Company :
Address :
Designation :

Please, tick (√) mark on the appropriate and express your ideas and views where necessary.

1. Which is the prioritised area for the purpose of making investment?
 - a. Service sector
 - b. Financial sector
 - c. Banking sector
 - d. Manufacturing sector

2. Why major portion of deposit have been invested in loan and advances?
 - a. Quick return
 - b. Security
 - c. Profitability
 - d. Market demand

3. What is the major problem commercial banks are facing while making investment?
 - a. Limited opportunity
 - b. Market competition
 - c. Interest rate
 - d. Political instability

4. To what extent banks are responsible for this problem?
 - a. Little bit
 - b. More
 - c. Don't know

5. Why banks invest in government securities?
 - a. Profitability
 - b. Marketability
 - c. Security
 - d. Legality

6. Why most of the banks are focusing their business in urban areas?
 - a. Market
 - b. Security
 - c. Infrastructure
 - d. Other

7. Do you think Nepal Rastra Bank's policies and guidelines are comfortable for proper and smooth operation of commercial bank?

- a. Yes
 - b. No
 - c. Don't know
8. What is the reason for increasing in bank interest rate?
- a. Competition
 - b. Lack of liquidity
 - c. International trend
 - d. Increasing opportunity
9. Do you think prevailing interest rate on deposit/lending is satisfactory?
- a. Yes
 - b. No
10. Which of these factors you consider more while making investment decision?
- a. Profitability
 - b. Security
 - c. Level of income
 - d. Government policy
 - e. Political environment

Everest bank ltd

year	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8
current assets	6359.66	7836.89	9399.95	11545.23	15147.86	21262.5	26788.8
Current liabilities	6063.87	7420.73	8928.24	10599.9	14696.48	19931.1	24928.1
Cash & Bank balance	592.76	1139.57	613.81	1049.98	1552.96	2391.43	2667.95
Total Deposit	5466.61	6694.95	8063.9	10097.69	13802.44	18186.25	23976.29
Investment on govt. securities	1538.9	1599.35	2466.43	2100.29	3548.62	4704.63	4821.6
Loan and advances	3948.48	4908.46	5884.12	7618.67	9801.31	13664.08	18339.08
Total investment	1657.87	1653.97	2535.65	2128.93	4200.52	4984.31	5059.55
Working Fund	6607.18	8052.2	9608.56	11732.52	15959.29	21432.57	27149.34
Invest on share & Debenture	17.11	17.11	17.11	19.39	19.08	19.88	101.15
Loan loss provision	34.73	45.75	81.78	88.92	70.47	89.69	99.34
Net profit	85.33	34.17	143.56	168.2	237.3	296.4	451.2
Interest earned	443.82	520.17	657.25	719.3	903.41	1144.4	1549.65
outside assets	5641.51	6562.44	8419.82	9747.6	14001.82	18648.39	23398.63
interest paid	257.05	307.64	316.37	299.57	401.39	517.16	632.6
Total assets	6607.18	8052.2	9068.56	11732.52	15959.29	21432.57	27149.34

Nabil bank ltd

year	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8
current assets	13313.4	1386803	14244.04	16702.72	22010.87	26741.35	36526.4
Current liabilities	1051.82	15135.42	15135.13	15406.5	20454.98	25196.35	3445507
Cash & Bank balance	1051.82	1144.76	970.49	559.38	630.29	1399.8	2671.09
Total Deposit	15506.43	13447.66	14119.06	14586.66	19347.4	23342.25	31915.05
Invest on govt. securities	4120.29	3588.77	3672.63	2418.4	2301.46	4808.3	4646.8
Loan and advances	7437.89	7755.95	8189.99	10586.17	12922.5	15545.8	21365.05
Total investment	8199.51	6031.18	5835.95	4275.5	6178.53	8945.31	9939.8
Working Fund	17770.65	17529.25	16562.62	17064.08	22329.9	27253.4	37133
Invest on share & Debenture	22.22	22.22	22.22	27.36	27.56	57.85	28.33
Loan loss provision	0	0	1.051	8.6	3.76	14.2	64.05
Net profit	271.64	416.24	455.31	520.1	635.3	673.96	746.5
Interest earned	1120.7	1017.87	1001.61	1068.75	1310	1587.75	1978.7
outside assets	15630.74	13787.13	14025.94	14853.4	19101	24491.11	31304.85
interest paid	462.08	317.35	282.95	243.54	357.2	555.7	758.4
Total assets	13313.4	13868.3	14244.04	17064.08	22329.9	27253.4	37132.8

BOK Limited

year	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8
current assets	6192.12	7224.66	9364.43	9645.13	12066.77	14245.64	17333.84
Current liabilities	5815.18	6865.68	8845.59	91363.39	11238.6	13388.1	16079.8
Cash & Bank balance	683.65	692.71	782.88	740.52	728.69	1315.94	1440.34
Total Deposit	5723.28	6170.7	7741.64	8942.75	10485.36	12388.9	15833.7
Investment on govt. securities	522.65	1510.71	2371.77	2146.62	2658.37	2332.1	2113.21
Loan and advances	4613.7	4542.7	5646.7	5912.58	7259.08	9399.32	12462.6
Total investment	667.46	1816.15	2477.41	2598.25	3374.71	2992.4	3204.06
Working Fund	6356.65	7444.81	9496.35	9857.12	12278.33	14570.09	17721.9
Invest on share & Debenture	38.01	22.81	23.16	23.16	73.7	64.6	85.7
Loan loss provision	34.73	45.75	81.78	88.92	70.47	81.89	38.44
Net profit	9.28	82.13	127.48	139.52	202.44	262.39	361.5
Interest earned	473.3	496.81	567.09	607.09	718.12	819.12	1034.15
outside assets	5281.07	6358.85	8124.09	8510.83	10633.8	12391.7	15666.7
interest paid	285	276.71	286.3	241.64	308.15	339.18	417.5
Total assets	6192.12	7224.66	9364.43	9310.27	12278.4	14570.09	17721.9

Appendix- 1

Current Ratio

(Rs in million)

Bank	EBL			NABIL			BOK		
	F/Y	C.A.	C.L.	Ratios	C.A.	C.L.	Ratios	C.A.	C.L.
2001/2	6359.66	6063.87	1.05	13313.4	10518.2	1.27	6192.12	5815.18	1.06
2002/3	7836.89	7420.73	1.06	13868.03	15135.42	0.92	7224.66	6865.68	1.05
2003/4	9399.95	8928.24	1.05	14244.04	15135.13	0.94	9364.43	8845.59	1.06
2004/5	11545.23	10599.9	1.09	16702.72	15406.5	1.08	9645.13	9136.39	1.06
2005/6	15147.86	14696.48	1.03	22010.87	20454.98	1.08	12066.77	11238.6	1.07
2006/7	21262.5	19931.1	1.07	26741.35	25196.35	1.06	14245.64	13388.1	1.06
2007/8	26788.8	24928.1	1.07	36534.72	34455.07	1.06	17333.84	16079.8	1.08

Appendix-2

Cash and bank balance to total deposit ratio

(Rs in million)

Bank	EBL			NABIL			BOK		
F/Y	cash & bank balance	Total Deposit	Ratios	cash & bank balance	Total Deposit	Ratios	Cash & bank balance	Total Deposit	Ratios
2001/2	592.76	5466.61	10.84	1051.82	15506.43	6.78	683.65	5723.28	11.95
2002/3	1139.57	6694.95	17.02	1144.76	13447.66	8.51	692.71	6170.7	11.23
2003/4	613.81	8063.9	7.61	970.49	14119.06	6.87	782.88	7741.64	10.11
2004/5	1049.98	10097.69	10.40	559.38	14586.66	3.83	740.52	8942.75	8.28
2005/6	1552.96	13802.44	11.25	630.29	19347.4	3.26	728.69	10485.36	6.95
2006/7	2391.43	18186.25	13.15	1399.8	23342.25	6.00	1315.94	12388.9	10.62
2007/8	2667.95	23976.29	11.13	2671.09	31915.05	8.37	1440.34	15833.7	9.10

Appendix-3

Cash and bank balance to current assets ratio

(Rs in million)

Bank	EBL			NABIL			BOK		
F/Y	cash & bank balance	Total Deposit	Ratios	cash & bank balance	Total Deposit	Ratios	Cash & bank balance	Total Deposit	Ratios
2001/2	592.76	6607.18	8.97	1051.82	13313.4	7.90	683.65	6192.12	11.04
2002/3	1139.57	8052.2	14.15	1144.76	13868.3	8.25	692.71	7224.66	9.59
2003/4	613.81	9068.56	6.77	970.49	14244.04	6.81	782.88	9364.43	8.36
2004/5	1049.98	11732.52	8.95	559.38	17064.08	3.28	740.52	9310.27	7.95
2005/6	1552.96	15959.29	9.73	630.29	22329.9	2.82	728.69	12278.4	5.93
2006/7	2391.43	21432.57	11.16	1399.8	27253.4	5.14	1315.94	14570.09	9.03
2007/8	2667.95	27149.34	9.83	2671.09	37132.8	7.19	1440.34	17721.9	8.13

Appendix-4

Investment on Government securities to current assets

(Rs in million)

Bank	EBL			NABIL			BOK		
F/Y	Invst on govt. securities	Current assets	Ratios	Invst on govt. securities	Current assets	Ratios	Invst on govt. securities	Current assets	Ratios
2001/2	1538.9	6359.66	24.20	4120.29	13313.4	30.95	522.65	6192.12	8.44
2002/3	1599.35	7836.89	20.41	3588.77	13868.03	25.88	1510.71	7224.66	20.91
2003/4	2466.43	9399.95	26.24	3672.63	14244.04	25.78	2371.77	9364.43	25.33
2004/5	2100.29	11545.23	18.19	2418.4	16702.72	14.48	2146.62	9645.13	22.26
2005/6	3548.62	15147.86	23.43	2301.46	22010.87	10.46	2658.37	12066.77	22.03

2006/7	4704.63	21262.5	22.13	4808.3	26741.35	17.98	2332.1	14245.64	16.37
2007/8	4821.6	26788.8	18.00	4646.8	36526.4	12.72	2113.21	17333.84	12.19

Appendix-5

Loan and advances to current assets

(Rs in million)

Bank	EBL			NABIL			BOK			
	F/Y	Loan & advance	Current assets	Ratios	Loan & advance	Current assets	Ratios	Loan & advance	Current assets	Ratios
	2001/2	3948.48	6359.66	62.09	7437.89	13313.4	55.87	4613.7	6192.12	74.51
	2002/3	4908.46	7836.89	62.63	7755.95	13868.03	55.93	4542.7	7224.66	62.88
	2003/4	5884.12	9399.95	62.60	8189.99	14244.04	57.50	5646.7	9364.43	60.30
	2004/5	7618.67	11545.23	65.99	10586.17	16702.72	63.38	5912.58	9645.13	61.30
	2005/6	9801.31	15147.86	64.70	12922.5	22010.87	58.71	7259.08	12066.77	60.16
	2006/7	13664.08	21262.5	64.26	15545.8	26741.35	58.13	9399.32	14245.64	65.98
	2007/8	18339.08	26788.8	68.46	21365.05	36526.4	58.49	12462.6	17333.84	71.90

Appendix-6

Loan and advance to total deposit

(Rs in million)

Bank	EBL			NABIL			BOK			
	F/Y	Loan & advance	Total Deposit	Ratios	Loan & advance	Total Deposit	Ratios	Loan & advance	Total Deposit	Ratios
	2001/2	3948.48	5466.61	72.23	7437.89	15506.43	47.97	4613.7	5723.28	80.61
	2002/3	4908.46	6694.95	73.32	7755.95	13447.66	57.68	4542.7	6170.7	73.62
	2003/4	5884.12	8063.9	72.97	8189.99	14119.06	58.01	5646.7	7741.64	72.94
	2004/5	7618.67	10097.69	75.45	10586.17	14586.66	72.57	5912.58	8942.75	66.12
	2005/6	9801.31	13802.44	71.01	12922.5	19347.4	66.79	7259.08	10485.36	69.23
	2006/7	13664.08	18186.25	75.13	15545.8	23342.25	66.60	9399.32	12388.9	75.87
	2007/8	18339.08	23976.29	76.49	21365.05	31915.05	66.94	12462.6	15833.7	78.71

Appendix-7

Total Investment to total deposit ratio

(Rs in million)

Bank	EBL			NABIL			BOK			
	F/Y	Total Invest	Total Deposit	Ratios	Total Invest	Total Deposit	Ratios	Total Invest	Total Deposit	Ratios
	2001/2	1657.87	5466.61	30.33	8199.51	15506.43	52.88	667.46	5723.28	11.66
	2002/3	1653.97	6694.95	24.70	6031.18	13447.66	44.85	1816.15	6170.7	29.43
	2003/4	2535.65	8063.9	31.44	5835.95	14119.06	41.33	2477.41	7741.64	32.00
	2004/5	2128.93	10097.69	21.08	4275.5	14586.66	29.31	2598.25	8942.75	29.05

2005/6	4200.52	13802.44	30.43	6178.53	19347.4	31.93	3374.71	10485.36	32.18
2006/7	4984.31	18186.25	27.41	8945.31	23342.25	38.32	2992.4	12388.9	24.15
2007/8	5059.55	23976.29	21.10	9939.8	31915.05	31.14	3204.06	15833.7	20.24

Appendix-8

Loan and advance to total working ratio

(Rs in million)

Bank	EBL			NABIL			BOK		
	Loan & Advance	Working Fund	Ratios	Loan & Advance	Working Fund	Ratios	Loan & Advance	Working Fund	Ratios
2001/2	3948.48	6607.18	59.76	7437.89	17770.65	41.85	4613.7	6356.65	72.58
2002/3	4908.46	8052.2	60.96	7755.95	17529.25	44.25	4542.7	7444.81	61.02
2003/4	5884.12	9608.56	61.24	8189.99	16562.62	49.45	5646.7	9496.35	59.46
2004/5	7618.67	11732.52	64.94	10586.17	17064.08	62.04	5912.58	9857.12	59.98
2005/6	9801.31	15959.29	61.41	12922.5	22329.9	57.87	7259.08	12278.33	59.12
2006/7	13664.08	21432.57	63.75	15545.8	27253.4	57.04	9399.32	14570.09	64.51
2007/8	18339.08	27149.34	67.55	21365.05	37133	57.54	12462.6	17721.9	70.32

Appendix-9

Investment on government securities to total working fund

(Rs in million)

Bank	EBL			NABIL			BOK		
	Invest on govt. securities	Working Fund	Ratios	Invest on govt. securities	Working Fund	Ratios	Invest on govt. securities	Working Fund	Ratios
2001/2	1538.9	6607.18	23.29	4120.29	17770.65	23.19	522.65	6356.65	8.22
2002/3	1599.35	8052.2	19.86	3588.77	17529.25	20.47	1510.71	7444.81	20.29
2003/4	2466.43	9608.56	25.67	3672.63	16562.62	22.17	2371.77	9496.35	24.98
2004/5	2100.29	11732.52	17.90	2418.4	17064.08	14.17	2146.62	9857.12	21.78
2005/6	3548.62	15959.29	22.24	2301.46	22329.9	10.31	2658.37	12278.33	21.65
2006/7	4704.63	21432.57	21.95	4808.3	27253.4	17.64	2332.1	14570.09	16.01
2007/8	4821.6	27149.34	17.76	4646.8	37133	12.51	2113.21	17721.9	11.92

Appendix-10

Investment on share & debenture to total working fund ratio

(Rs in million)

Bank	EBL			NABIL			BOK		
	Invest on share & debenture	Working Fund	Ratios	Invest on share & debenture	Working Fund	Ratios	Invest on share & debenture	Working Fund	Ratios
2001/2	17.11	6607.18	0.26	22.22	17770.65	0.13	38.01	6356.65	0.60

2002/3	17.11	8052.2	0.21	22.22	17529.25	0.13	22.81	7444.81	0.31
2003/4	17.11	9608.56	0.18	22.22	16562.62	0.13	23.16	9496.35	0.24
2004/5	19.39	11732.52	0.17	27.36	17064.08	0.16	23.16	9857.12	0.23
2005/6	19.08	15959.29	0.12	27.56	22329.9	0.12	73.7	12278.33	0.60
2006/7	19.88	21432.57	0.09	57.85	27253.4	0.21	64.6	14570.09	0.44
2007/8	101.15	27149.34	0.37	28.33	37133	0.08	85.7	17721.9	0.48

Appendix-11

Loan loss ratio

(Rs in million)

Bank	EBL			NABIL			BOK		
	F/Y	Loan loss provision	Loan & Advance Ratios	Loan loss provision	Loan & Advance Ratios	Loan loss provision	Loan & Advance Ratios		
2001/2	34.73	3948.48	0.88	0	7437.89	0	34.73	4613.7	0.75
2002/3	45.75	4908.46	0.93	0	7755.95	0	45.75	4542.7	1.01
2003/4	81.78	5884.12	1.39	1.051	8189.99	0.01	81.78	5646.7	1.45
2004/5	88.92	7618.67	1.17	8.6	10586.17	0.08	88.92	5912.58	1.50
2005/6	70.47	9801.31	0.72	3.76	12922.5	0.03	70.47	7259.08	0.97
2006/7	89.69	13664.08	0.66	14.2	15545.8	0.09	81.89	9399.32	0.87
2007/8	99.34	18339.08	0.54	64.05	21365.05	0.30	38.44	12462.6	0.31

Appendix-12

Return on loan and advances ratio

(Rs in million)

Bank	EBL			NABIL			BOK		
	F/Y	Net profit	Loan & Advance Ratios	Net profit	Loan & Advance Ratios	Net profit	Loan & Advance Ratios		
2001/2	85.33	3948.48	2.16	271.64	7437.89	3.65	9.28	4613.7	0.20
2002/3	34.17	4908.46	0.70	416.24	7755.95	5.37	82.13	4542.7	1.81
2003/4	143.56	5884.12	2.44	455.31	8189.99	5.56	127.48	5646.7	2.26
2004/5	168.2	7618.67	2.21	520.1	10586.17	4.91	139.52	5912.58	2.36
2005/6	237.3	9801.31	2.42	635.3	12922.5	4.92	202.44	7259.08	2.79
2006/7	296.4	13664.08	2.17	673.96	15545.8	4.34	262.39	9399.32	2.79
2007/8	451.2	18339.08	2.46	746.5	21365.05	3.49	361.5	12462.6	2.90

Appendix-13

Return on total working fund

(Rs in million)

Bank	EBL			NABIL			BOK		
	F/Y	Net profit	Working fund Ratios	Net profit	Working fund Ratios	Net profit	Working fund Ratios		
2001/2	85.33	3948.48	2.16	271.64	7437.89	3.65	9.28	4613.7	0.20
2002/3	34.17	4908.46	0.70	416.24	7755.95	5.37	82.13	4542.7	1.81
2003/4	143.56	5884.12	2.44	455.31	8189.99	5.56	127.48	5646.7	2.26
2004/5	168.2	7618.67	2.21	520.1	10586.17	4.91	139.52	5912.58	2.36
2005/6	237.3	9801.31	2.42	635.3	12922.5	4.92	202.44	7259.08	2.79
2006/7	296.4	13664.08	2.17	673.96	15545.8	4.34	262.39	9399.32	2.79
2007/8	451.2	18339.08	2.46	746.5	21365.05	3.49	361.5	12462.6	2.90

2001/2	85.33	6607.18	1.29	271.64	17770.65	1.53	9.28	6356.65	0.15
2002/3	34.17	8052.2	0.42	416.24	17529.25	2.37	82.13	7444.81	1.10
2003/4	143.56	9608.56	1.49	455.31	16562.62	2.75	127.48	9496.35	1.34
2004/5	168.2	11732.52	1.43	520.1	17064.08	3.05	139.52	9857.12	1.42
2005/6	237.3	15959.29	1.49	635.3	22329.9	2.85	202.44	12278.33	1.65
2006/7	296.4	21432.57	1.38	673.96	27253.4	2.47	262.39	14570.09	1.80
2007/8	451.2	27149.34	1.66	746.5	37133	2.01	361.5	17721.9	2.04

Appendix-14

Total interest earned to total outside assets ratio

(Rs in million)

Bank	EBL			NABIL			BOK		
	F/Y	Interest earned	outside assets Ratios	Interest earned	outside assets Ratios	Interest earned	outside assets Ratios		
2001/2	443.82	5641.51	7.87	1120.7	15630.74	7.17	473.3	5281.07	8.96
2002/3	520.17	6562.44	7.93	1017.87	13787.13	7.38	496.81	6358.85	7.81
2003/4	657.25	8419.82	7.81	1001.61	14025.94	7.14	567.09	8124.09	6.98
2004/5	719.3	9747.6	7.38	1068.75	14853.4	7.20	607.09	8510.83	7.13
2005/6	903.41	14001.82	6.45	1310	19101	6.86	718.12	10633.8	6.75
2006/7	1144.4	18648.39	6.14	1587.75	24491.11	6.48	819.12	12391.7	6.61
2007/8	1549.65	23398.63	6.62	1978.7	31304.85	6.32	1034.15	15666.7	6.60

Appendix-15

Total interest earned to total working fund ratio

(Rs in million)

Bank	EBL			NABIL			BOK		
	F/Y	Interest earned	Working fund Ratios	Interest earned	Working fund Ratios	Interest earned	Working fund Ratios		
2001/2	443.82	6607.18	6.72	1120.7	17770.65	6.31	473.3	6356.65	7.45
2002/3	520.17	8052.2	6.46	1017.87	17529.25	5.81	496.81	7444.81	6.67
2003/4	657.25	9608.56	6.84	1001.61	16562.62	6.05	567.09	9496.35	5.97
2004/5	719.3	11732.52	6.13	1068.75	17064.08	6.26	607.09	9857.12	6.16
2005/6	903.41	15959.29	5.66	1310	22329.9	5.87	718.12	12278.33	5.85
2006/7	1144.4	21432.57	5.34	1587.75	27253.4	5.83	819.12	14570.09	5.62
2007/8	1549.65	27149.34	5.71	1978.7	37133	5.33	1034.15	17721.9	5.84

Appendix-16

Total interest paid to total working fund ratio

(Rs in million)

Bank	EBL	NABIL	BOK
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F/Y	interest paid	Working fund	Ratios	interest paid	Working fund	Ratios	interest paid	Working fund	Ratios
2001/2	257.05	6607.18	3.89	462.08	17770.65	2.60	285	6356.65	4.48
2002/3	307.64	8052.2	3.82	317.35	17529.25	1.81	276.71	7444.81	3.72
2003/4	316.37	9608.56	3.29	282.95	16562.62	1.71	286.3	9496.35	3.01
2004/5	299.57	11732.52	2.55	243.54	17064.08	1.43	241.64	9857.12	2.45
2005/6	401.39	15959.29	2.52	357.2	22329.9	1.60	308.15	12278.33	2.51
2006/7	517.16	21432.57	2.41	555.7	27253.4	2.04	339.18	14570.09	2.33
2007/8	632.6	27149.34	2.33	758.4	37133	2.04	417.5	17721.9	2.36

Appendix-17
Credit risk ratio

(Rs in million)

Bank	EBL			NABIL			BOK		
F/Y	Loan & advance	Total Assets	Ratios	Loan & advance	Total Assets	Ratios	Loan & advance	Total Assets	Ratios
2001/2	3948.48	6607.18	59.76	7437.89	13313.4	55.87	4613.7	6192.12	74.51
2002/3	4908.46	8052.2	60.96	7755.95	13868.3	55.93	4542.7	7224.66	62.88
2003/4	5884.12	9068.56	64.88	8189.99	14244.04	57.50	5646.7	9364.43	60.30
2004/5	7618.67	11732.52	64.94	10586.17	17064.08	62.04	5912.58	9310.27	63.51
2005/6	9801.31	15959.29	61.41	12922.5	22329.9	57.87	7259.08	12278.4	59.12
2006/7	13664.08	21432.57	63.75	15545.8	27253.4	57.04	9399.32	14570.09	64.51
2007/8	18339.08	27149.34	67.55	21365.05	37132.8	57.54	12462.6	17721.9	70.32

Appendix-18
Liquidity risk Ratio

(Rs in million)

Bank	EBL			NABIL			BOK		
F/Y	Cash & Bank balance	Total deposit	Ratios	Cash & Bank balance	Total deposit	Ratios	Cash & Bank balance	Total deposit	Ratios
2001/2	592.76	5466.61	10.84	1051.82	15506.43	6.78	683.65	5723.28	11.95
2002/3	1139.57	6694.95	17.02	1144.76	13447.66	8.51	692.71	6170.7	11.23
2003/4	613.81	8063.9	7.61	970.49	14119.06	6.87	782.88	7741.64	10.11
2004/5	1049.98	10097.69	10.40	559.38	14586.66	3.83	740.52	8942.75	8.28
2005/6	1552.96	13802.44	11.25	630.29	19347.4	3.26	728.69	10485.36	6.95
2006/7	2391.43	18186.25	13.15	1399.8	23342.25	6.00	1315.94	12388.9	10.62
2007/8	2667.95	23976.29	11.13	2671.09	31915.05	8.37	1440.34	15833.7	9.10

Appendix -19
Coefficient of correlation between deposit and loan and advances of EBL
(Rs in million)

Year	Deposit(x)	Loan & adv(y)	X=x-x ⁻	X ²	Y=y-y ⁻	Y ²	XY
2002	5466.61	3948.48	-6860.27	47063246	-5217.834	27225794.63	3579572
2003	6694.95	4908.46	-5631.93	31718587	-4257.854	18129323.12	239799
2004	8063.9	5884.12	-4262.98	18172962	-3282.194	10772799.33	139919
2005	10097.69	7618.67	-2229.19	4969268.9	-1547.644	2395202.835	344998
2006	13802.44	9801.31	1475.56	2177290	634.996	403219.5572	936976
2007	18186.25	13664.08	5859.37	34332267	4497.766	20229896.42	263540
2008	23976.29	18339.08	11649.41	135708853	9172.766	84139630.85	10685
Total	86288.13	64164.2		274142474		163295866.7	211365
x⁻	12326.8757	9166.314					

$$r = \frac{xy}{\sqrt{x^2} \sqrt{y^2}} = \frac{211365967.5}{\sqrt{274142474} \sqrt{163295866.7}} = 0.99$$

Coefficient of Determination (r²) = 0.98

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.98}{\sqrt{7}} = 0.00509$$

6 P.Er = 0.0305

Appendix-19
Coefficient of correlation between deposit and loan and advances of NABIL
(Rs in million)

Year	Deposit(x)	Loan & adv(y)	X=x-x ⁻	X ²	Y=y-y ⁻	Y ²	XY
2002	15506.43	7437.89	-3388.5	11481932	-4534.01	20557246.68	15363492
2003	13447.66	7755.95	-5447.27	29672750	-4215.95	17774234.4	22965417
2004	14119.06	8189.99	-4775.87	22808934	-3781.91	14302843.25	18061910
2005	14586.66	10586.17	-4308.27	18561190	-1385.73	1920247.633	5970098.9
2006	19347.4	12922.5	452.47	204729.1	950.6	903640.36	430117.9
2007	23342.25	15545.8	4447.32	19778655	3573.9	12772761.21	15894276
2008	31915.05	21365.05	13020.12	169523525	9393.15	88231266.92	12229994
Total	132264.51	83803.35		272031716		156462240.5	20098525
x⁻	18894.93	11971.9					

$$r = \frac{xy}{\sqrt{x^2} \sqrt{y^2}} = \frac{200985255.4}{\sqrt{272031716} \sqrt{156462240.5}} = 0.97$$

Coefficient of Determination (r^2) = 0.9409

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.9409}{\sqrt{7}} = 0.0150$$

6 P.Er = 0.090

Appendix-19
Coefficient of correlation between deposit and loan and advances of BOK
(Rs in million)

Year	Deposit(x)	Loan & adv(y)	X=x-x ⁻	X ²	Y=y-y ⁻	Y ²	XY
2002	5723.28	4613.7	-3889.05	15124710	-2505.83	6279162.51	9745281.
2003	6170.7	4542.7	-3441.63	11844817	-2576.83	6640030.76	8868480.
2004	7741.64	5646.7	-1870.69	3499481.1	-1472.83	2169215.58	2755200.
2005	8942.75	5912.58	-669.58	448337.38	-1206.95	1456717.96	808146.
2006	10485.36	7259.08	873.03	762181.38	139.55	19475.40	121835.
2007	12388.9	9399.32	2776.57	7709341	2279.79	5197461.99	6330008.
2008	15833.7	12462.6	6221.37	38705445	5343.07	28548442.82	33241242.
Total	67286.33	49836.68		78094312		50310507.02	61870194.
x⁻	9612.33	7119.526					

$$r = \frac{xy}{\sqrt{x^2} \sqrt{y^2}} = \frac{61870194.79}{\sqrt{78094312} \sqrt{50310507.02}} = 0.99$$

Coefficient of Determination (r^2) = 0.98

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.98}{\sqrt{7}} = 0.00509$$

6 P.Er = 0.0305

Appendix -20
Coefficient of correlation between deposit and total investment EBL
(Rs in million)

Year	Deposit(x)	Total investment(y)	X=x-x ⁻	X ²	Y=y-y ⁻	Y ²	XY
2002	5466.61	1657.87	-80821.5	6532118095	-1516.53	2299863.24	122568259
2003	6694.95	1653.97	-79593.2	6335074303	-1520.43	2311707.38	121015858
2004	8063.9	2535.65	-78224.2	6119030159	-638.75	408001.56	49965726.9
2005	10097.69	2128.93	-76190.4	5804983147	-1045.47	1093007.52	79654819.3
2006	13802.44	4200.52	-72485.7	5254175255	1026.12	1052922.25	-74379016.2
2007	18186.25	4984.31	-68101.9	4637866060	1809.91	3275774.20	-123258273
2008	23976.29	5059.55	-62311.8	3882765404	1885.15	3553790.52	-117467165
Total	12326.876	22220.8		38566012423		13995066.69	58100209.5
Mean	86288.13	3174.4					

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = \frac{58100209.58}{\sqrt{38566012423} \sqrt{13995066.69}} = 0.079$$

Coefficient of Determination (r^2) = 0.0062

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.0062}{\sqrt{7}} = 0.253$$

6 P.Er = 1.52

Appendix -20

Coefficient of correlation between deposit and total investment of NABIL

(Rs in million)

Year	Deposit(x)	Loan & adv(y)	X=x-x ⁻	X ²	Y=y-y ⁻	Y ²	XY
2002	15506.43	8199.51	-3388.5	11481932.3	1141.541	1303116.83	-38681
2003	13447.66	6031.18	-5447.27	29672750.5	-1026.79	1054294.77	55931
2004	14119.06	5835.95	-4775.87	22808934.3	-1222.02	1493329.39	58362
2005	14586.66	4275.5	-4308.27	18561190.4	-2782.47	7742131.35	119876
2006	19347.4	6178.53	452.47	204729.101	-879.439	773412.201	-3979
2007	23342.25	8945.31	4447.32	19778655.2	1887.341	3562057.67	83936
2008	31915.05	9939.8	13020.12	169523525	2881.831	8304952.38	375217
Total	132264.51	49405.78		272031716		24233294.6	650663
x ⁻	18894.93	7057.96857					

$$\text{Coefficient of correlation (r)} = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = \frac{65066391.89}{\sqrt{272031716} \sqrt{24233294.6}} =$$

0.80

Coefficient of Determination (r^2) = 0.64

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z .64}{\sqrt{7}} = 0.091$$

6 (p.Er) = 0.546

Appendix - 20

Coefficient of correlation between deposit and total investment BOK

(Rs in

million)

Year	Deposit(x)	Total investment(y)	X=x-x ⁻	X ²	Y=y-y ⁻	Y ²	XY
2002	5723.28	667.46	-3889.05	15124732.1	-1779.75	3167494.81	69215
2003	6170.7	1816.15	-3441.63	11844836.7	-631.05	398231.31	21718
2004	7741.64	2477.41	-1870.69	3499491.77	151.04	22814.37	-2825
2005	8942.75	2598.25	-669.58	448341.20	151.04	22814.37	-1011
2006	10485.36	3374.71	873.02	762176.39	927.50	860264.2	8097
2007	12388.9	2992.4	2776.56	7709325.1	545.19	297236.80	15137
2008	15833.7	3204.06	6221.36	38705409.1	756.85	572828.41	47086
Total	67286.33	17130.44		78094312.4		5341684.29	157418
Mean	9612.33286	2447.20571					

$$\text{Coefficient of correlation (r)} = \frac{xy}{\sqrt{x^2} \sqrt{y^2}} = \frac{15741866.45}{\sqrt{78094312.4} \sqrt{5341684.29}} =$$

0.77

Coefficient of Determination (r^2) = 0.593

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.593}{\sqrt{7}} = 0.104$$

6 P.Er = 0.623

Appendix-21

Coefficient of correlation between deposit and loan and advances of EBL

(Rs in million)

year	Deposit(x)	Loan & adv(y)	X=x-x̄	X ²	Y=y-ȳ	Y ²	XY
2001	5466.61	3948.48	-6860.27	47063245.7	-5217.83	27225794.63	357957
2002	6694.95	4908.46	-5631.93	31718587.3	-4257.85	18129323.12	239799
2003	8063.9	5884.12	-4262.98	18172961.9	-3282.19	10772799.33	139919
2004	10097.69	7618.67	-2229.19	4969268.9	-1547.64	2395202.84	34499
2005	13802.44	9801.31	1475.56	2177290.0	635.00	403219.56	9369
2006	18186.25	13664.08	5859.37	34332267.0	4497.77	20229896.42	263540
2007	23976.29	18339.08	11649.41	135708853.2	9172.77	84139630.85	1068573
Total	86288.13	64164.2		274142474		163295866.74	2113659
Mean	12326.876	9166.31429					

$$\text{Coefficient of correlation (r)} = \frac{xy}{\sqrt{x^2} \sqrt{y^2}} =$$

$$\frac{211365967.47}{\sqrt{274142474} \sqrt{163295866.74}} = 0.99$$

Coefficient of Determination (r^2) = 0.98

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.98}{\sqrt{7}} = 0.005$$

6P.Er = 0.030

Appendix-21

Coefficient of correlation between deposit and loan and advances of NABIL

(Rs in

million)

year	Deposit(x)	Loan & adv(y)	X=x-x̄	X ²	Y=y-ȳ	Y ²	XY
2002	15506.43	7437.89	-3388.5	11481932.25	-76365.5	5831683481	258764
2003	13447.66	7755.95	-5447.27	29672750.45	-76047.4	5783207047	414250
2004	14119.06	8189.99	-4775.87	22808934.26	-75613.4	5717380210	361119
2005	14586.66	10586.17	-4308.27	18561190.39	-73217.2	5360755447	315439
2006	19347.4	12922.5	452.47	204729.1009	-70880.9	5024094897	-32071
2007	23342.25	15545.8	4447.32	19778655.18	-68257.6	4659093132	-303563
2008	31915.05	21365.05	13020.12	169523524.8	-62438.3	3898541307	-812954
Total	132264.51	11971.9071		272031715.6		36274755521	200985
Mean	18894.93	83803.35					

$$\text{Coefficient of correlation (r)} = \frac{xy}{\sqrt{x^2} \sqrt{y^2}} = \frac{200985255.4}{\sqrt{272031715.6} \sqrt{36274755521}} = 0.064$$

Coefficient of Determination (r^2) = 0.004

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.004}{\sqrt{7}} = 0.254$$

6P.Er = 1.524

Appendix-21
Coefficient of correlation between deposit and loan and advances of BOK

(Rs in

million)

year	Deposit(x)	Loan & adv(y)	X=x-x̄	X ²	Y=y-ȳ	Y ²	XY
2002	5723.28	4613.7	-11098.30	123172318.4	-45223	2045117920	5018
2003	6170.7	4542.7	-10650.88	113441298	-45294	2051544624	482420
2004	7741.64	5646.7	-9079.94	82445355.8	-44190	1952754332	401242
2005	8942.75	5912.58	-7878.83	62076001.56	-43924.1	1929326561	346070
2006	10485.36	7259.08	-6336.22	40147715.57	-42577.6	1812852022	269781
2007	12388.9	9399.32	-4432.68	19648674.15	-40437.4	1635180084	1792
2008	15833.7	12462.6	-987.88	975911.83	-37374.1	1396821856	369211
Total	67286.33	7119.52571		441907275.3		12823597399	22175
Mean	16821.583	49836.68					

$$\text{Coefficient of correlation (r)} = \frac{xy}{\sqrt{x^2} \sqrt{y^2}} = \frac{2217580600}{\sqrt{441907275.3} \sqrt{12823597399}} = 0.931$$

0.931

Coefficient of Determination (r^2) = 0.867

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.867}{\sqrt{7}} = 0.034$$

6 P.Er = 0.202

Appendix-22
Coefficient correlation between outside assets and net profit EBL
(Rs in million)

Year	Outside assets(x)	Net profit(y)	X=x-x̄	X ²	Y=y-ȳ	Y ²	XY
2002	5641.51	85.33	-6704.23	44946757.4	-116.97	13683.98	784251.74
2003	6562.44	34.17	-5783.30	33446608.5	-168.13	28270.57	972396.52
2004	8419.82	143.56	-3925.92	15412881.5	-58.74	3451.39	230642.44
2005	9747.6	168.2	-2598.14	6750353.73	-34.10	1163.39	88618.98
2006	14001.82	237.3	1656.07	2742586.77	34.99	1224.40	57948.45
2007	18648.39	296.4	6302.64	39723343	94.09	8853.19	593024.93
2008	23398.63	451.2	11052.88	122166283	248.89	61946.94	2750968.51

Total	86420.21	1416.16		265188813		118593.89	5477851.61
Mean	12345.7443	202.308571					

$$\text{Coefficient of correlation (r)} = \frac{xy}{\sqrt{x^2} \sqrt{y^2}} = \frac{5477851.61}{\sqrt{265188813} \sqrt{118593.89}} = 0.98$$

Coefficient of Determination (r^2) = 0.96

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.96}{\sqrt{7}} = 0.010$$

6 P. Er = 0.061

Appendix-22
Coefficient correlation between outside assets and net profit NABIL

(Rs in million)

Year	Outside assets(x)	Net profit(y)	X=x-x̄	X ²	Y=y-ȳ	Y ²	XY
2002	15630.74	271.64	-17667.80	312151245	-33026.9	1090776289	5835127
2003	13787.13	416.24	-19511.41	380695218	-32882.3	1081245818	6415801
2004	14025.94	455.31	-19272.60	371433207	-32843.2	1078677921	6329745
2005	14853.4	520.1	-18445.14	340223282	-32778.4	1074426293	6046030
2006	19101	635.3	-14197.54	201570213	-32663.2	1066887411	4637377
2007	24491.11	673.96	-8807.43	77570867.2	492.96	243009.562	-43417
2008	31304.85	746.5	-1993.69	3974809.78	-32552	1059635471	648987
Total	133194.17	3719.05		1687618842		6451892211	2986965391
Mean	33298.5425	33298.5425					

$$\text{Coefficient of correlation (r)} = \frac{xy}{\sqrt{x^2} \sqrt{y^2}} =$$

$$\frac{2986965391}{\sqrt{1687618842} \sqrt{6451892211}} = 0.91$$

Coefficient of Determination (r^2) = 0.81

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.81}{\sqrt{7}} = 0.048$$

6 P.Er = 0.29

Appendix -22
Coefficient correlation between outside assets and net profit BOK

(Rs in million)

Year	Outside assets(x)	Net profit(y)	X=x-x̄	X ²	Y=y-ȳ	Y ²	XY
2002	5281.07	9.28	-11460.69	131347415	-16732.5	279975887	191765766
2003	6358.85	82.13	-10382.91	107804820	-16659.6	277543272	172975438
2004	8124.09	127.48	-8617.67	74264236.2	-16614.3	276034300	143176382
2005	8510.83	139.52	-8230.93	67748208.7	-16602.2	275634373	136651875
2006	10633.8	202.44	-6107.96	37307175.4	-16539.3	273549106	10102150
2007	12391.7	262.39	-4350.06	18923022	-16479.4	271569636	71686248.2
2008	15666.7	361.5	-1075.06	1155754	-16380.3	268312918	17609762.3
Total	66967.04	1184.74		438550632		1922619491	834886978
Mean	16741.76	16741.76					

$$\text{Coefficient of correlation (r)} = \frac{xy}{\sqrt{x^2} \sqrt{y^2}} = \frac{834886978.3}{\sqrt{438550632} \sqrt{1922619491}} = 0.90$$

Coefficient of Determination (r^2) = 0.81

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.81}{\sqrt{7}} = 0.05$$

6 P.Er = 0.29

Appendix -23
Correlation of coefficient between total deposit and net profit EBL

(Rs in

million)

Year	Deposit(x)	Net profit(y)	X=x-x̄	X ²	Y=y-ȳ	Y ²	XY
2002	5466.61	85.33	-16105.42	259384634	-21486.7	461678384	346052
2003	6694.95	34.17	-14877.08	221327584	-21537.9	463879521	32042
2004	8063.9	143.56	-13508.13	182469644	-21428.5	459179434	28945
2005	10097.69	168.2	-11474.34	131660536	-21403.8	458124046	24559
2006	13802.44	237.3	-7769.59	60366567.6	-21334.7	455170811	16576
2007	18186.25	296.4	-3385.78	11463523.1	-21275.6	452652538	72034
2008	23976.29	451.2	2404.26	5780454.13	-21120.8	446089565	-50779
Total	86288.13	1416.16		872452942		3196774299	13885
Mean	21572.0325	21572.0325					

$$\text{Coefficient of correlation (r)} = \frac{xy}{\sqrt{x^2} \sqrt{y^2}} = \frac{1388543452}{\sqrt{872452942} \sqrt{3196774299}} = 0.83$$

Coefficient of Determination (r^2) = 0.689

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.689}{\sqrt{7}} = 0.079$$

6. P. Er = 0.473

Appendix -23
Correlation of coefficient between total deposit and net profit NABIL

(Rs in million)

Year	Deposit(x)	Net profit(y)	X=x-x̄	X ²	Y=y-ȳ	Y ²	XY
2002	15506.43	271.64	-3388.5	240449371	-259.65	67419.61	879833.71
2003	13447.66	416.24	-5447.27	180839559	-115.05	13237.16	626723.98
2004	14119.06	455.31	-4775.87	199347855	-75.98	5773.39	362884.25
2005	14586.66	520.1	14243.66	212770650	14055.37	197553346	200199870.8
2006	19347.4	635.3	452.47	374321887	18816.11	354045888	8513724.00
2007	23342.25	673.96	4447.32	544860635	142.67	20353.91	634486.44
2008	31915.05	746.5	13020.12	1018570417	215.21	46314.11	2802022.82

Total	132264.51	3719.05		2771160374	32778.66	551752332	214019546
Mean	18894.93	531.292857					

$$\text{Coefficient of correlation (r)} = \frac{xy}{\sqrt{x^2} \sqrt{y^2}} =$$

$$\frac{214019546}{\sqrt{2771160374} \sqrt{551752332}} = 0.173$$

Coefficient of Determination (r^2) = 0.029

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.029}{\sqrt{7}} = 0.25$$

6 P.Er = 1.48

Appendix-23
Correlation of coefficient between total deposit and net profit BOK
(Rs in million)

Year	Deposit(x)	Net profit(y)	X=x-x̄	X ²	Y=y-ȳ	Y ²	XY
2002	5723.28	9.28	-11098.30	123172318	-159.97	25589.94	1775379.60
2003	6170.7	82.13	-10650.88	113441298	-87.12	7589.65	927889.67
2004	7741.64	127.48	-9079.94	82445355.8	-41.77	1744.61	379256.23
2005	8942.75	139.52	-7878.83	62076001.6	-29.73	883.79	234226.43
2006	10485.36	202.44	-6336.22	40147715.6	33.19	1101.67	-210308.28
2007	12388.9	262.39	-4432.68	19648674.1	93.14	8675.33	-412866.38
2008	15833.7	361.5	-987.88	975911.83	192.25	36960.61	-189921.82
Total	67286.33	1184.74		441907275		82545.60	2503655.45
mean	16821.5825	169.248571					

$$\text{Coefficient of correlation (r)} = \frac{xy}{\sqrt{x^2} \sqrt{y^2}} = \frac{2503655.45}{\sqrt{441907275} \sqrt{82545.60}} = 0.41$$

Coefficient of Determination (r^2) = 0.17

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.17}{\sqrt{7}} = 0.212$$

6 P.Er = 1.27

Appendix -24
Coefficient of correlation between total deposit and interest earned of EBL
(Rs in million)

Year	Total deposit(x)	Interest earned(y)	X=x-x̄	X ²	Y=y-ȳ	Y ²	XY
2002	5466.61	443.82	-6860.27	47063246	1040.68	1083014.86	7139341.32
2003	6694.95	520.17	-5631.93	31718587	-964.33	929932.35	5431034.92
2004	8063.9	657.25	-4262.98	18172962	-827.25	684342.56	3526546.66
2005	10097.69	719.3	-2229.19	4969269	-765.20	585531.04	1705772.91
2006	13802.44	903.41	1475.56	2177290	-581.09	337665.59	-857435.65

2007	18186.25	1144.4	5859.37	34332267	-340.10	115668.01	-1992773.19
2008	23976.29	1549.65	11649.41	135708853	65.15	4244.52	758959.34
Total	86288.13	5938		274142474		3740398.93	15711446.31
Mean	12326.8757	1484.5					

$$\text{Coefficient of correlation (r)} = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} =$$

$$\frac{15711446.31}{\sqrt{274142474} \sqrt{3740398.93}} = 0.49$$

$$\text{Coefficient of Determination (r}^2\text{)} = 0.24$$

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}} = 0.6745 \times \frac{1 - 0.24}{\sqrt{7}} = 0.19$$

$$6 \text{ P.Er} = 1.164$$

Appendix-24

Coefficient of correlation between total deposit and interest earned of NABIL

(Rs in million)

Year	Total deposit(x)	Interest earned(y)	X=x-x̄	X ²	Y=y-ȳ	Y ²	XY
2002	15506.43	1120.7	-3388.5	11481932.3	-177.211	31403.89	600480.92
2003	13447.66	1017.87	-5447.27	29672750.5	-280.041	78423.20	1525461.27
2004	14119.06	1001.61	-4775.87	22808934.3	-296.301	87794.54	1415097.10
2005	14586.66	1068.75	-4308.27	18561190.4	-229.161	52514.96	987289.30
2006	19347.4	1310	452.47	204729.101	12.08857	146.13	5469.71
2007	23342.25	1587.75	4447.32	19778655.2	289.8386	84006.39	1289004.87
2008	31915.05	1978.7	13020.12	169523525	680.7886	463473.07	8863948.89
Total	132264.51	9085.38		272031716		797762.199	14686752.1
Mean	18894.93	1297.91143					

$$\text{Coefficient of correlation (r)} = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} =$$

$$\frac{14686752.1}{\sqrt{272031716} \sqrt{797762.199}} = 0.997$$

$$\text{Coefficient of Determination (r}^2\text{)} = 0.994$$

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}} = 0.6745 \times \frac{1 - 0.994}{\sqrt{7}} = 0.0016$$

$$6 \text{ P.Er} = 0.0096$$

Appendix -24

Coefficient of correlation between total deposit and interest earned of BOK

(Rs in million)

Year	Total deposit(x)	Interest earned(y)	X=x-x̄	X ²	Y=y-ȳ	Y ²	XY
2002	5723.28	473.3	-3889.05	15124709.9	-200.37	40148.14	779248.95
2003	6170.7	496.81	-3441.63	11844817.1	-176.86	31279.46	608686.68
2004	7741.64	567.09	-1870.69	3499481.1	-106.58	11359.30	199378.14
2005	8942.75	607.09	-669.58	448337.4	-66.58	4432.90	44580.64
2006	10485.36	718.12	873.03	762181.4	44.45	1975.80	38806.18

2007	12388.9	819.12	2776.57	7709341.0	145.45	21155.70	403852.11
2008	15833.7	1034.15	6221.37	38705444.7	360.48	129945.83	2242679.46
Total	67286.33	4715.68		78094312.4		240297.12	4317232.15
Mean	9612.33	673.67					

$$\text{Coefficient of correlation (r)} = \frac{xy}{\sqrt{x^2} \sqrt{y^2}} = \frac{4317232.15}{\sqrt{78094312.4} \sqrt{240297.12}} = 0.997$$

Coefficient of Determination (r^2) = 0.994

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.994}{\sqrt{7}} = 0.0015$$

6 .P.Er = 0.009

Appendix -25
Correlation of coefficient between loan & advance to interest paid of EBL
(Rs in million)

Year	loan & adv(x)	Interest paid(y)	X=x-x̄	X ²	Y=y-ȳ	Y ²	XY
2002	3948.48	257.05	-5217.83	27225749.9	-133.2	17742.24	695014.96
2003	4908.46	307.64	-4257.85	18129286.6	-82.61	6824.41	351740.99
2004	5884.12	316.37	-3282.19	10772771.2	-73.88	5458.25	242488.20
2005	7618.67	299.57	-1547.64	2395189.57	-90.68	8222.86	140340.00
2006	9801.31	401.39	635	403225	11.14	124.10	7073.90
2007	13664.08	517.16	4497.77	20229935	126.91	16106.15	570811.99
2008	18339.08	632.6	9172.77	84139709.5	242.35	58733.52	2223020.81
Total	64164.2	2731.78		163295867		113211.54	4230490.84
Mean	9166.31	390.25					

$$\text{Coefficient of correlation (r)} = \frac{xy}{\sqrt{x^2} \sqrt{y^2}} = \frac{4230490.84}{\sqrt{163295867} \sqrt{113211.54}} = 0.98$$

Coefficient of Determination (r^2) = 0.96

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.96}{\sqrt{7}} = 0.01$$

6 P.Er = 0.60

Appendix -25
Correlation of coefficient between loan & advance to interest paid of NABIL
(Rs in million)

Year	loan & adv(x)	Interest paid(y)	X=x-x̄	X ²	Y=y-ȳ	Y ²	XY
2002	7437.89	462.08	-4534.02	20557311.5	36.76	1351.51	-166683.42
2003	7755.95	317.35	-4215.96	17774294.6	-107.97	11656.90	455184.85
2004	8189.99	282.95	-3781.92	14302897.3	-142.37	20268.40	538420.74
2005	10586.17	243.54	-1385.74	1920267.43	-181.78	33042.93	251895.34

2006	12922.5	357.2	950.59	903626.78	-68.12	4639.95	-64751.67
2007	15545.8	555.7	3573.89	12772710.2	130.38	16999.69	465974.36
2008	21365.05	758.4	9393.14	88231132.7	333.08	110944.19	3128694.86
Total	83803.35	2977.22		156462240		198903.57	4608735.05
Mean	11971.91	425.32					

$$\text{Coefficient of correlation (r)} = \frac{xy}{\sqrt{x^2} \sqrt{y^2}} = \frac{4608735.05}{\sqrt{156462240} \sqrt{198903.57}} = 0.83$$

$$\text{Coefficient of Determination (r}^2\text{)} = 0.69$$

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.69}{\sqrt{7}} = 0.079$$

$$6 \text{ P.Er} = 0.474$$

Appendix -25

Correlation of coefficient between loan & advance to interest paid of BOK (Rs in million)

Year	loan & adv(x)	Interest paid(y)	X=x-x̄	X ²	Y=y-ȳ	Y ²	XY
2002	4613.7	285	-7119.53	50687646	-1869.48	3494955.47	13309810
2003	4542.7	276.71	-2576.83	6640031	-1877.77	3526020.17	4838680
2004	5646.7	286.3	-1472.83	2169216	-1868.18	3490096.51	2751500
2005	5912.58	241.64	-6396.53	40915541	-1912.84	3658956.87	12235530
2006	7259.08	308.15	139.55	19475	-1846.33	3408934.47	-257660
2007	9399.32	339.18	2279.79	5197462	-1815.3	3295314.09	-4138510
2008	12462.6	417.5	5343.07	28548443	-1736.98	3017099.52	-9280810
Total	49836.68	307.782857		134177814		23891377.1	19458543.74
Mean	7119.52571	2154.48					

$$\text{Coefficient of correlation (r)} = \frac{xy}{\sqrt{x^2} \sqrt{y^2}} = \frac{19458543.74}{\sqrt{134177814} \sqrt{23891377.1}} = 0.34$$

$$\text{Coefficient of Determination (r}^2\text{)} = 0.116$$

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.116}{\sqrt{7}} = 0.22$$

$$6 \text{ P.Er} = 1.34$$

Appendix -26

Coefficient of correlation between total working fund and net profit of EBL (Rs in million)

year	Working fund (x)	Net profit(y)	X=x-x̄	X ²	Y=y-ȳ	Y ²	XY
2002	6607.18	85.33	-18528.24	343295492	-116.98	13683.99	2167406.46
2003	8052.2	34.17	-17083.22	291836235	-168.14	28270.58	2872347.37
2004	9608.56	143.56	-15526.86	241083226	-58.75	3451.39	912180.55
2005	11732.52	168.2	-13402.90	179637594	-34.11	1163.39	457153.60
2006	15959.29	237.3	-9176.13	84201270	34.99	1224.40	-321085.72
2007	21432.57	296.4	-3702.85	13711061.1	94.09	8853.20	-348405.98
2008	27149.34	451.2	2013.93	4055893.91	248.89	61946.94	501248.67
Total	100541.66	1416.16		1157820773		118593.89	6240844.95
Mean	25135.42	202.308571					

$$\text{Coefficient of correlation (r)} = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} =$$

$$\frac{6240844.95}{\sqrt{1157820773} \sqrt{118593.89}} = 0.53$$

Coefficient of Determination (r^2) = 0.28

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.28}{\sqrt{7}} = 0.18$$

6 P.Er = 1.09

Appendix - 26
Coefficient of correlation between total working fund and net profit of NABIL
(Rs in million)

year	Working fund (x)	Net profit(y)	X=x-x ⁻	X ²	Y=y-y ⁻	Y ²	XY
2002	17770.65	271.64	-4464.05	19927742.4	-259.65	67419.61	1159103.34
2003	17529.25	416.24	-4705.45	22141259.7	-115.05	13237.16	541375.47
2004	16562.62	455.31	-5672.08	32172491.5	-75.98	5773.39	430980.84
2005	17064.08	520.1	-5170.62	26735311.2	-11.19	125.28	57874.01
2006	22329.9	635.3	95.2	9063.04	104.01	10817.49	9901.48
2007	27253.4	673.96	5018.7	25187349.7	142.67	20353.91	716003.59
2008	37133	746.5	14898.3	221959343	215.21	46314.11	3206220.58
Total	155642.9	3719.05		348132560		164040.95	6121459.31
Mean	22234.7	531.29					

$$\text{Coefficient of correlation (r)} = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = \frac{6121459.31}{\sqrt{348132560} \sqrt{164040.95}} = 0.81$$

Coefficient of Determination (r^2) = 0.66

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.66}{\sqrt{7}} = 0.09$$

6P.Er = 0.53

Appendix-26
Coefficient of correlation between total working fund and net profit of BOK
(Rs in million)

year	Working fund (x)	Net profit(y)	X=x-x ⁻	X ²	Y=y-y ⁻	Y ²	XY
2002	6356.65	9.28	-4746.96	22533602.1	-1175.46	1381706.21	5579858.2
2003	7444.81	82.13	-3658.80	13386796.5	-1102.61	1215748.81	4034226.3
2004	9496.35	127.48	-1607.26	2583275.5	-1057.26	1117798.71	1699288.6
2005	9857.12	139.52	-1246.49	1553730.2	-1045.22	1092484.85	1302853.2
2006	12278.33	202.44	1174.72	1379973.8	-982.3	964913.29	-1153930.2
2007	14570.09	262.39	3466.48	12016503.4	-922.35	850729.52	-3197310.4
2008	17721.9	361.5	6618.29	43801800.3	-823.24	677724.10	-5448443.4

Total	77725.25	169.25		97255681.9		7301105.49	2816542.40
Mean	11103.61	1184.74					

$$\text{Coefficient of correlation (r)} = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} =$$

$$\frac{2816542.40}{\sqrt{97255681.9} \sqrt{7301105.49}} = 0.11$$

Coefficient of Determination (r^2) = 0.011

$$\text{Calculation of probable error (P.Er)} = 0.6745 \times \frac{1 Z r^2}{\sqrt{n}} = 0.6745 \times \frac{1 Z 0.011}{\sqrt{7}} = 0.25$$

$$6P.Er = 1.51$$

Trend Analysis

Appendix- 27

Trend analysis of total deposit of EBL

Let assume year will be the 1,2,3.....7

(Rs in million)

Fiscal Year(t)		Total Deposit(y)	X=t-4	x ²	XY	Yc = a+bx
2001/2	1	5466.61	-3	9	-16399.8	3300.04
2002/3	2	6694.95	-2	4	-13389.9	6308.98
2003/4	3	8063.9	-1	1	-8063.9	9317.92
2004/5	4	10097.69	0	0	0	12326.86
2005/6	5	13802.44	1	1	13802.44	15335.8
2006/7	6	18186.25	2	4	36372.5	18344.74
2007/8	7	23976.29	3	9	71928.87	21353.68
	Total	86288.13		28	84250.18	

$$A = \frac{\sum y}{N}$$

$$= \frac{86288.13}{7} = 12326.86$$

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

$$= \frac{84250.18}{28} = 3008.94$$

Projected trend value of total deposit for next five years

fiscal year(t)	X= t- 4	Yc= a+bx
2008/9	4	24362.62
2009/210	5	27371.56
2010/11	6	30380.5
2011/12	7	33389.44
2012/13	8	36398.38

Test of hypothesis

The following are some of main hypothesis tests calculated and decision is made.

Appendix- 28

Test of hypothesis on Loan and advances to total deposit ratios between EBL, NABIL and BOK

fiscal year	EBL			NABIL			BOK		
	x1	X1	x1 ²	X2	X2	X2 ²	X3	X3	X3 ²
2001/2	72.23	-1.57	2.46	47.97	-14.40	207.24	80.61	6.74	45.41
2002/3	73.32	-0.48	0.23	57.68	-4.69	21.96	73.62	-0.25	0.06
2003/4	72.97	-0.83	0.69	58.01	-4.36	18.97	72.94	-0.93	0.87
2004/5	75.45	1.65	2.72	72.57	10.20	104.13	66.12	-7.75	60.08
2005/6	71.01	-2.79	7.78	66.79	4.42	19.57	69.23	-4.64	21.54
2006/7	75.13	1.33	1.77	66.6	4.23	17.93	75.87	2.00	3.99
2007/8	76.49	2.69	7.24	66.94	4.57	20.92	78.71	4.84	23.41
Total	516.6		22.90	436.56		410.72	517.1		155.37
mean	73.8			62.37			73.87		

We have

$$\begin{aligned} \bar{x}_1 &= \frac{\sum x_1}{n} = \frac{516.6}{7} = 73.8 \\ \bar{x}_2 &= \frac{\sum x_2}{n} = \frac{436.56}{7} = 62.37 \\ \bar{x}_3 &= \frac{\sum x_3}{n} = \frac{517.1}{7} = 73.87 \end{aligned}$$

$$\text{Again, } X_1 = \sum (x_1 - \bar{x}_1) \quad X_2 = \sum (x_2 - \bar{x}_2) \quad X_3 = \sum (x_3 - \bar{x}_3)$$

b) Test of significance of difference between EBL and NABIL:

To test the significance relationship between EBL and NABIL under statistical tool T-Test has been done.

We have,

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{SP^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

Where,

$$Sp^2 = \frac{1}{n_1 \Gamma n_2 Z 2} (x_1^2 + x_2^2)$$

$$= \frac{1}{7 \Gamma 7 Z 2} (22.90 + 410.72)$$

$$= 36.135$$

Now statistic under Ho is,

$$t = \frac{73.8 Z 62.37}{\sqrt{36.135 \frac{1}{7} \Gamma \frac{1}{7}}}$$

$$= 3.56$$

With degree of frequency = $n_1 + n_2 - 2 = 7 + 7 - 2 = 12$

The calculated value of (t) = 3.56

The tabulated value of at 5% level of significance for two tailed test and for 12 degree of freedom (D.F) is 2.179 i.e. $t_{.05}(12) = 2.179$

b. Test of significance difference between EBL and BOK

To test the significance relationship between EBL and BOK under statically tool, T-test has been done.

We have,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{SP^2 \frac{1}{n_1} \Gamma \frac{1}{n_3}}}$$

$$\text{Where, } sp^2 = \frac{1}{n_1 \Gamma n_3 Z 2} (x_1^2 + x_3^2)$$

$$= \frac{1}{7 \Gamma 7 Z 2} (22.90 + 155.37)$$

$$= 14.86$$

Now,

Test statistics under Ho is

$$t = \frac{73.8 Z 73.87}{\sqrt{14.86 \frac{1}{7} \Gamma \frac{1}{7}}}$$

$$= -0.034$$

With degree of freedom = $n_1 + n_3 - 2 = 7 + 7 - 2 = 12$

The calculated value of (t) = -0.034

The tabulated value at 5% level of significance for two tail test and 12 degree of freedom (D.F) is 2.179 i.e. $t_{0.05}(12) = 2.179$

Appendix- 29
Test of hypothesis on total investment to total Deposit ratio.

Let,

Total investment to total deposit ratios of EBL, NABIL and BOK are x1, x2 and x3 respectively.

		EBL			NABIL			BOK		
fiscal year	x1	X1	x1 ²	X2	X2	X2 ²	X3	X3	X3 ²	
2001/2	30.33	3.69	13.61	52.88	14.34	205.72	11.66	-13.87	192.38	
2002/3	24.7	-1.94	3.77	44.85	6.31	39.85	29.43	3.90	15.21	
2003/4	31.44	4.80	23.03	41.33	2.79	7.80	32	6.47	41.86	
2004/5	21.08	-5.56	30.93	29.31	-9.23	85.14	29.05	3.52	12.39	
2005/6	30.43	3.79	14.35	31.93	-6.61	43.65	32.18	6.65	44.22	
2006/7	27.41	0.77	0.59	38.32	-0.22	0.05	24.15	-1.38	1.90	
2007/8	21.1	-5.54	30.69	31.14	-7.40	54.72	20.24	-5.29	27.98	
Total	186.49		116.97	269.76		436.93	178.71		335.95	
mean	26.64			38.54			25.53			

$$\begin{aligned} \bar{x}_1 &= \frac{\sum x_1}{n} \\ &= \frac{186.49}{7} \\ &= 26.64 \end{aligned}$$

$$\begin{aligned} \bar{x}_2 &= \frac{\sum x_2}{n} \\ &= \frac{269.76}{7} \\ &= 38.54 \end{aligned}$$

$$\begin{aligned} \bar{x}_3 &= \frac{\sum x_3}{n} \\ &= \frac{178.71}{7} \\ &= 25.53 \end{aligned}$$

Again, $X1 = X1 - \bar{x}_1$

$X2 = X2 - \bar{x}_2$

$X3 = X3 - \bar{x}_3$

c) Test of hypothesis Difference between EBL and NABIL

To test the significance relationship between EBL and NABIL under statistical tool, T-test has been done.

We have,

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{SP^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

Where,

$$SP^2 = \frac{1}{n_1 + n_2} (\sum x_1^2 + \sum x_2^2)$$

$$\begin{aligned} sp^2 &= \frac{1}{7 + 7} (116.97 + 436.93) \\ &= 46.16 \end{aligned}$$

Now, test statistics under (Ho) is,

$$t = \frac{26.64 - 38.54}{\sqrt{46.16 \left(\frac{1}{7} + \frac{1}{7} \right)}}$$

$$= -3.278$$

With degree of frequency = $n_1 + n_2 - 2 = 7 + 7 - 2 = 12$

The calculated value of $t = -3.278$

The tabulated value of t at 5% level of significance for two tailed test and 12 degree of freedom is 2.179 i.e. $t_{0.05} = 2.179$

d) Test of significance Difference between EBL and BOK

To test the significance relationship between EBL and BOK under statistical tool. T-test has been done.

We have,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{SP^2 \left(\frac{1}{n_1} + \frac{1}{n_3} \right)}}$$

Where,

$$SP^2 = \frac{1}{n_1 + n_3 - 2} (x_1^2 + x_3^2)$$

$$= \frac{1}{7 + 7 - 2} (116.97 + 335.95)$$

$$= 37.74$$

Now test statistics is,

$$t = \frac{26.64 - 25.53}{\sqrt{37.74 \left(\frac{1}{7} + \frac{1}{7} \right)}} = 0.338$$

The calculated value of $t = 0.338$

With degree of frequency = $n_1 + n_3 - 2 = 7 + 7 - 2 = 12$

The tabulated value of at 5% level of significance for 12 degree of freedom in two tail test is 2.179 i.e. $t_{0.05(10)} = 2.179$

Appendix- 30

Hypothesis test of investment of government securities to current assets ratios.

To test the significance relationship between EBL, NABIL and BOK under statically tool T-test has been done.

Investment of government securities to current asset ratio of EBL, NABIL and BOK

	EBL			NABIL			BOK		
fiscal year	x1	X1	x1 ²	X2	X2	X2 ²	X3	X3	X3 ²
2001/2	24.2	1.65	2.73	30.95	11.20	125.44	8.44	-9.78	95.62
2002/3	20.41	-2.14	4.57	25.88	6.13	37.58	20.91	2.69	7.24
2003/4	31.47	8.92	79.62	25.78	6.03	36.36	25.33	7.11	50.57
2004/5	18.19	-4.36	18.98	14.48	-5.27	27.77	22.26	4.04	16.33
2005/6	23.43	0.88	0.78	10.46	-9.29	86.30	22.03	3.81	14.53
2006/7	22.13	-0.42	0.17	17.98	-1.77	3.13	16.37	-1.85	3.42
2007/8	18	-4.55	20.68	12.72	-7.03	49.42	12.19	-6.03	36.34
Total	157.83	0.00	127.53	138.25		366.01	127.53		224.06
mean	22.55			19.75			18.22		

We have,

$$\begin{aligned} \bar{x}_1 &= \frac{\sum x_1}{n} = \frac{157.83}{7} = 22.55 \\ \bar{x}_2 &= \frac{\sum x_2}{n} = \frac{138.25}{7} = 19.75 \\ \bar{x}_3 &= \frac{\sum x_3}{n} = \frac{127.53}{7} = 18.22 \end{aligned}$$

$$\text{Again, } X1 = X1 - \bar{x}_1 \qquad X2 = X2 - \bar{x}_2 \qquad X3 = X3 - \bar{x}_3$$

c) Test of hypothesis Difference between EBL and NABIL

To test the significant relationship between EBL and NABIL under statically tool, T-test has been done.

$$\text{We have, } t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{SP^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

Where,

$$\begin{aligned} SP^2 &= \frac{1}{n_1 + n_2} (\sum x_1^2 + \sum x_2^2) \\ &= \frac{1}{7 + 7} (127.53 + 366.01) \\ &= 41.13 \end{aligned}$$

Now, test statistics under (Ho) is,

$$t = \frac{22.55 - 19.75}{\sqrt{41.13 \left(\frac{1}{7} + \frac{1}{7} \right)}} = 0.8163$$

The calculated value of $t = 0.8163$

With degree of frequency = $n_1 + n_2 - 2 = 7 + 7 - 2 = 12$

The tabulated value of t at 5% level of significance for 12 degree of freedom on a two tail test is 2.179 i.e. $t_{0.05}(12) = 2.179$.

d) Test of significance Difference between EBL and BOK

To test the significant relationship between EBL and BOK under statistical tool, T-test has been done.

We have,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{SP^2 \left(\frac{1}{n_1} + \frac{1}{n_3} \right)}}$$

Where,

$$\begin{aligned} sp^2 &= \frac{1}{n_1 + n_3 - 2} (\sum x_1^2 + \sum x_3^2) \\ &= \frac{1}{7 + 7 - 2} (127.53 + 224.06) \\ &= 29.30 \end{aligned}$$

Now,

Test statistics under hypothesis H_0 is

$$\begin{aligned} t &= \frac{22.55 - 18.22}{\sqrt{29.30 \left(\frac{1}{7} + \frac{1}{7} \right)}} \\ &= 1.4983 \end{aligned}$$

Calculated value of $t = 1.4983$

With degree of frequency = $n_1 + n_2 - 2 = 7 + 7 - 2 = 12$

The tabulated value of t at 5% level of significance for 12 degree of freedom on a two tailed test is 2.179 i.e. $t_{0.05} = 2.179$.

Appendix- 31 Hypothesis test of loans and advances to current assets ratios.

To test the significance relationship between loans and advances of EBL, NABIL and BOK under statistical tool, T-test has been done.

Let, loan and advances to current assets ratios of EBL & BOK are X1, x2 and X3 respectively.

Loan and advances to current assets ratio of EBL, NABIL and BOK

	EBL			NABIL			BOK		
fiscal year	x1	X1	x1 ²	X2	X2	X2 ²	X3	X3	X3 ²
2001/2	62.09	-4.08	16.67	55.87	-2.42	5.84	74.51	9.22	85.01
2002/3	62.63	-3.54	12.55	55.93	-2.36	5.56	62.88	-2.41	5.81
2003/4	75.08	8.91	79.34	57.50	-0.79	0.62	60.3	-4.99	24.90
2004/5	65.99	-0.18	0.03	63.38	5.09	25.94	61.3	-3.99	15.92
2005/6	64.7	-1.47	2.17	58.71	0.42	0.18	60.16	-5.13	26.32
2006/7	64.26	-1.91	3.66	58.13	-0.16	0.02	65.98	0.69	0.48
2007/8	68.46	2.29	5.23	58.49	0.20	0.04	71.9	6.61	43.69
Total	463.21		119.65	408.01		38.20	457.03		202.12
mean	66.17			58.29			65.29		

We have,

$$\begin{aligned} \bar{x}_1 &= \frac{\sum x_1}{n} = \frac{463.21}{7} = 66.17 \\ \bar{x}_2 &= \frac{\sum x_2}{n} = \frac{408.01}{7} = 58.29 \\ \bar{x}_3 &= \frac{\sum x_3}{n} = \frac{457.03}{7} = 65.29 \end{aligned}$$

$$\text{Again, } X1 = X1 - \bar{x}_1 \qquad X2 = X2 - \bar{x}_2 \qquad X3 = X3 - \bar{x}_3$$

b) Test of Significance of difference between EBL and NABIL.

To test the significance relationship between EBL and NABIL under statistical tool, T-test has been done.

We have

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{SP^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

Where,

$$sp^2 = \frac{1}{n_1 + n_2 - 2} (\sum x_1^2 + \sum x_2^2)$$

$$\begin{aligned} &= \frac{1}{7 + 7 - 2} (119.65 + 38.20) \\ &= 13.15 \end{aligned}$$

Now,

Test statistics is

$$t = \frac{66.17 - 58.29}{\sqrt{13.15 \left(\frac{1}{7} + \frac{1}{7} \right)}} = 2.097$$

The calculated value of $t = 2.097$

With degree of frequency = $n_1 + n_2 - 2 = 7 + 7 - 2 = 12$

The tabulated value of t at 5% level of significance for 12 degree of freedom in a two tail test is 2.179 i.e. $t_{0.05}(12) = 2.179$.

b) Test of Significance of Difference between EBL and BOK.

To test the significance relationship between EBL and BOK under statistical tool, T-test has been done.

$$\text{We have, } t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{SP^2 \left(\frac{1}{n_1} + \frac{1}{n_3} \right)}}$$

Where,

$$\begin{aligned} sp^2 &= \frac{1}{n_1 + n_3 - 2} (x_1^2 + x_3^2) \\ &= \frac{1}{7 + 7 - 2} (119.65 + 202.12) \\ &= 26.81 \end{aligned}$$

Now,

Test statistics is

$$t = \frac{66.17 - 65.29}{\sqrt{26.81 \left(\frac{1}{7} + \frac{1}{7} \right)}} = 0.318$$

The calculated value of $t = 0.318$

With degree of frequency = $n_1 + n_2 - 2 = 7 + 7 - 2 = 12$

The tabulated value of t at 5% level of significance for 12 degree of freedom on two tailed test is 2.179 is $t_{0.05}(12) = 2.179$.

Appendix-32

Hypothesis test of return on loan and advances of EBL, NABIL and BOK

The ratios of return on loans and advances of EBL, NABIL and BOK are taken and under t-test of significance difference.

Let, Return on loans and advances ratio of EBL, NABIL and BOK are x_1 , x_2 and x_3 respectively.

Return on loan and advances ratio of EBL, NABIL and BOK

		EBL			NABIL			BOK	
fiscal year	x1	X1	x1 ²	X2	X2	X2 ²	X3	X3	X3 ²
2001/2	2.16	0.08	0.01	3.65	-0.96	0.91	0.2	-1.96	3.84
2002/3	0.7	-1.38	1.90	5.37	0.76	0.58	1.81	-0.35	0.12
2003/4	2.44	0.36	0.13	5.56	0.95	0.91	2.26	0.10	0.01
2004/5	2.21	0.13	0.02	4.91	0.30	0.09	2.36	0.20	0.04
2005/6	2.42	0.34	0.12	4.92	0.31	0.10	2.79	0.63	0.40
2006/7	2.17	0.09	0.01	4.34	-0.27	0.07	2.79	0.63	0.40
2007/8	2.46	0.38	0.14	3.49	-1.12	1.24	2.9	0.74	0.55
Total	14.56		2.33	32.24		3.91	15.11	0.00	5.36
mean	2.08			4.61			2.16		

We have,

$$\begin{aligned} \bar{x}_1 &= \frac{\sum x_1}{n} \\ &= \frac{14.56}{7} \\ &= 2.08 \end{aligned}$$

$$\begin{aligned} \bar{x}_2 &= \frac{\sum x_2}{n} \\ &= \frac{32.24}{7} \\ &= 4.61 \end{aligned}$$

$$\begin{aligned} \bar{x}_3 &= \frac{\sum x_3}{n} \\ &= \frac{15.11}{7} \\ &= 2.16 \end{aligned}$$

$$\text{Again, } X1 = \sum X1 - \bar{x}_1$$

$$X2 = \sum X2 - \bar{x}_2$$

$$X3 = \sum X3 - \bar{x}_3$$

d) Test of Significance of difference between EBL and NABIL

To test the significance relationship between EBL and NABIL under statistical tool, T-test has been done.

We have

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{SP^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

Where,

$$sp^2 = \frac{1}{n_1 + n_2 - 2} (\sum x_1^2 + \sum x_2^2)$$

$$\begin{aligned} &= \frac{1}{7 + 7 - 2} (2.33 + 3.91) \\ &= 0.52 \end{aligned}$$

Now,

Test statistics is

$$\begin{aligned} t &= \frac{2.08 - 4.61}{\sqrt{0.52 \left(\frac{1}{7} + \frac{1}{7} \right)}} \\ &= -6.571 \end{aligned}$$

The calculated value of t = -6.571

With degree of frequency = n1+n2-2 = 7+7-2 = 12

The tabulated value of t at 5% level of significance for 12 degree freedom on two tail test is 2.179 i.e. $t_{0.05(12)} = 2.179$.

e) Test of significance difference between EBL and BOK.

To test the significance relationship between EBL and BOK under statically tool, T-test has been done.

We have,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{SP^2 \left(\frac{1}{n_1} + \frac{1}{n_3} \right)}}$$

Where,

$$\begin{aligned} SP^2 &= \frac{1}{n_1 + n_3 - 2} (x_1^2 + x_3^2) \\ &= \frac{1}{7 + 7 - 2} (2.33 + 5.36) \\ &= 0.64 \end{aligned}$$

Now,

$$t = \frac{2.08 - 2.16}{\sqrt{0.64 \left(\frac{1}{7} + \frac{1}{7} \right)}} = -0.187$$

The calculated value of $t = -0.187$

With degree of frequency = $n_1 + n_2 - 2 = 7 + 7 - 2 = 12$

The tabulated value of t at 5% level of significance for 12 degree of freedom on two tail test is 2.179 i.e. $t_{0.05(12)} = 2.179$.

Appendix-33

Hypothesis test of total interest earned to total outside assets ratio of EBL, NABIL and BOK.

Total interest earned to total outside assets ratio of EBL, NABIL and BOK

		EBL			NABIL			BOK		
fiscal year	x1	X1	x1 ²	X2	X2	X2 ²	X3	X3	X3 ²	
2001/2	7.87	0.70	0.49	7.17	-4.97	24.68	8.96	-3.75	14.06	
2002/3	7.93	0.76	0.58	7.38	-4.76	22.63	7.81	-4.90	24.01	
2003/4	7.81	-7.17	51.43	7.14	-5.00	24.98	6.98	-5.73	32.83	
2004/5	7.38	0.21	0.04	7.2	-4.94	24.38	7.13	-5.58	31.14	
2005/6	6.45	-0.72	0.52	6.86	-5.28	27.85	6.75	-5.96	35.52	
2006/7	6.14	-1.03	1.06	6.48	-5.66	32.01	6.61	-6.10	37.21	
2007/8	6.62	-0.55	0.30	6.32	-5.82	33.84	6.6	-6.11	37.33	
Total	50.20		54.42	48.55		190.37	50.84		5.36	

mean	7.17			12.14			12.71		
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We have,

$$\begin{array}{lcl} \bar{x}_1 & \times & \frac{x_1}{n} \\ & = & 50.20/7 \\ & = & 7.17 \end{array} \qquad \begin{array}{lcl} \bar{x}_2 & \times & \frac{x_2}{n} \\ & = & 48.55/7 \\ & = & 12.14 \end{array} \qquad \begin{array}{lcl} \bar{x}_3 & \times & \frac{x_3}{n} \\ & = & 5.84/7 \\ & = & 12.71 \end{array}$$

f) Test of Significance of difference between EBL and NABIL

To test the significance relationship between EBL and NABIL under statistical tool, T-test has been done.

We have

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{SP^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

Where,

$$\begin{aligned} sp^2 &= \frac{1}{n_1 + n_2 - 2} (x_1^2 + x_2^2) \\ &= \frac{1}{7 + 7 - 2} (54.42 + 109.37) \\ &= 13.65 \end{aligned}$$

$$\text{Now, } t = \frac{7.17 - 12.14}{\sqrt{13.65 \left(\frac{1}{7} + \frac{1}{7} \right)}} = -2.523$$

The calculated value of t = -2.523

With degree of frequency = n1+n2-2 = 7+7-2

The tabulated value of t at 5% level of significance for 12 degree of freedom on two tail test is 2.179 i.e. t0.05(12) = 2.179

g) Test of significance difference between EBL and BOK.

To test the significance relationship between EBL and BOK under statically tool, T-test has been done.

We have,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{SP^2 \left(\frac{1}{n_1} + \frac{1}{n_3} \right)}}$$

Where,

$$sp^2 = \frac{1}{n_1 + n_3 - 2} (x_1^2 + x_3^2)$$

$$= \frac{1}{7 \Gamma 7 Z 2} (54.42 + 5.36)$$

$$= 4.98$$

Now,

$$t = \frac{7.17 Z 12.71}{\sqrt{4.98 \frac{1}{7} \Gamma \frac{1}{7}}} = -4.644$$

The calculated value of $t = -4.644$

With degree of frequency = $n_1 + n_2 - 2 = 7 + 7 - 2 = 12$

The tabulated value of t at 5% level of significance for 12 degree of freedom on two tailed test is 2.179 i.e. $t_{0.05}(12) = 2.179$.

Appendix-34

Calculation of Growth Ratio

Let

D_n = Variable in the n th year

D_0 = Variable in the initial year

n = No of period study

g = Growth rate

A) Total deposit growth ratio of EBL

$$D_n = D_0 (1+g)^{n-1}$$

$$23976.29 = 5466.61(1+g)^{7-1}$$

$$g = 28.59\%$$

Total deposit growth ratio of NABIL

$$D_n = D_0 (1+g)^{n-1}$$

$$31915.05 = 15506.43(1+g)^{7-1}$$

$$g = 13\%$$

Total Deposit Growth rate of BOK

$$D_n = D_0 (1+g)^{n-1}$$

$$15833.7 = 5723.28(1+g)^{7-1}$$

$$g = 19\%$$

B) Total loan and advance growth rate of EBL

$$D_n = D_o (1+g)^{n-1}$$

$$18339.08 = 3948.48 (1+g)^{7-1}$$

$$g = 29.8\%$$

Total loan and advance growth rate of NABIL

$$D_n = D_o (1+g)^{n-1}$$

$$21365.05 = 7437.89 (1+g)^{7-1}$$

$$g = 19.6\%$$

Total loan and advance growth rate of BOK

$$D_n = D_o (1+g)^{n-1}$$

$$12462.6 = 4613.7 (1+g)^{7-1}$$

$$g = 19.2\%$$

C) Total investment growth rate of EBL

$$D_n = D_o (1+g)^{n-1}$$

$$5059.55 = 1657.87 (1+g)^{7-1}$$

$$g = 22\%$$

Total investment growth rate of NABIL

$$D_n = D_o (1+g)^{n-1}$$

$$9939.8 = 8199.51 (1+g)^{7-1}$$

$$g = 3.5\%$$

Total investment growth rate of BOK

$$D_n = D_o (1+g)^{n-1}$$

$$3204.06 = 667.46 (1+g)^{7-1}$$

$$g = 32\%$$

D) Total net profit growth rate of EBL

$$D_n = D_o (1+g)^{n-1}$$

$$451.2 = 85.33 (1+g)^{7-1}$$

$$g = 33\%$$

Total net profit growth rate of NABIL

$$D_n = D_o (1+g)^{n-1}$$

$$746.5 = 271.64 (1+g)^{7-1}$$

$$g = 19.6\%$$

Total Net profit growth rate of BOK

$$D_n = D_o (1+g)^{n-1}$$

$$361.5 = 9.28 (1+g)^{7-1}$$

$$g = 91.2\%$$