

**ANALYSIS OF INVESTMENT POLICY OF NEPALESE
COMMERCIAL BANKS IN NEPAL**

A THESIS

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The responsibility for any errors of facts or interpretation solely rests on me.

Madhav Raj Phulara

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CHAPTER - I

INTRODUCTION

1.1 Background

Banking sector plays an important role in the economic development of the country commercial banks one of the vital aspects of this sector which deals in the process of channelising available resources in the needed sector. It is obvious that economic development is impossible without the development of different sectors like Agriculture, Industry, and Trade of the country. So, development of their sectors needs a regular supply of financial resources. In developing countries there is always shortage of the capital for the development activities it is not possible to handle and develop all the sector by the government alone at a time private people also can not undertake large business because per capital income of the people is very low while their propensity to consume is very high. Due to low income their saving is very low and capital for motion is very low. So, their saving is not sufficient for carrying on development works.

"Economic development demands transformation of saving or investable resources into the actual investment. It is the financial institution that transfer funds from surplus spending units to deficit units" (Nepal Rastra Bank, 1996:43).

The proper mobilization and utilization of domestic resources is one of the key factors in the economic development of a country. Similarly, integrated and speedy development of the country is only possible when competitive and reliable banking services are reached and operated to every corner of the country. It has been well established that the economic activities of any country can hardly be carried without the assistance and support of financial institutions. Financial institutions have catalytic role in the process of economic development. The investment policy of financial institution, especially banks has long term impact not only on their growth and sustainability but also on the economic development of the country. Successful formulation and effective implementation of investment policy is the prime requisite for the successful performance of banks and

other financial institutions. Good investment policy has a positive impact on economic development of the country and vice-versa.

Capital formation is one of the important factors in economic development. The capital formation leads to increase in the size of the national output, income, and employment, solving the problem of inflation and balance of payment and making the economy free from the burden of foreign debt. Domestic capital formation helps in making a country self-sustainable. Profit made by business community constituted the major part of the saving of the community and what was saved was assumed to be invested.

The initial step investing policy involves is determining the investment objectives and the amount if one's investing able fund. Investment is always related with risks and returns. Making money alone cannot be an appropriate objective. It is appropriate to state that the objective is to make a lot of money by recognizing the possible losses. Therefore, investment objective should be stated in terms of both risks and returns setting a clear investment policy also involve the identification of the potential categories of financial assets for consideration in the ultimate portfolio. The identification of assets depends upon many things such as investment objectives investable fund, tax consideration etc.

Investment is a very risky job for a purposeful, safe and profitable investment. Bank must follow sound investment policy. The fundamental principle of investment must be followed thoroughly for profitable investment policy should ensure maximum amount of investment to all sectors with proper utilization. There is high liquidity in the amount and it seems no profitable place to invert there days. Investment policy provides the bank several inputs through which they can handle their investment operation efficiently ensuring the maximum return with minimum risk, which ultimately leads the bank to the path of success to achieve its organizational objectives of shareholder wealth maximization.

Investment operation of commercial banks is very risky on for this, commercial banks have to pay due consideration while formulating investment policy. A healthy development of any commercial bank depends upon its investment policy. A good

investment policy attracts both borrowers and lenders which help to increase the volume and quality of deposits, loans and investment.

1.1.1 Investment

Money attracts money, this sounds familiar to every individual involved in some or other investment activities; this means if you know the tactics to invest your money in their right way in the right place and at the right time-you will earn more amount of extra income (money in return) in the future from the investment you made. In a common layman's view, every investment gives a certain return. It could be both favorable and unfavorable depending upon the efficiency of investment made.

In general sense investment is the sacrifice of money to generate more money, where as in economic sense, investment is the purchase of goods not for consumption but for the future create of wealth. Investment encompasses the vision of profit involved speculation and wealth generation.

By for going today's consumption and investing the savings, the investors expect to enhance their future consumption possibilities. The term 'Investment has its primary significance in financial sector, i.e., it refers to the process of determining the worthy area to invest a firms fund to procure expected return as a favorable one by its maximum utility at the minimal risk. We can say that investment is concerned with the management of an investor's wealth-who is interested in working on it to get more of the money (which includes the sum of current money and the present value of all future money).

Investment promotes economic growth and contributes to a nation's wealth, as in when people deposit money in a bank, for instance the bank may invest it by lending the funds to various business companies. These firms in return may invest the money in new factories and other equipment to increase their production. Beside borrowing from the bank most of the comprises issues stock/bonds and sell them to the investors to raise the capital needed for their business expansion. Government also issues bonds to obtain funds to invest in projects such as the construction of dams, roads, school etc for the development of the country. All such investment done by the firms and government involves a present sacrifice of money to get an expected future benefits. Hence we can say that investment raised a nation's standard of living.

1.1.2 Investment Policy

Investment policy is simple words in the proper management of any fund/wealth to maximize the value of it or to obtain the favorable return with minimal risk considering the protection of the investment from inflation, taxes and other factors. It's ensures efficiency on the allocation of fund to achieve the materialistic and economic well-being of the society. In appropriate or unsuitable investment policy and inadequate knowledge on it usually creates dilemma to the investor on selection of an optimal investment area. Investment policy basically involves the determining of the investor's objectives and the amount of investable fund available. Investment is always related with risks and returns. Making money alone cannot be an appropriate objective in itself the objective should focus on making decent return by recognizing the possible losses. Therefore, investment should stats in terms of both risk and return. We can say that there is a positive relation between risk and return for sensible investment strategies and the investment policy concludes with the identification of the potential categories of financial assets for consideration in the ultimate portfolio.

A good investment policy attracts both borrowers and lenders which enhances the volumes and quality of the deposit, loan and investment. The purpose of the investment policy is to guide the foundation in effectively supervising, monitoring and managing its investments.

From the above explanation we can say that investment policy is an important ingredient for the overall economic development. In this regard, the commercial banks also formulate their investment policies which drive to achieve the priority of commercial sector along with their needs in the context of the whole country's economic development.

1.1.3 Commercial Banks

Commercial banks are the major components in the financial system. They work as the intermediary between depositors and lenders and facilitate in overall development of the economy, with major thrust in industrial development. In modern time, commercial, banks, which are facilitated, regulated and supervised by the central bank, confine them and concentrate in their activities of fulfilling needs of their customers.

Modern commercial banks can be identified by different name such as business banks, retail banks, clearing banks, joint venture banks, they all perform the same basis function i.e., they

provide a link between lenders, those who have surplus of money and do not wish to spend immediately with borrowers, those who do not have surplus money but wish to borrow for investment in productive purpose. Basically, by charging a rate of interest to borrowers slightly higher than they pay to lenders, the banks make their profit. This is known as financial intermediate.

Bank essentially is an intermediary of short term funds. It can carry out the extensive lending operations only if it can effectively channelize the saving of the community. A good bank is the one, which effectively mobilize the saving of the community as well as makes use of nations' economy. Commercial banks are by far the most widespread banking institutions in Nepal.

Commercial bank came into existence mainly with the objective of collecting the idle funds, mobilizing them into productive sector and causing an overall economic development. The bankers have the responsibility of safeguarding the interest of the depositors, the shareholders and the society they serve. A sound banking system is important because of the key role it plays in the economy, intermediation, mainly transformation, facilitating payments flow, credit allocation and maintaining financial discipline among borrow, Banks are the gatherers of having, the alligators of resources and provided of liquidity and payment services.

Because of higher return on investment and lower capital requirements, entrepreneurs were interested in setting up new banks including branch of foreign banks. However, current policies and economic scenario of the country coupled with new prudential norms of Nepal Rastra Bank and stiff competition may make the entrepreneurs give a second thought to the idea of establishing banks.

1.1.4 Important of Investment Policy to the Commercial Banks

Investment policy of the financial institutions, especially banks have long term impact not only on their growth and sustainability but also on the economic development of the country. As we know that one of the main objectives of the commercial banks is to provide the fund needed to community i.e., lending service to the community. To make their lending service more effective, the commercial banks formulate sound investment/lending policies which eventually contribute to the economic development of the banks and further contributes to the overall development of the country.

Every commercial bank has its investment policy to guide them on their investing operation. The basic factors that will determine the objectives of a banks' investment policy are its income liquidity needs and the managements' willingness to trade liquidity for greater income opportunities along with the degree of risk associated. Formulation of an investment policy must give awareness about the entire risk exposure that bank management is willing to assume. One of the acceptable methods of reducing risks in the investment portfolio of commercial banks is by diversification a basic and important rule of any investment policy risk can not be completely avoided by diversification, but they can be reduced. Besides the investment policy of a bank should be revised occasionally and modified as economic conditions changes.

Likewise, sound policies help the commercial banks maximize its quality and quantity of its investment and thereby, achieve their focused desired objective. Investment management of a bank is guided by the investment policy adopted by the banks which helps then in the investment operation of the banks to be efficient and profitable by minimizing the inherent risk. Investment policy comprises the set of guidelines and procedures that direct the long-term management of the investment. However, the fundamental principles of the commercial banks like the volume and quality of deposit, loan and investment are to be considered while making the investment policy. Besides the formulation of sound lending policies for all banks should have adequate and careful consideration over the community needs, size of loan portfolio, charter of loan, credit worthiness of borrower and assets pledged security borrowing, interest rate policy, etc.

A good banker is one which follows a profound investment policy which brings maximum profit to share holders and provides maximum security to the depositors. It will focus on the concept and importance of the investment policy in the banking area especially in the commercial banks, banking in Nepal. Commercial banks, overview of the selected banks.

1.2 Focus of the Study

Banks have today gained paramount trust of the public. Banking industry offers a wide range of services addressing the needs of public in different walks of life. At present, a large number of banks are operating in Nepal; naturally, they are rendering a wide range of services. They are trying to keep up pace with the changes taking, place in the world. But quantity does not count for quality. The financial institution of all classes 'A' to 'D' are increasing every year. In a small economy like Nepal, it is a question of great concern as to how so many banks are servicing and

reaping profit. The concern is not only about these days but also the sustainability of the operating banks in future days also. Therefore, the report will try to concentrate on Ten major private/Government sectors banks of Nepal, i.e. Bank of Kathmandu Ltd (BOK), Everest Banks Ltd (EBL), Nepal SBI Bank Ltd. (NSBIL) , Himalayan Bank Ltd. (HBL), Standard Chartered Bank Nepal Ltd (SCBNL), Nepal investment Bank Ltd (NIBL), Nabil Bank Ltd, Kumari bank limited, Nepal Industrial and commercial bank limited (NIC). It will focus on the comparative profit accounting to these nine banks regarding profitability, liquidity, leverage positions cost minimization etc.

1.3 Statements of the Problems

Banking business in Nepal through seemed developed and mushroomed only in urban area of the country in recent days, has its own limitations and problems as regards to security, profitability and financial soundness. Currently there are 33 commercial banks under 'A' class financial institutions operating in the country. The inflow of money in the banks in the form of several kinds of deposits is huge but it could not be invested in more profitable sustainable and riskless projects. In addition, many banks are found centered in the urban areas of the country. Therefore, there is a situation that needy people and small entrepreneurs residing in rural areas are still deprived from institutional credit. However, this study will not go to this vast and thus focus only on the level and quality of deposit mobilization of the ten sampled banks as regards to profit earning capacity or status of profitability.

Investment is the most important factor from the shareholder's and banks' management point of view. Though several commercial banks have been established in our country within short period of time, sufficient return cannot have been earned and strong, stable and appropriate investment policy has not been followed by the commercial banks. Due to throat-cut competition of financial environment, banks seem to be ready to grant much more loan, advances and other facilities against their client insufficient deposit. However, subsequent development of commercial banks in quality has not been satisfactory. Majority of the commercial banks is found to be unsatisfactory. The financial loss and managerial responsibilities of their ailing units have to be done by the government. But private banks are running successfully. The commercial banks are not interested in granting loan to the primary sectors of the economy. Banking is not being easy accessibility of public in remote village area. Private Banks have concentrated their

operation mainly in town and capital of the country. The present study will try to analyze and examine the investment policy of respected banks. Each and every commercial bank should not run successfully without the conceptual frame work of investment policy.

In developing countries like Nepal commercial banks have been facing several challenges, some of them are arising from lack of smooth functioning of the economy, some of them are arising due to confused policy and many of them are arising due to default of the borrower. Liberalization in the economy has produced some degree of opportunities and more than it had created chaos and uncertainty. The liberalization of financial sectors demands a new technology of lending to cope with the risky pressures on the profitability of the banks and financial sector institutions.

1.4 Objective of the Study

The major objective of the study will be examine, identify analyze study and evaluated the investment policy and the fund mobilization of the commercial banks in Nepal and as the sample for the study we take selected commercial banks of Nepal-in the analysis using the different financial and statistical tools.

The specific objectives are as follows:

1. To evaluate the liquidity, asset management, profitability and risk position of the banks under study.
2. To analyze the trends of most influential terms to the investment policy of the bank (i.e. total deposit, total investment and net profit under which the conduct various activities.)
3. To provide suggestions, guidance's and appropriate recommendations on the basis of major findings.

1.5 Significance of the Study

The present study is to find out the investment policy and practice of the commercial bank in Nepal. Any bank can perform its lending behavior only when it has sufficient amount to lend it. So first, it should be able to collect sufficient amount in the form of deposits from different sectors.

In Nepal, there are very few resources, which have been made in the area of investment policy of commercial banks. Due to this reason, only few books and resources dealing with this aspect are found but are not sufficient. Whatever the research in the area of investment policies have been made are also not in depth and detailed.

Investment policy is one of the essential and the main functions where the whole banking business is related thus, the study on the major commercial banks and especially in their lending and investment policies carry a great significance to the share holders of banks to the banking professionals, to the students and teachers of banking and commerce. It is expected that this Study will provide some relevant findings, which may help the bankers, professional and interested readers too.

1.6 Limitation of the Study

In the context of Nepal, data availability is the major problem for any purpose-that may be because of the poor document handling management or due to the wretched response for the concerned people when asked for any information.

This study is simply a partial requirement of MBS program and the limitations faced while doing this study are as follows:

- Only the available secondary data will analyzed for the interpretation of any result and the decisions will primarily be depending on the reliability of the secondary data available.
- The sample taken for the study may not represent the whole population of the commercial bank in Nepal.
- The study will analyze the data and information of five years. A consolidate trend for five years will not be sufficient for the research accurate projection.
- The data are modified as per the study.
- Lastly, the time factor is the major limitation of this study as this has to be completed within a short period of time.

1.7 Organization of the Study

The whole study comprised of the five different consecutive parts as mentioned below:

Chapter I: Introduction

This chapter comprises of general background, focus of the study, introduction of commercial banks the study, significance of the study, objective of the study, limitations of the study and organization of the study.

Chapter II: Review of the Literature

This part deals with the reviewing of the various literatures, definitions and concept of investment policy. This also consists of the review of the related studies, journals articles and review of books concerned to investment policy.

Chapter III: Research Methodology

This part consists of research design, total population and sample of the study, nature and sources of the data collection procedures and the analytical tools and techniques used in the study.

Chapter IV: Presentation and Analysis Data

This part constitutes the tabular and graphical representation of the collected data, their interpretation and analysis using various financial as well as statistical tools. A part for it summary of the major findings is also presented at the end of the chapter.

Chapter V: Summary, conclusion of Recommendations

This chapter contains the summary of the whole study and relevant contains the summary of the whole study and relevant conclusions were drawn based on the study. A suitable set of recommendations were made at the end of the chapter.

Finally an extensive appendices and bibliography are presented at the end of this study.

CHAPTER –II

REVIEW OF LITERATURE

In this chapter focus has been made on the review of literature that is relevant to the investment policy of commercial banks. Review of literature is basically a stock taking of available literature in the field of research. Every possible effort has been made to gap knowledge and information that is available from libraries, document collection centers, other information magazine bureaus and concerned commercial banks. This chapter helps to take adequate feed back to broaden the information base and input to the study. The first section of the chapter implies the conceptual framework of the study and the second section implies the review of previous studies. Therefore this chapter has its own important in this study.

- Conceptual review
- Review of related studies

2.1 Conceptual Review

A commercial bank is business organization that receives and holds deposit of fund from others, makes loan or extend credits transfer fund by written order of deposits (Grolier incorporate, 1984)

Commercial bank Act of Nepal (1974) has defined commercial banks in following way “commercial banks means a bank which operates currency, exchange transaction, accepts deposit, provided loan and perform dealing relating to commerce and other than those banks which have been specified for the co-operative, agriculture, and industry of likely other special objectives. The commercial banks are established under the commercial banks Act, 1974 in Nepal that has been amended regularly. It has been amended for six times till today. Now commercial bank Act 1992 is active.

The main function of commercial bank is the accumulation to the temporary idle money of general public for trade and commerce. Its main functions are accept deposit and

grants loan, exchange and purchase and discount bill for promissory notes exchange foreign currency to provide loan, agency function .Overseas trading services and information and other services. Commercial banks earn profit by proper mobilization of their resources. Many commercial banks have been established to provide a suitable service according to their customers.

2.1.1 Concept of commercial bank:

Before defining the term commercial bank, let us define the meaning of bank and commercial. According to S&S definition of banks, a banker or bank is a person or company carrying on the business of receiving money and collecting cheque drawn upon them from time to time by the customer to the extent of the amount available on their customer (Shekher&Shekher, 1999:4).

Commerce is the financial transactions related to selling and buying activities of goods and services. Therefore commercial banks are those banks, which work from commercial viewpoint. They perform all kinds' creation and agency functions. They provide short-term credit, medium term credits and long terms credit to trade and industry. They also operate off balance sheet functions such as issuing guarantee, bonds, letter of credit, etc. Commercial bank acts as an intermediately; accepting deposits and providing credits to the needy area. The main source of the commercial bank is current deposit, so they give more importance to the liquidity of investment and as such they specialize in satisfying the short- term credit needs of business other than the long-term. Commercial banks are restricted to invest their funds in corporate securities. Their business is confined to financing the short-term needs of trade and industry such as working capital financing. They cannot finance in fixed assets. They grant credits in the form of cash credits and overdrafts. Apart from financing, they also render services like collection of bills and cheques, safe keeping of valuables, financial advising, etc to their customers (*Vaidhya; 1999:7*).

Commercial banks are organized as a joint stock company system, primarily for the purpose of earning profit. They can be either of the branch banking types as we see in most of countries, with a large network branches like in Nepal or of the unit banking type, as we see in the United States where a bank's operations are confined to a single office or to a few branches within a strictly limited area.

The commercial banks are those banks that pool together the savings of community and arrange for their productive use. They activate the idle money to the different productive areas. They supply the financial needs of modern business by various means. Most of the banks in the world are found established with a view to finance and help in developing trade, industry and commerce. In fact, commercial banks can be defined according to the function they perform. Commercial banks can accept deposits and also provide loan primarily to business firms thereby facilitating the transfer of funds in the economy.

2.1.2 Feature of the Sound Lending and Investment Policy

The income and profit of the banks depends upon its lending procedures, lending policy and investments of its funds in different securities. In many causes a sound lending and investment policy is not only pre-requisite for the promotion of commercial saving of backward country like Nepal.

- **Liquidity**

Liquidity is the ability of a firm to satisfy its short term obligations when they become due for payment. People deposit money at the bank in different account with confidence that the bank will repay their money when they need. To maintain such confidence of the depositors, the bank must keep this point in mind. While investing its excess fund in different securities, so that it can meet current or short term obligation when they because due for payment.

- **Profitability**

A commercial bank can maximize its volume of wealth through maximization of return on their investment in lending. So, they must invest their fund where they can gain maximum profit. The profit of commercial banks depends on the interest rate, volume of loan, its time period and nature of investment in different securities.

- **Safety and Security**

The bank should never invest its funds in those securities which are too volatile i.e. which are subject to too much depreciation and fluctuations because a little difference may cause a great loss. It much not invest its fund into speculative businessman who may be bankrupt at once and who may earn million in a minute also. Security means

adequate collateral having good value which can be easily sold off it required at any point of time. The bank should accept that type of securities, which are commercial durable and marketable having fair market value for this purpose 'MAST' should be applied while reaching an investment decision where MAST stands for

M= Marketability.

A= Ascertain ability.

S= Stability.

T= Transferability.

Bank deals with customer is money so it must take care the belonging of public the risk and return involved must be analysis thoroughly so that depositors money is advance safety where the risk of followed while we arrive in decision regarding the advances of fund. The three 'C' stand for

Character

Capacity

Capital

- **Suitability**

Banks should always know that why a customers need loan because if the borrower misuse the loan granted by bank he will never be able to repay loan. In order to avoid such circumstance advances should be allowed to select the suitable borrowers and it should demand all the essential detailed information about the scheme of the project in which the bank is lending for. Bank must keep in mind the overall development plans of the nation and the credit policy of the concern authority i.e. central bank.

- **Purpose of Loan**

From the view print of security a banker should always be known that why a customer is in need of loan. If a borrower misuses the loan granted by the bank it can never repay and bank will process heavy bad debts. Therefore in order to avoid this situation each and every bank should demand examine all the essential detailed activities, before lending.

- **Diversification**

“A bank should not lay all its eggs on the same basket”. This saying is very important to the bank and it should always be careful not to grant loan in only one sector. To minimize risk, a bank must diversify its investment on different sectors. Diversification of loan helps to sustain loss according to the law of average because if securities of a company deprived, there may be appreciation in the securities of other companies. In this way the loss can be minimized or recovered.

- **National Interest**

In addition to its own profitability the bank should also consider the national interest. Even though the bank cannot get maximum return from such investment it should carry out its obligation towards the society and the country. The bank is required to invest on such sectors as per the government and Nepal Rastra Bank’s instruction. Investment on government bonds, priority and deprived sector lending are the examples of such investments.

- **Legality**

Illegal securities will bring out many problems for the investor. A commercial bank must follow the rules and regulations as well as different directives issued by the central bank (Nepal Rastra Bank), Ministry of finance, Ministry of law and other relevant authorities while mobilizing its funds.

2.1.3 Invest Management Functions

Every investment is not risk free so the investment must be made in such a way so that the risk is diversified. According to this book the investment can be made on securities such as treasury bins long term bond common stocks. The focuses of supply and demand inter act to determine a security market price. A security market is a mechanism for bringing together buyers and sellers of financial assets in order to facilitate trading. The investment decision has go through the following process. (Sharpe, Alexander & Bailey,1999).

- **Set Investment Process**

Setting the investment policy involves determine the investors objective and amount of

wealth tax consideration etc because there is a positive relationship between risk and return for deniable investment.

- **Portfolio Construction**

Portfolio construction involves identifying those specific assets in which to invest and what proportion the investors wealth portfolio construction involves the diversification which minimizes the risk.

- **Portfolio Revision**

The revision of portfolio is done from time to time. Due to changing partner of risk the portfolio revision are done to minimize the risk.

- **Security Analysis**

Security analysis involves examines the number of securities. The purpose of analysis is to check whether the securities are missing priced. Technical analysis, the analysis conducted on the basis of past history to predict future trend and fundamental analysis that calculates the intrinsic values of share are conducted. Fundamental analysis, tries to identify the real or true value of financial assets.

2.2 Review of Related Studies

2.2.1 Review of Books

Baidya (1967), has given his view on sound investment policy. He has said that “A sound investment policy of a bank is such that its funds are distributed of different types of assets with good profitability on the one hand and provides maximum safety and security to the depositors and bank on the other hand, moreover risk in banking sectors trends to be concentrated in the loan portfolio when a book gets into serious financial trouble its problem usually spring from significant amounts of loan that have become uncollectable due mismanagement illegal manipulation of loan misguided lending policy or unexpected economic down turn. So the bank investment policy must be such that it is sound & prudent in order to protect public funds”

Chandra (1973), says in this regard. “A banker seeks optimum combination of earning liquidity and safety, while formulation investment policy”.

Emphasizing the important of investment policy H.D. Crosse puts the importance of investment policy in this study. Lending is essence of commercial banking consequently the formulation and the implementation of sound policies are among the most important responsibilities of bank directors and management well conceives lending function effectively and minimize the risk in the rent in any extension of credit the formulate of sound lending policies for all bank should have adequate and care full consideration over community needs size of loan portfolio, character of loan, credit worthless of borrower and assets fledged to security borrowing interest rate.

Bhalla, (1983), has given the basic concept of investment in three points. They are as follows:

Economic investment that is an economic definition of investment. Investment is a more general extended sense which is used by “the man of the street.”

The sense in which are going to be very much interested namely financial investment. “Banks are those institutions which accept deposit from the public and turn provides credit to trade, business and industry that directly makes remarkable impact on the economic development of a country. Hence sound investment policy or a bank is another secret of a successful bank. To collect fund and utilize it in a good investment is a very risk job. Various people have given their view regarding the investment policy of CBS which has been written below.”

The investment policy of the bank helps the investment operation of the bank to be efficient and profitable by minimizing the inherent risk.

Baxley (1987), express his views as “Investment policy fixes responsibilities for the investment deposition of the bank assets in terms allocating funds for investment and loan and establishing responsibility for day to day management of these assets.”

Singh and Singh (1983), the investment policy of banks are conditioned to great extend by the national policy frame works every bankers has to apply his own judgment for arriving at a credit decision, keeping of course, his banker’s credit policy also in hand”.

They further state,” The field of investment is more challenging as it offers relatively greater scope to banker for judgment and discretion in selecting their loan portfolio. But

this higher degree of freedom in the field of credit management is also accomplished greater risk. Particularly during recent years, the credit function has become more complex.”

2.2.2 Review of related journals/ articles

Moriss(1980) explained that, "Latin America's banking system has concluded that the most of the bank concentrate on compliance with central bank rules on reserve requirement credit allocation and interest rate. While analyzing loan portfolio quality, operating efficiency and soundness investment management has largely been overload."

He further adds that mismanagement financial institution has inadequate and overoptimistic loan appraisal tax loan recovery, high risk diversification of lending and investment high risk concentration, connected and inside lending loan mismatching.

Barjacharya (1990) explained that, "monetary policy and deposit mobilization in Nepal." Domestic saving is one of the prime objectives of the monetary policy in Nepal and commercial banks resources in the form of deposit of private sector and providing credit to the investor in different sector of the economy."

Shrestha(1998) explained that, "lending operating of commercial banks of Nepal and its impact on GDP "It has presented with the objectives to make an analysis of 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 dependent variable and various sectors of lending viz. Agriculture industrial commercial, service and general and social sectors as independent variable. A multiple regression technique has applied it analyze the contribution.

The multiple analysis have shown that all the variable except service lending has positive impact on GDP, In conclusion she has accepted the hypothesis i.e. there has been positive impact by the kind of commercial bank in various sector economy, except service sector investment like wise Sunity Sherestha has analyzed, in her "financial performance of commercial banks". Using both describing and diagnostic approach" In her studies, she has concluded the following points:

- The structure of commercial banks shows that bank invest on the average 75 percent of their total deposit on the government securities and the resources.

- The analysis of resource position of commercial banks showed quit high percentage of deposit as cash revenue.
- The debt equity ratio of commercial banks is more than 100 percent in the most of the time period under study period. It leads to concluded that the commercial banks are highly leveraged and highly risk. Commercial banks had higher capital adequacy ratio but has been dealing every day.
- Income of analysis of the management achievement foreign banks have comparatively higher total management index.

Thus comparing all the banks through the time period financial condition and performance are better in commercial banks those other banks.

Pradhan (1999), has pointed out of some major issue on local commercial banks in comparison of recently established joint venture banks through his article, “Nepal Banijya Bank, UpalabdiTathaChunauti.” The study deals with the whole CBS system of Nepal in respect of their performance and profitability. Some of his finding relevant to his study is summarized below.

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

-The pattern of deposit are also different between these banks. The rent of current deposit in local banks is 9.34% only where as in the same joint venture banks is 52.6% but fixed deposit ratio is very high in local banks.

Bista(2001), in his article, “Issue in banking reform” write that “the banks are main vehicle in transferring currency form one country to another commercial bank deal heavily in foreign exchange transactions.”

Sharma, (2000), in his article, “Banking the future of completion has said, “Due to the bank of the investment revenues bank are tempted to invest without proper credit appraisal and on personal guarantee, whose negative side effects would show colors only after 4 or 5 years.” Again he said that private commercial banks have mushroomed only in urban areas where banking transactions in large volume is possible the rural and sub urban areas mostly remain unattended too. This is likely to prevail till competition takes

its fall rain in the urban area.”

Shrestha(2055), in his article “A study on deposit and credits of commercial bank in Nepal” concluded that the credit deposit ratio would be 51 .30% other things remaining the same in 2004 A.D 3 much was the lowest under the period of review. So he had strongly recommended that the commercial bank should try to give more credit entering new field as far as possible. Otherwise they might be able to absorb even its total expenses.

Charles J. Hardlock and Chirstopher M. James (2002). “Do banks provide financial slack?”inthis paper their main hypothesis is that the banks have the ability to accurately price financial claims thus including a preference for undervalued firms to choose bank debts as their marginal financial source. They refer to this escapes that this information benefit will be weighed against the verity of contracting costs in a firms ultimate financing choice since they expect that these firms are the most likely to be undervalued, these financing are consist dent with the presence of and information. Benefit to bank debt finance.

For identify whether the firms weighted these information benefits of bank finance against other contracting costs they examine the variation. In the sensitivity of the bank loan likelihood to their variables measuring potential under valuation they the find that firms with public debt outstanding tend to exhibit a relatively low sensitivity of bank loan likelihood to these variables. .since they accept that the contracting cost of bank debt information benefits of bank debt against the contracting costs.

The result suggest that for firms with public securities marketfor the firms to cross the threshold where the information benefits of bank debt finance outweigh the relatives contracting costs. Agricultural projects center has submitted in their report on where “ongoing evaluation of intensive Banking program in (October 1985)” this study has widely covered the whole aspects of IBP. It says due to the wide net work of commercial banks they have now 346 branches at present and the huge amount of ideal funds estimate at Rs.3226 million in 1984/85 lying with them. The investment of commercial banks in the priority sectors areas seems justified. To generate intensive for commercial

banks, it has necessary to raise the interest rate which would sufficiently cover up the cost leading leave some profit margin as well. As the indirect cost of borrowing small loan between two to three thousand rupees is six percentages some active measure could be taken to dower this rate to compensate the small borrows for the proposed rise in the rate of interest.

Bhattatrai (2002): In his article the start with words like NPA, conflict of interest, well connected defaulter, and political obstruction to describe the commercial banks in Nepal. Mr. Bhattarai quoted the words of the governor to describe the state of banking sector as 'terrible'. also, he quotes one of the donor representatives involved in financial reform as " Nepal has the weakest central bank in the developing world ." as per the author, bankers with patronage could get way with getting anything they wanted approval by the regulator. he quotes Mr. Himalayan SJB bank the first governor of NRB, " only 3 out of 12 governors actually compiled their five year terms in its entire history because they were sacked for undefined exigencies." he also quotes Mr. shaven dev pant, the then executive director of Nabil, " the financial sector is in appalling state."

Mr. Bhattarai says that all the evidences gathered for his article point to one direction the regulatory body, NRB not doing its job properly. He explains that malaise with the financial sector was deep. As an instance, he presents Nabil Bank and its ownership. He bets on the fact the even Nabil Bank shareholders do not know of the bank's owners of the major block of shares. The author experts NRB to disclose this fact if they know about it.

Another example Mr. Bhattarai presents is on the profitability of the banks in the very first year. He questions their profit figures with the given state of ailing economy, where each sector is showing heavy losses. Also the increasing trend of non-performing assets (NPAs) is explained by him is a result of scam. A scam process as explained to him by an NRB official goes like this." you put in rs.50 million to promote a bank and then borrow rs.500 million from it. They are not opening banks to do banking but to siphon loans for themselves. "However, the author is of a view that the new directives issued on oct. 2001 shall improve the situation.

Here, the author has not clearly mentioned of the research methodology. The conclusion is not well supported by data. The article reflects a one side's biased view of the author and the view of NRB on this has not been taken. The conclusion made by the author has not been tasted.

2.2.3 Review of Previous Thesis

Many researchers have published their research article about the investment policy in Nepal. There are many there that have been conducted by students regarding the various in order to achieve aspect of commercial bank and financial institution in order to achieve their goal effectively some of there as supposed to be relevant for the study are presented below.

Bohara (1992), in his study entitled “A comparative study on the financial performance of Nepal Arab bank ltd and Nepal Indosuez banks ltd” for five years from fiscal years 1985/86 to 1889/90. Major findings of his study had made 'endeavor to examine the comparative finance performance of NABIL and NIBL in form of their liquidity activity profitability along with other parameters. He has concluded that bank performance cannot be judged solely in term of profit as it may have earned profit by maintaining adequate liquidity and safety position. But it also be evaluated on the ground of the contribution it has made to the community Government and national economy of on the social and national priority discharged by banks .This means the bank should come forward with national priority tasks i.e. more deposit collection resources mobilization. The tasks are possible when they expand branches more employment opportunities services to more customers developing skills and expertise in local satisfaction on profit earning and exchange of autonomy provide by them. The accountability can be discharge by following their rules regulations directives and priorities.

Pokharel (1983), defined that "Investment put on and policy of RastriyaBanijya Bank" for five fiscal years from 1976/77 to 1981/82 with the objectives of

- To review the present investment policy of "RastriyaBanijya Bank"
- To examine whether the bank has been fully utilize the deposit mobilized or not.
- To established the relationship between deposit loan and advances and the effect on them by the change of interest rate.
- To recommend for the investment in the investment policy.

The research was conducted mainly on the basis of secondary data interview technique has also been use to collect information on the investment policy of the bank. The research major finding of the study are concluded as"

From the study of investment pattern of "RastriyaBanijaya bank" it is obvious that the investment is mainly towards security of gold and silver. From the study it has been revealed that there has never been clear and specific investment policy. In fact the bank is running its business without having any definite direction except following the directives used by the Rastra Bank from time to time in some specific matters. The effect of change in interest rate has neither contributed to raise deposit nor has been favorable in investment extension. The deposit raised by the bank is not properly utilized. This also reflected the lack of definite policy of the RastriyaBanijaya Bank.

Joshi(1982) defined that, "lending policy of commercial bank in Nepal" for five fiscal years from 1975/76 to 1980/81 concluded that commercial banks have collected many resources from people but they are far behind in their utilization. Commercial banks in Nepal are still lazy to play an active role to utilize their resource collected from different sector in accordance with the need of the economy.

Tuladhar (1999), defined that, "A study on investment policy of Nepal grinding bank Ltd. In comparison to other joint venture bank (NABIL and HBL)." For period five years 1992/93 to 1996/1997. The researcher's main objective of study was to fund mobilization and investment policy with respect to fee based off balance sheet transaction and fund based on balance sheet transaction and to evaluate the growth ratios of loan and advances and total investment with respective growth ratios of loan and advances and total investment with respective growth rate of total deposit and net profit.

Through his research Mr. Tuladhar has found that NGBL has successfully maintained the best way both liquidity position and their consistency, among three banks i.e. NGBL, NABIL, HBL. HBL has successfully managed assets to generate income. Income from loan and advances and total investment is the main income sources of NGBL and it can affect the bank's net profit. The researcher had conducted that commercial banks of Nepal are not effectively informative to their clients and commercial banks have given first priority to stricken and deprived sectors and given second priority. The reason behind not providing banking facilities to the rural area is these banks are profit oriented only.

Khadka (2000) explained that "A study on investment policy of NABIL in comparison to the commercial bank of Nepal" for five year period 1994/95 to 1998/99. Major findings are liquidity position of NABIL was worse than that of NGBL and NABIL had more portion of current assets as loan and advances but less portion as investment on government securities. NABIL was

comparatively less successful in one balance sheet operation as well as off balance sheet operation than that of other commercial profitability position of NABIL was comparatively not better than that of other banks. NABIL was more successful in deposit mobilization but failure to maintain high growth rate of profit in compare to NGBL and NICL. He had suggested the commercial banks to be careful in increasing profit in real sense to maintain the confidence of shareholders deposits and customer. He had strongly recommended NABIL to utilize its risk assets and shareholder fund to gain highest profit margin and reduce its expenses and collect chapter fund for more profitability. He had recommended investing its fund in different sector of investment and administering various deposit schemes to collect fund such as cumulative deposit scheme, price bond scheme, gift cheque scheme, house building deposit scheme etc. He had recommended following liberal lending policy and investment more percentage of total deposit as loan and advance.

Pant (2004), explained that "A study of commercial bank deposit and its utilization 40 had made as attempt to highlight the discrepancy between resources collection and resource, utilization. He concluded that commercial banks failure in resource utilization is due to their lending confined to short terms only. So, he recommended the commercial banks to give emphasis also on long and medium term lending for better utilization of the deposits.

Pradhan (1980), in his study entitled "A study on investment of Nepal Bank Ltd" whole study is based on data five year(1975/76 to 1978/79). The major finding are there is a greater relationship between loans and advances. He concluded that though loan advance as well as deposits are increasing trend, increases in loan advances due to the increase in the interest. His recommendation was to grant loans and advances without its length process. He has suggested enhancing banking transition up to rural sector of the kingdom.

Deuja(2004), defined that "A comparative study of the fiancé performance between Nepal State Bank of India Ltd. and Bangladesh Bank". The study is base only the past five year period since 1998/99 to 2002/03. The research is main objective of study was to evaluate the trend of deposits and loan and advances of NSBI and NBBL and to evaluate the liquidity, profitability capital structure turn over and capital adequacy position and NSBIL and NBBL.

Major finding are that the cash and bank balance to current deposit to NABIL are higher while fixed deposit to total deposit, loan and advances to current assets of NBBL and higher and

NBBL has better turnover than NABIL in term of loan and advances to total deposits ratio and loan and advances to fixed deposit ratio where as the loan and advance ration is better NBBL. Further NBBL has better utilization of resources in income generating activity then NSBIL. Thought return on total assets and return on total deposit is better of NSLBIL than NBBL they are on decreasing trend while interest earned to total assets and return on net worth of NBBL is better than NSBI. As per Mr. Deuja both banks are highly leveraged.

Silwal (1980), has conducted a study on “Lending policy of commercial bank in Nepal” with the objective of

- To analyze the role of commercial bank in its historical prospective.
- To identify to major weakness of lending policy of the commercial banks.
- To show the relationship between deposits, loans and advances.

The research was conducted mainly on the basis of secondary data. The research findings of the study summarized as follows.

By paying higher interest rate the banks are increasing deposits, which in run create saving habits of the general people. Then the banks will be able to utilize their idle funds in productive channels. This type of business of commercial banks is relay a necessary one in an agriculture country like Nepal, where public investment has limited capacity.

Effectiveness of lending policy is directly based upon a sounding banking system. But to geographical variation, transportation and other regional disparities, it is very difficult to expand braches in different rural area. So it can be said that commercial banks in Nepal are not plying an active role to utilize their sources collected from different sectors.

Pradhan (1994),in his research,“financial management practices in Nepal” the study is base on only the past five year since 1988/1989 to 1992/93. major objective are of financial management practices in Nepal. To address his issue a survey of 78 enterprises was carried out by distributing a multiple questionnaires. This contained questions on various aspects of financial management practice in Nepal.

The fund that among the several financial function, the most important finance function appeared to be working capital management. While the least important one appeared to be maintaining good relations with stock holder. The major finding are that banks and

retained earnings are the two most widely used financing sources. most enterprise do not borrow one bank loans, less than one year are more popular in public sector where as bank loans of 1-5 years are more popular in private sector. In periods of tight money, the majority of private sector enterprises felt that banks will treat all firms equally while public sector does not feel. So, similarly he concluded that the majority of enterprises in traded sector find that the same is one higher side.

Laudar (2001),has conducted his study entitled, “A study on investment policy of Nepal Indosuez Bank Ltd, in comparison of Nepal state bank of India bank ltd.” The study covers only a period of five year fiscal year ended 1995/96 to 1999/2000. The researcher main objective of study was to examine the liquidity assets management and profitability position and investment policy of NIBL in comparison to NSBI to study the growth ratios of loan and advances and investment to total deposits and net profit of NIBL in comparison to NSBI.

Major finding are the both banks current assets have exceeded the current liabilities therefore the ratio consider satisfactory but there cash reserve ratios have fluctuated in high degree. However NIBL has maintained both current ratio and cash reserve ratio better than that of NSBI. As per Mr. Laudari the assets management ratios shows that deposit utilization of NIBL is less effective than NSBI. He has stated that NIBL has invested lesser amount on government securities and share and debenture than that of NABIL, not only did NIBL a better performance in:

- ❖ Return on total assets and loan and advances.
- ❖ Invest earning but it paid lower interest amount to working fund.
- ❖ The growth ratio of total deposit loan and advances.

2.3 Research Gap

Looking at there all studies it shows that limited studies have been conducted in the area investment policies of between these nine banks. So it is expected that this study will contribute significant role in this area. Hence this study for on the policy and management of investment in these nine banks.

CHAPTER - III

RESEARCH METHODOLOGY

3.1 Introduction

The word research is composed of two syllables, re and search. Re is a prefix meaning again, anew or over again Search is a verb meaning to examine closely and carefully, systematic, patient study and investigation in some field of knowledge, undertaken to establish facts or principles.

Research is structural enquiry that utilizes acceptable scientific methodology to solve problems and create new knowledge that is generally applicable. In simple words, research means to search or study about a phenomenon. The term research is search again and again is called research. Research is the systematic and organized effort to investigate a specific problem that needs a solution. This process of invitation involves a series of well thought out activities of gathering, recording, analyzing and interpreting the data with a purpose of findings answers to the problem. So research is an ongoing and ever-growing activity.

Research methodology is the research method used through the entire study to solve the research problems with certain objectives in view. The research methodology is comprised of tools and techniques used to analyze the data as well as logic behind their application. Research Methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. It is study of various steps that is generally adopted by a researcher, studying his research problem among with the logic behind them. “Research is the process of systematic and in-depth collection, presentation and interpretation or relevant detail or data” (*Michael; 1985:57*).

The basic framework of this study is descriptive as well as exploratory. In order to reach and accomplish the objective of this study, different activities are carried out & different stages are crossed during the study period. For this purpose, the chapter aims to present and reflect the methods & techniques those are carried out & followed during the study period.

3.2 Research Design

Research Design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions & to control variances. Types of research design are follows:

- i. conventional research
- ii. historical research
- iii. action research
- iv. descriptive research
- v. development research
- vi. field study research
- vii. true- experimental research

Basically this study based on descriptive and analytical research design for fact finding and comparative analysis of data. This study also will be based on recent historical data. Mostly, secondary data & information to be collected, evaluated, verified & synthesized to reach a conclusion. To achieve the objective of this study descriptive data different journals & articles relevant with the study, annual reports of different fiscal years of concerned banks, NRB Directives; banking & financial statistics reports published by NRB & other related material are collected & studied. With the help of descriptor & research design, the study evaluates the credit management of commercials banks.

3.3 Population and Sample

There are altogether 33 commercial banks functioning all over the country at present, which are taken as a population of this study work. Among them, this study comprises nine commercial banks namely; BOK, EBL, NSBIL, HBL, SCBNL, NIBL, NABIL, KBL, NIC. This has been selected as a sample by using random sampling method for this study.

3.4 Sources of Data

This study is mainly based on secondary data. Secondary data are collected from respective annual report. Similarly, articles, journals, bank bulletins, newspaper related to finance performance study, previous research report etc, have also been taken into account while collecting information.

3.5 Methods of Data Analysis

Mainly financial methods are applied for the purpose of this study. Appropriate statistical tools are also used. Among them correlation analysis regarded as major one is used for this research.

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

3.5.1 Financial Tools

3.5.2 Statistical Tools

3.6 Financial tools

Financial tools are used to examine the financial strength & weakness of the bank. In this study, following financial tools are used:

A. Liquidity Ratio

Liquidity ratios measure the firm's ability to meet its current obligations. It is the measurement of time within which a bank's assets can be converted into cash to meet deposit withdrawal and other current obligations. A bank should ensure that it does not suffer from lack of liquidity and also it does not have excess liquidity. Both conditions of liquidity are not in favorable to the bank.

The following ratios are evaluated under liquidity ratios

i. Current Ratio

A ratio between assets and current liabilities is known as current ratio. It shows the relationship between current assets and current liabilities. Current assets are those assets, which can be converted into cash within short period of time, normally not exceeding one year. Current liabilities are those obligations which are payable within a short period normally not exceeding one year.

Mathematically it is represented as:

$$\text{Current Ratio} = \frac{\text{Total Current Assets}}{\text{Total Current Liabilities}}$$

Higher the current ratio better is the liquidity position. The traditional standard of current ratio is 2:1 but accurate standard depends in circumstances in case of seasonal business

this ratio measures the bank's short-term solvency i.e. its ability to meet short-term obligations. As a measure of creditors versus current assets it indicates each rupee of current assets available for each rupees of current liability.

ii. Cash and Bank Balance to Total Deposit Ratio

Cash and bank balance are the most liquid current assets. This ratio measures the percentage of most liquid fund with the bank to make immediate payment to the depositor. This ratio is calculated by dividing the cash and bank balance by the amount of total deposits. Mathematically it is expressed as,

$$\text{Cash and bank balance to total deposit ratio} = \frac{\text{Cash and Bank Balance}}{\text{Total Deposit}}$$

Hence, cash and bank balance includes cash at vault (Including local and forging currencies). Balance with other banks at Nostrum Account is including current deposits, saving deposits, fixed deposits, money at call and short notice and other deposits.

iii. Cash and Bank Balance to Current Assets Ratio

This ratio measure the proportion of most liquid assets i.e. cash and balance among the total current assets of the bank. Higher ratio shows the bank's ability to meet its demand for cash.

This ratio is calculated by dividing cash and bank balance by current assets.

Mathematically it is expressed as.

$$\text{Cash and bank balance to current assets ratio} = \frac{\text{Cash and Bank Balance}}{\text{Current Assets}}$$

iv. Investment on Government Securities to Current Assets Ratio

Investment on government securities includes treasury bills and development bonds etc.

This ratio is calculated to find out the percentage of current assets invested in government securities.

This ratio is calculated by dividing investment made on government made on government securities by current assets.

Mathematically it is expressed as,

Investment on government securities to current assets ratio

$$\frac{\text{Investment on Government Securities}}{\text{Current Assets}}$$

B. Asset Management Ratio

Assets are the profit generating fund of any institution if managed properly. Hence a bank should efficiently utilize its assets to generate extra income earn interest from the deposit as well to contribution to its profit. Asset management ratio shows how will the financial asset of banks have been utilized, to what extent and where hence it is also known as turnover ratios. These ratios are based on the relationship between the level of activity. This is represented by sales or cost of goods sold and the levels of different assets. The proper management of the assets leads to the efficiency of a banks' performance which contributes to its profit. The measurement of efficiently of the management of the asset can be determined by various calculations under this ratio like:

i. Loan and Advances to Total Deposit Ratio

This ratio shows the mathematical relationship between the total deposit of a bank and its use as loan and advances. Loan and advances are the major source of income for a bank which highly influences its profit margin. This ratio shows how effectively a bank is utilizing its different deposit collected on loan and advances for profit generating motive. Here, greater of this ratio implies that there is better utilization of its deposit under the profit motive.

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

ii. Total investment to total Deposit Ratio

This show the mathematical relationship of the total deposit of a bank and its investment. Higher the ratio-higher effectiveness in the mobilization of its total deposit is seen.

$$\text{Total Investment to Total Deposit Ratio} = \frac{\text{Total Investment}}{\text{Total Deposit}}$$

iii. Investment on Government security to total Asset Ratio

The commercial banks are interested to invest their funds collected in various government securities issued by government. The government securities are the safest place to

make investment. But the government securities are not so much liquid as cash and bank balance. They can be easily sold in the market or they can be converted into cash in other ways. The main purpose of this ratio is to examine that portion of a commercial bank's current asset that is invested on different government securities.

Investment on Government Securities Current Asset Ratio =

$$\frac{\text{Investment on Government Securities}}{\text{Current Asset}}$$

C. Profitability Ratio

Profitability ratios are designed to show the end result of business activities. These ratios are the resultant of the pattern of liquidity ratios, asset management ratios and debt management ratios. Hence higher profitability ratios show greater efficiency of the bank. Here the profitability aspect of the bank is shown through the calculation of following ratios.

i. Return on Loan and Advances

This ratio shows the mathematical relationship between the net profit and loan and advances. Here higher return on loan and advances indicates efficient management of loan and advances vice-versa.

$$\text{Return on Loan and Advances} = \frac{\text{Net profit (loss)}}{\text{Loan and Advances}}$$

iv. Return on Total Assets

Return on total asset is also called return on investment because bank generates profit by utilizing its assets in different sectors. However the bank should maintain the optimum level of utilization of its total asset (working fund) so that it generates highest level of profit and maintain its liquidity at the same time. Here higher ratio shows better utilization of its assets in terms of generating profit.

$$\text{Return on Total Assets} = \frac{\text{Net profit (loss)}}{\text{Total Assets}}$$

iii. Net Profit to Total Deposit Ratio

This ratio is used for measuring the internal rate of return from deposits. It is computed by dividing the net profit by total deposits. The following formula is used as:

$$\text{Net Profit to Total Deposit Ratio} = \frac{\text{Net Profit}}{\text{Total Deposit Ratio}}$$

Higher ratio indicates the return from investment on loans and advances are desirable and lower ratio indicates the funds are not properly mobilizing

D. Risk Ratio

Risk is an inevitable and unavoidable factor in any business. It is the prime factor which makes the business interesting and what pulls the profit. In brief we can say that the proper management of the risk factor increases the effectiveness and the profitability of the bank. Here we have taken those ratios into consideration which is associated with the various operations of the banks which ultimately influences the bank and its investment policy.

i. Credit Risk Ratio

Credit risk ratio is expressed as the percentage of non-performing loan to the total loan and advances. It deals with the uncertainty that all the loan and advance to be repaid with its interest on it.

Hence the banks should measure the risk in granting loan and advances with the help of credit risk ratio, since this ratio shows the possibility that the loan will not be repaid or the investment made will go default with the consequent loss to the bank.

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

ii. Liquidity Risk Ratio

Investment is an important aspect of any bank-no doubt, but the maintenance of the liquidity cannot be neglected either. Hence the liquidity risk is not a marketability risk but a possibility that the bank may go short of its liquid assets knowing of the this ratio is important because a bank should always be able to have trust with its customers and depositors who are the sources of their funds. Liquidity risk ratio measure the level of risk associated with the liquid assets of the bank for the purpose of fulfilling the demand of the depositors on their call. It shows

the mathematical relationship between the total deposit of the bank and its most liquid asset-cash and bank balance

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

3.7 Statistical Tools

Several numbers of statistical tools can be employed to examine the financial data of NIBL & BOK. Some of the statistical tools that are used for the purpose of this study are presented below;

i. Arithmetic Mean

Most of the times when we refer to the "average" of something, we are talking about its arithmetic mean. To find out the arithmetic mean, we sum the values & divide by the number of observations. The mean can be calculated as;

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

Where,

N = Number of elements in the sample

$\sum X$ = Sum of values of all observations

ii. Standard deviation:

The standard deviation is the square root of the average of the squared distances of the observations from the mean. It enables us to determine, with a great accuracy, where the values of a frequency distribution are located in relation to the mean. To compute the sample standard deviation, we use the following formula;

$$\text{S.D. } (\sigma) = \sqrt{\frac{\sum (X - \bar{X})^2}{N}}$$

Where,

σ = Standard Deviation

S.D. =Standard deviation

X = Value of each of the n observation

\bar{X} = mean of the sample

iii. Karl Pearson's Correlation Coefficient :

The Karl Pearson's correlation coefficient is one of the widely used mathematical methods of calculating the correlation or relationship between two different variables. This method summary in one figures the degree of relationship as well as direction. It is simply denoted by "r" & it can be calculated by using the following formula;

$$\text{Correlation Coefficient (Simply, r)} = \frac{n \sum XY - \sum X \sum Y}{\sqrt{[n \sum x^2 - (\sum X)^2] [n \sum Y^2 - (\sum Y)^2]}}$$

iv. Probable Error

The probable error of the coefficient of correlation is very useful for interpreting value of coefficient of correlation. It helps to determine the reliability value of the coefficient of correlation

$$\text{P.E.} = 0.6745 \frac{1-r^2}{\sqrt{n}}$$

Where,

r = coefficient of correlation

n = No. of pairs of observation

P.E. = Probable error

It is used in interpretation whether calculated value of r is significant or not. If $r < \text{P.E.}$, it is in significant, so perhaps there is no evidence of correlation

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

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

The data collected from various sources have been presented and analyzed in the chapter, since, the conclusions to be drawn and recommendations to be made in this study are based on the presentation and interpretation of data analyzed in this chapter.

4.1 Financial Analysis

The main focus of this chapter is to study, evaluate and analyze various financial performance that are mainly related to the investment management and fund mobilization of Nabil bank Ltd, NIBL, SCBNL, HBL, NSBIL, EBL, BOKL, NIC, KBL, Many different types of ratios are found to be helpful, but only those ratios that are related to the evaluation of fund mobilization and investment are only calculated. The main ratios that are studied are:

- A. Liquidity ratio
- B. Asset management ratio
- C. Profitability ratio
- D. Risk Ratio

4.1.1 Liquidity Ratio

A commercial bank must maintain its satisfactory liquidity position to satisfy the credit needs of the community, to meet demands for deposits with draws, pay maturity obligation in time and convert non cash assets into cash to satisfy immediate needs without loss to bank and consequent impact on long run profit. This includes.

4.1.1.1 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 indicates the bank's ability to meet the daily cash requirement of their customer's 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. It can calculate as follows:

$$\text{Cash and Bank Balance to current asset Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Current Assets}}$$

Table 4.1

Cash and bank balance to current assets ratio

(Rs. In '000')

Fiscal Year		2007/08	2008/09	2009/10	2010/11	2011/2012	Average
NABIL	C & BB	2671141	3372512	1400098	2458550	4294046	0.070
	C.A.	30383336	34218848	43563214	50645113	51202533	
	Ratio	0.088	0.099	0.032	0.049	0.084	
NIBL	C&BB	3754942	7918004	6815890	8140371	11803749	0.15
	C.A.	34183441	47081164	51445486	53389874	59544263	
	Ratio	0.11	0.17	0.13	0.15	0.20	
SCBNL	C&BB	2050243	3137164	1929307	2975795	6366231	0.10
	C.A.	26473429	28744145	28125843	35754876	35863767	
	Ratio	0.077	0.11	0.069	0.083	0.17	
HBL	C & BB	1448143	3048527	3866491	2964651	6362294	0.087
	C.A.	29265514	33551892	36665374	41504357	49430443	
	Ratio	0.049	0.091	0.105	0.071	0.12	
SBI	C&BB	1342960	1903906	3441261	4877826	5508381	0.12
	C.A.	16741165	20310768	25044393	31442328	36298317	
	Ratio	0.080	0.094	0.14	0.16	0.15	
EBL	C & BB	2667972	6164371	7818815	6122863	10363305	0.17
	C.A.	24967251	33912640	38656637	42777517	50521165	

	Ratio	0.11	0.18	0.20	0.14	0.21	
BOK	C & BB	1440467	2182112	1798367	1678931	3382709	0.098
	C.A.	15411316	18202621	21784230	23159031	27136154	
	Ratio	0.093	0.12	0.083	0.072	0.12	
NIC	C & BB	1192349	1461151	2086130	1677057	2755389	0.099
	C.A.	14117341	17438198	17958789	195493321	23568964	
	Ratio	0.084	0.084	0.12	0.086	0.12	
KBL	C & BB	933842	1776299	2723829	1168524	3722626	0.10
	C.A.	13940855	17662426	19462305	19229078	24158556	
	Ratio	0.067	0.10	0.14	0.061	0.15	
Total Average of nine sample banks							0.0994

According to the table-4.1 depicts that the ratios of cash and bank balance to current assets of all nine sample banks. The ratio of cash and bank balance to current assets of all nine sample banks are going fluctuating trend sometime up and sometimes going down. The NIBL and EBL is highest ratio of cash and bank balance to current assets both sample banks are same ratio and HBL is lowest ratio in FY 2007/08. The EBL is highest ratio of cash and bank balance to current assets and NIC is lowest ratio in FY 2008/09. The EBL is highest ratio of cash and bank balance to current assets and NABIL is lowest ratio in FY 2009/10. The SBI is highest ratio of cash and

bank balance to current assets and NABIL is lowest ratio in FY 2010/11. The EBL is highest ratio of cash and balance to current assets and NABIL is lowest ratio in FY2011/2012 of the study period.

From the analyzing table it can be seen that the cash and bank balance with respect to total current assets. The average ratio of EBL is highest and average of NABIL is lowest i.e. 0.070. The total average of nine sample banks is 0.0994 it is satisfactory level, which is higher than the average of KBL, NIBL, SCBNL, SBI, & EBL and lower than the average of NABIL, HBL, BOK & NIC. The position of sample banks is EBL > NIBL > SBI > KBL & SCBNL > NIC > BOK > HBL > NABIL i.e. 0.17 > 0.15 > 0.12 > 0.10 > 0.099 > 0.098 > 0.087 > 0.070. The ratio should not be large, because higher ratio indicates the poor cash management so it can be concluded that NABIL has better than that of other sample banks.

4.1.1.2 Investment on Government Securities to Current Assets Ratio

Investing in government means to bear no risk or minimal risk. Due to the lower risk the return from government securities is also lower. So, higher the investment on government securities lowers the risk and lower returns and vice versa. This ratio examines that the portion of a commercial banks' current assets, which it's invested on different government securities. More or less, each commercial bank interested to invest their collected funds on different securities issued by Government in different times to utilize their excess funds and or for other purpose. Though government securities are not so liquid as cash and bank balance of commercial bank, they can easily be sold in the market or they can be converted into cash in other ways. This ratio shows the percentage of current assets invested on government securities.

The ratio can be expressed as:

Investment on Government securities to current Ratio =

$$\frac{\text{Investment on Government Securities}}{\text{Current Assets}}$$

Table 4.2
Investment on Government Securities to Current Assets Ratio
(InRs. “000”)

Fiscal Year		2007/08	2008/09	2009/10	2010/11	2011/2012	Average
NABIL	IOGS	3788387	1838819	5865885	6489955	4494594	0.11
	C.A.	30383336	34218848	43563214	50645113	51202533	
	Ratio	0.124	0.054	0.134	0.128	0.088	
NIBL	IOGS	3155000	2531300	3911850	3564600	5282960	0.076
	C.A.	34183441	47081164	51445486	53389874	59544263	
	Ratio	0.092	0.054	0.076	0.067	0.089	
SCBNL	IOGS	7157731	9050988	7878573	9309110	7214567	0.265
	C.A.	26473429	28744145	28125843	35754876	35863767	
	Ratio	0.270	0.314	0.280	0.260	0.201	
HBL	IOGS	7166534	3907341	3455030	4725584	6402963	0.139
	C.A.	29265514	33551892	36665374	41504357	49430443	
	Ratio	0.244	0.116	0.094	0.113	0.129	
SBI	IOGS	2762828	2933848	3720592	4682117	3417984	0.140
	C.A.	16741165	20310768	25044393	31442328	36298317	
	Ratio	0.165	0.144	0.149	0.149	0.094	
EBL	IGOS	3237977	3371428	2745277	4745492	3119591	0.094
	C.A.	24967251	33912640	38656637	42777517	50521165	
	Ratio	0.129	0.099	0.071	0.111	0.062	

BOK	IGOS	1281185	907253	2148538	3189874	4046459	0.104
	C.A.	15411316	18202621	21784230	23159031	27136154	
	Ratio	0.083	0.050	0.099	0.137	0.149	
NIC	IOGS	1385248	1973614	2893428	2682640	2387778	0.122
	C.A.	14117341	17438198	17958789	195493321	23568964	
	Ratio	0.098	0.113	0.161	0.137	0.101	
KBL	IGOS	1278195	882519	1522341	2577192	2244985	0.089
	C.A.	13940855	17662426	19462305	19229078	24158556	
	Ratio	0.092	0.050	0.078	0.134	0.093	
Total Average of nine sample banks							0.127

Table No. 4.2 shows that ratio of investment on government securities to current assets of all nine sample banks are going fluctuating trend sometime up and sometimes going down During the study period, SCBNL has maintained highest ratio in fiscal years 2008/09 i.e. 0.314 and lowest in years 2011/12, 0.201 where as SBI has highest ratio in fiscal years 2007/08 i.e. 0.165 and lowest ratio in years 2011/12 i.e. 0.094 and from available Data other banks HBL highest ratio in fiscal years 2007/08 is 0.244 lowest in fiscal years 2009/10 i.e. 0.094. And EBL has highest ratio in fiscal year 2007/08 i.e. 0.129 and lowest ratio in year 2011/2012 i.e.0.062 and total average of nine banks is SCBNL.

In overall, the mean ratio of investment on government securities to total current asset of SCBNL is higher than other nine banks; it means the liquidity position of SCBNL from the point of view of investment in government securities is best.

4.1.2 Asset Management Ratio

A commercial bank must be able to manage its asset very well to earn adequate profit, to satisfy its customers and for its own existence. Asset management ratio measures how efficiently the bank manage the resources at it commends. Through following rations, Asset management ability has been measured.

4.1.2.1 Loan and Advances to Total Deposit Ratio

This ratio assesses to what extent the bank is able to utilize the depositor's funds to earn profit by providing loans and advances. This ratio measures the extent to which banks are successful in utilizing the profit generating purpose. In other words how quickly collected deposits total are converted into loan and advances given to the client to earn income. It is calculated as follows:

$$\text{Loan and Advance to Total Deposit Ratio} = \frac{\text{Loan and Advance}}{\text{Total Deposit}}$$

The following table shows the bank's loan and advances to total deposit ratio.

Table-4.3
Loan and Advance to Total Deposit Ratio

(Rs. In '000')

Fiscal Year		2007/08	2008/09	2009/10	2010/2011	2011/2012	Average
NABIL	L & A	21365053	27589933	32268873	38034097	41605682	0.728
	T D	31915045	37348256	46340701	49608376	55023695	
	Ratio	0.67	0.74	0.70	0.77	0.76	
NIBL	L & A	26996652	36241207	40318308	41095514	41636998	0.782
	T D	34451726	46698100	50094725	50138122	57010603	
	Ratio	0.78	0.78	0.80	0.82	0.73	
SCBNL	L & A	13718597	13679757	15956955	18427270	19575968	0.464
	T D	29473999	35871721	35182721	37999242	35965630	
	Ratio	0.47	0.38	0.45	0.48	0.54	
HBL	L & A	19497520	24793155	27980629	31566976	34965433	0.712
	T D	31842789	34681345	37611202	40920627	47730993	
	Ratio	0.61	0.71	0.74	0.77	0.73	

SBI	L & A	12113698	15131748	17480548	21365771	26142094	0.582
	T D	13715395	27957221	34896424	42415443	53337264	
	Ratio	0.88	0.54	0.50	0.50	0.49	
EBL	L & A	18339085	23884674	27556356	31057691	35910974	0.742
	T D	23976298	33322946	36932310	41127901	50006100	
	Ratio	0.76	0.72	0.75	0.76	0.72	
BOK	L & A	12462637	14647297	16664931	17468194	18813937	0.80
	T D	15833738	18083980	20315834	21018417	24991448	
	Ratio	0.79	0.81	0.82	0.83	0.75	
NIC	L & A	11264678	13679394	12732014	14933939	17242306	0.826
	T D	13084689	15579931	15968918	18394435	22111851	
	Ratio	0.86	0.88	0.80	0.81	0.78	
KBL	L & A	11335088	14593347	14765912	14626074	17614348	0.866
	T D	12774281	15710925	17432253	16986279	21985198	
	Ratio	0.89	0.93	0.85	0.86	0.80	
Total Average of nine sample banks							0.7224

According to the Table-4.3 shows that the ratios loan and advances to total deposit ratios. The loan and advances to total deposit ratio of NIBL, HBL, BOK, NABIL, SCBNL, EBL, SBI, NIC and KBL are fluctuating trend sometimes increasing trend and sometimes decreasing trend. In FY 2007/08 loan and advances to total deposit ratio highest of KBL and lowest ratio of SCBNL. In FY 2008/09 loan and advances to total deposit ratio highest of KBL and lowest ratio of SCBNL. In FY 2009/10 loan and advances to total deposit ratio highest of KBL and lowest ratio of SCBNL of this fiscal year. In FY 2010/11 loan and advances to total deposit ratio highest of KBL and lowest ratio of SCBNL. In FY 2011/12 loan and advances to total deposit ratio highest of KBL and lowest ratio of SBI of this last fiscal year. The average ratio of KBL is higher

than that of KBL>NIC>BOK> NIBL>EBL>NABIL>HBL>SBI>SCBNL i.e. 0.87>0.83>0.80>0.78 >0.74>0.73>0.71> 0.58 > 0.46. The average ratio of six banks KBL, NIC, BOK, SBI, NIBL and EBL are higher than the total average of nine sample banks.

The above analysis helps to conclude that the loan and advance to total deposit ratio or total deposit turnover ratio of KBL is better than that of other sample banks. Because of the lower amount of total deposit, the ratio becomes higher of KBL than NABIL, NIBL, SCBNL, HBL, BOK, EBL, NIC and SBI. KBL is employing the funds more efficiently for the profit generating purpose on loan and advances than other sample banks. NIC, BOK, HBL, NIBL, EBL has also employed its funds quite satisfactorily but SBI and SCBNL is very weak in that respect.

4.1.2.2 Total Investment to Total Deposit Ratio

Commercial banks may mobilize its bank deposit by investing its fund in different securities issued by government and other financial or non financial companies. Now effect has been made to measure the extent to which the banks are successful in mobilizing the total deposit investment. In process of portfolio management of bank assets, various factors such as availability of fund, liquidity requirement, central banks' norms etc. are to be considered in general. A high ratio is the indicator of high success to mobilize the banking funds as investment and vice versa. The ratio is calculating by dividing total investment by total deposit.

$$\text{Total Investment to Total Deposit Ratio} = \frac{\text{Total Investment}}{\text{Total Deposit}}$$

Table-4.4

Total Investment to Total Deposit Ratio

(Rs. In '000')

Fiscal Year		2007/08	2008/09	2009/10	2010/11	2011/12	Average
NABIL	Investment	9966562	10874805	13714512	13085768	14083666	0.28
	TD	31915047	37348256	46340701	49608376	55023695	
	Ratio	0.31	0.29	0.30	0.26	0.26	
	Investment	6874023	7403111	8638530	7425056	10441037	0.17

NIBL	TD	34451726	46698100	50094725	50138122	57010603	
	Ratio	0.20	0.16	0.17	0.13	0.18	
SCBNL	Investment	13927194	20260496	19871886	17283057	12962590	0.48
	TD	29473999	35871721	35182721	37999242	35965630	
	Ratio	0.47	0.56	0.56	0.45	0.36	
HBL	Investment	13340176	8710690	8444910	8769938	10031580	0.26
	TD	31842789	34681345	37611202	40920627	47730993	
	Ratio	0.42	0.25	0.22	0.21	0.21	
SBI	Investment	3088886	13286181	16305632	18911021	24463451	0.42
	TD	13715395	27957221	34896424	42415443	53337264	
	Ratio	0.23	0.48	0.47	0.45	0.46	
EBL	Investment	5061157	5950080	5009907	7745528	7863627	0.18
	TD	23976298	33322946	36932310	41127901	50006100	
	Ratio	0.21	0.18	0.14	0.19	0.16	
BOK	Investment	3206826	2786357	3269204	4286599	5246682	0.18
	TD	15833738	18083980	20315834	21018417	24991448	
	Ratio	0.20	0.15	0.16	0.20	0.21	
NIC	Investment	2311468	3026022	4946777	4868914	3992730	0.22
	TD	13084689	15579931	15968918	18394435	22111851	
	Ratio	0.18	0.19	0.31	0.26	0.18	
KBL	Investment	2138797	1510828	2298345	3533622	2940556	0.15
	TD	12774281	15710925	17432253	16986279	21985198	
	Ratio	0.17	0.097	0.13	0.21	0.13	

Total Average of nine sample banks	2.34
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In the 4.4 table all the bank have fluctuating trend regarding the ratio. During the study, the mean ratio SCBNL is greater than other banks. In average KBL has maintained lower mean value i.e. 0.15 than other banks. SCBNL has maintained the higher mean value of i.e. 0.48.

4.1.2.3 Investment on Government Securities to Total Asset Ratio

The ratio is very important to know the extent to which the banks are successful in mobilizing their total working fund on different types of government securities to maximize the income. All the deposits of the banks should not be utilized in loans and advances and other credit from the point of view of security and liquidity. Therefore, to some extent commercial banks seem to be interested to utilize their deposits by purchasing government securities. A high ratio indicates better mobilization of fund as investment on government securities and vice versa.

This ratio is calculated by dividing investment on government securities by total assets.

Investment on government securities to

$$\text{Total Asset Ratio} = \frac{\text{Investment on Government Securities}}{\text{Total Assets}}$$

Table No. 4.5
Investment on Government Securities to Total Asset Ratio

(Rs. In '000')

Fiscal Year		2007/08	2008/09	2009/10	2010/11	2011/2012	Average
NABIL	IOGS	3788387	1838819	5865885	6489955	4494594	0.088
	TA	37132759	43867398	52079726	58099620	63200298	
	Ratio	0.102	0.042	0.113	0.112	0.071	
NIBL	IOGS	3155000	2531300	3911850	3564600	5282960	0.068
	TA	38873306	53010803	57305413	58356828	65756231	

	Ratio	0.081	0.048	0.068	0.061	0.080	
SCBNL	IOGS	7157731	9050988	7878573	9309110	7214567	0.20
	TA	33335788	40066571	40213320	43810520	41677052	
	Ratio	0.21	0.23	0.20	0.21	0.17	
HBL	IOGS	7166534	3907341	3455030	4725584	6402963	0.12
	TA	36175532	39330132	42717125	46736204	54364427	
	Ratio	0.20	0.10	0.081	0.10	0.12	
SBI	IOGS	2762828	2933848	3720592	4682117	3417984	0.10
	TA	17187446	30916682	38047679	46088234	58059707	
	Ratio	0.16	0.095	0.098	0.101	0.059	
EBL	IGOS	3237977	3371428	2745277	4745492	3119591	0.087
	TA	27149343	36916849	41382761	46236212	55813129	
	Ratio	0.12	0.091	0.066	0.102	0.056	
BOK	IGOS	1281185	907253	2148538	3189874	4046459	0.096
	TA	17721925	20496005	23396192	24757750	28881996	
	Ratio	0.072	0.044	0.092	0.13	0.14	
NIC	IOGS	1385248	1973614	2893428	2682640	2387778	0.11
	TA	15238736	18750633	20309331	22090376	25579528	
	Ratio	0.091	0.105	0.14	0.12	0.093	
KBL	IGOS	1278195	882519	1522341	2577192	2244985	0.084
	TA	15026599	18538565	20522475	20491785	25131400	
	Ratio	0.085	0.048	0.074	0.125	0.089	
Total Average of nine sample banks							0.106

From the above comparative table - 4.5, it is seen that the trends for NABIL, NIBL, SCBNL, HBL, NSBIL, EBL, BOKL, KBL and NIC in the ratio have fluctuating trend. The highest ratio for all has fiscal years 2008/09 of SCBNL. NABIL has highest ratio of 0.113 FY 2009/10 NIBL has 0.081 FY 2007/08, SCBNI has 0.23 FY 2008/09, HBL has 0.20 FY 2007/08 , NSBIL 0.16 FY 2007/08, EBL has 0.12 FY 2007/08, BOKL has 0.14 FY 2011/12 NIC has 0.14 FY 2009/10, KBL has 0.125 FY 2010/11. Fiscal years 2008/09 for NABIL 0.042 Lower ratio, NIBL has 0.048 FY 2008/09, SCBNL has 0.17 FY 2011/12, HBL has 0.081 FY 2009/10, NSBIL has 0.059 FY 2011/12, EBL has 0.056 FY 2011/12, BOKL has 0.044 FY 2008/09, NIC has 0.091 FY 2007/08 and KBL has 0.048 FY 2008/09. The comparative of mean ratio of SCBNL is strong to mobilize its total assets on investment in government securities.

It can be concluded the SCBNL has been more successful in utilizing its fund in government security than other banks and other banks seen to have lower attention toward the investment on government security.

4.1.3 Profitability Ratio

Profit is an important factor that determines the firm's expansion and diversification. Profitability ratios indicate the degree of success in achieving desired profit. Various profitability ratios are calculated to measure the operating efficiency of business enterprises. Through profitability ratios the lender and investors want to decide whether to invest in a particular business or not. This ratio is related as the engine that drives the business and indicates economic progress. Under this study various profitability ratios are developed upon the profit under different circumstances to measure the operating efficiency of these nine sample banks. Different profitability ratios are required to support the purpose of the study so the various ratios have been developed, which have been mentioned below.

4.1.3.1 Net profit to Total Assets Ratio

This ratio is very much crucial for measuring the profitability of all financial resources invested in the bank's assets. It measures the return on assets. It is computed by dividing the net profit after tax by total assets. The formula used for computing this Ratio is as:

$$\text{Net Profit to Total Assets} = \frac{\text{Net Profit}}{\text{Total Assets}}$$

The following table shows the net profit to total assets ratio of nine sample banks.

Table-4.6**Net Profit to Total Assets Ratio**

(Rs. In “000”)

Fiscal Year		2007/08	2008/09	2009/10	2010/2011	2010/2012	Average
NABIL	NP	746468	1031053	1138571	1344179	1696276	0.023
	TA	37132759	43867398	52079726	58099620	63200298	
	Ratio	0.020	0.024	0.022	0.023	0.027	
NIBL	NP	696732	900619	1265950	1176641	1039275	0.019
	TA	38873306	53010803	57305413	58356828	65756231	
	Ratio	0.018	0.017	0.022	0.020	0.016	
SCBNL	NP	818921	1025115	1085872	1119171	1168967	0.0264
	TA	33335788	40066571	40213320	43810520	41677052	
	Ratio	0.025	0.026	0.027	0.026	0.028	
HBL	NP	635869	752835	508798	893115	958638	0.0172
	TA	36175532	39330132	42717125	46736204	54364427	
	Ratio	0.018	0.019	0.012	0.019	0.018	
SBI	NP	247771	316373	391742	464565	480105	0.0105
	TA	17187446	30916682	38047679	46088234	58059707	
	Ratio	0.014	0.010	0.010	0.010	0.0083	
EBL	NP	451219	638733	831766	931304	1090564	0.0188
	TA	27149343	36916849	41382761	46236212	55813129	
	Ratio	0.017	0.017	0.020	0.020	0.020	

BOK	NP	361497	461735	509263	605152	607662	0.0220
	TA	17721925	20496005	23396192	24757750	28881996	
	Ratio	0.020	0.023	0.022	0.024	0.021	
NIC	NP	243058	317434	449844	495704	391779	0.0184
	TA	15238736	18750633	20309331	22090376	25579528	
	Ratio	0.016	0.017	0.022	0.022	0.015	
KBL	NP	174930	258379	316542	251237	275504	0.0128
	TA	15026599	18538565	20522475	20491785	25131400	
	Ratio	0.012	0.014	0.015	0.012	0.011	
Total Average of nine sample banks							0.019

Accord

ing to the Table-4.6 depicts that the net profit of EBL bank are 2007/08 and 2008/09 same ratio as well as in other years increasing same ratio ,SBI, BOK, NIC NABIL, NIBL, SCBNL, HBL, and KBL banks are fluctuating trend. . The overall profitability i.e. net profit to total assets ratio highest in FY 2007/08 of SCBNL and lowest ratio of KBL. The net profit to total assets ratio is highest in FY 2008/09 of SCBNL and lowest ratio in this year of SBI. The net profit to total assets ratio is highest in FY 2009/10, FY 2009/10, and FY 2010/11 of SCBNL and SBI is lowest ratio in all three fiscal years.

The average ratio of SCBNL is greater than other eight sample banks. The position on sample banks are SCBNL>NABIL>BOK>NIBL&EBL>NIC>HBL>KBL>SBI i.e. 0.0264>0.023>0.0220>0.019>0.0184>0.0172>0.0128>0.0105. The total average of nine sample banks is 0.019. The average of SCBNL, NABIL, BOK are greater than total average of nine sample banks and the average of NIBL&EBL are equal to total average of nine sample banks. The average of NIC, HBL, KBL, SBI are lower than total average of nine sample banks.

The above analysis is helps to conclude that overall profitability of SCBNL is better than eight other sample banks. It implies that SCBNL is more efficiently using its working fund of assets to earn higher rate of profit. NABIL, BOK, NIBL and EBL has also used its working fund of assets quite satisfactorily but NIC, HBL, KBL and SBI is weak in utilizing its working funds of assets.

4.1.3.2 Net Profit to Total Deposit Ratio

This ratio is used for measuring the internal rate of return from deposits. It is computed by dividing the net profit by total deposits. The following formula is used as:

$$\text{Net Profit to Total Deposit Ratio} = \frac{\text{Net Profit}}{\text{Total Deposit}}$$

The following table shows the net profit to total deposit ratio of nine sample banks.

Table-4.7

Net Profit to Total Deposit Ratio

(Rs. In '000')

Fiscal Year		2007/08	2008/09	2009/10	2010/2011	2011/2012	Average
NABIL	NP	746468	1031053	1138571	1344179	1696276	0.0268
	TD	31915045	37348256	46340701	49608376	55023695	
	Ratio	0.023	0.028	0.025	0.027	0.031	
NIBL	NP	696732	900619	1265950	1176641	1039275	0.0210
	TD	34451726	46698100	50094725	50138122	57010603	
	Ratio	0.020	0.019	0.025	0.023	0.018	
SCBNL	NP	818921	1025115	1085872	1119171	1168967	0.030
	TD	29473999	35871721	35182721	37999242	35965630	
	Ratio	0.028	0.029	0.031	0.029	0.033	
HBL	NP	635869	752835	508798	893115	958638	0.0196
	TD	31842789	34681345	37611202	40920627	47730993	
	Ratio	0.020	0.022	0.014	0.022	0.020	
	NP	247771	316373	391742	464565	480105	

SBI	TD	13715395	27957221	34896424	42415443	53337264	0.0120
	Ratio	0.018	0.011	0.011	0.011	0.009	
EBL	NP	451219	638733	831766	931304	1090564	0.0212
	TD	23976298	33322946	36932310	41127901	50006100	
	Ratio	0.019	0.019	0.023	0.023	0.022	
BOK	NP	361497	461735	509263	605152	607622	0.0248
	TD	15833738	18083980	20315834	21018417	24991448	
	Ratio	0.023	0.023	0.025	0.029	0.024	
NIC	NP	243058	317434	449844	495704	319779	0.0224
	TD	13084689	15579931	15968918	18394435	22111851	
	Ratio	0.019	0.020	0.028	0.027	0.018	
KBL	NP	174930	258379	316542	251237	275504	0.0152
	TD	12774281	15710925	17432253	16986279	21985198	
	Ratio	0.014	0.016	0.018	0.015	0.013	
Total Average of nine sample banks							0.0214

According to the Table-4.7 depicts that the net profit to total deposit ratios. The overall profitability i.e. net profit to total deposit ratio of EBL, BOK, SBI, NABIL, NIBL, SCBNL, HBL, NIC, and KBL are going fluctuating trend. In FY 2007/08 highest net profit to total deposit ratio of SCBNL and KBL are lowest ratio. In FY 2008/09, 2009/10, 2010/11 & 2011/12 highest net profit to total deposit ratio of SCBNL and SBI is lowest ratio of the study period.

The average ratio of SCBNL is greater than eight other sample banks. The position is SCBNL>NABIL>BOK>NIC>EBL>NIBL>HBL>KBL>SBI i.e. 0.030>0.0268>0.0248>0.0224>0.0212>0.0210>0.0196>0.0152>0.0120. The total average of nine sample banks is 0.0214. The average ratio SCBNL, NABIL, BOK & NIC is greater than

total average of nine sample banks. The average ratio of NIBL, EBL, HBL, KBL, & SBI is lower than total average of nine sample banks.

From the above analysis it helps to conclude that the net profit to total deposit ratio of SCBNL is better than eight other sample banks. It implies that SCBNL has better performance on mobilization of total deposits. NABIL, BOK, NIC, NIBL & EBL also shows satisfactory performance on the mobilization of total deposits but HBL, KBL, & SBI is very weak in that respect.

4.1.3.3 Return on Loans and Advances

Return on loan and advances ratio measures the earning capacity of a commercial bank on its mobilization fund based on loan and advances. A high ratio indicates greater success to mobilize fund as loan and advances and vice versa. This ratio is calculated by dividing Net income by loan and advance.

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

Table 4.8

Return on Loans and Advance

(Rs. In “000”)

Fiscal Year		2007/08	2008/09	2009/10	2010/2011	2011/2012	Average
NABIL	NP	746468	1031053	1138571	1344179	1696276	0.0366
	L & A	21365053	27589933	32268873	38034097	41605682	
	Ratio	0.035	0.037	0.035	0.035	0.041	
NIBL	NP	696732	900619	1265950	1176641	1039275	0.0272
	L & A	26996652	36241207	40318308	41095514	41636998	
	Ratio	0.026	0.025	0.031	0.029	0.025	
	NP	818921	1025115	1085872	1119171	1168967	0.0648

SCBNL	L & A	13718597	13679757	15956955	18427270	19575968	
	Ratio	0.060	0.075	0.068	0.061	0.060	
HBL	NP	635869	752835	508798	893115	958638	0.0272
	L & A	19497520	24793155	27980629	31566976	34965433	
	Ratio	0.033	0.030	0.018	0.028	0.027	
SBI	NP	247771	316373	391742	464565	480105	0.0208
	L & A	12113698	15131748	17480548	21365771	26142094	
	Ratio	0.021	0.021	0.022	0.022	0.018	
EBL	NP	451219	638733	831766	931304	1090564	0.0284
	L & A	18339085	23884674	27556356	31057691	35910974	
	Ratio	0.025	0.027	0.030	0.030	0.030	
BOK	NP	361497	461735	509263	605152	607622	0.0318
	L & A	12462637	14647297	16664931	17468194	18813937	
	Ratio	0.029	0.032	0.031	0.035	0.032	
NIC	NP	243058	317434	449844	495704	319779	0.0272
	L & A	11264678	13679394	12732014	14933939	17242306	
	Ratio	0.022	0.023	0.035	0.033	0.023	
KBL	NP	174930	258379	316542	251237	275504	0.0174
	L & A	11335088	14593347	14765912	14626074	17614348	
	Ratio	0.0154	0.018	0.021	0.017	0.016	
Total Average of nine sample banks							0.0313

The above table exhibit that the ratio of EBL is increasing trend up to 2008/09 than equal ratio. NABIL has increasing trend up to 2008/09 then equal trend to 2010/11 and increasing trend 2011/12. In case of other banks followed fluctuating trend at the study period.

The mean of the SCBNL is higher i.e. 0.0648 higher than other Banks. So SCBNL has maintained high return with variable ratios. From the above analysis, it can be concluded that SCBNL is significantly able to earn high return on its loan and advances in comparison to other banks in point of view of highest mean ratio.

4.1.4 Risk Ratios

The possibility of risk makes banks investment a challenging task. Banks 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 options for high profit, so it has to accept the risk and manage it efficiently. The risk measures the level of risk. The following ratios are studied for the purpose of meaning risk.

4.1.4.1 Credit Risk Ratio

Credit risk ratio measures the possibility that loan will not be repaid or that investment will deteriorate in quality or go into default with consequent loss to the bank. By definition credit risk ratio is express as the percentage of non-performing loan to total loan and advantage. Here, dividing total loan and advance by total assets derives this ratio.

This can be stated as,

$$\text{Credit risk ratio} = \frac{\text{Total Loan and Advance}}{\text{Total Assets}}$$

Table 4.9
Credit Risk Ratio
(Rs. In “000”)

Fiscal Year		2007/08	2008/09	2009/10	2010/2011	2010/2012	Average
NABIL	L & A	21365053	27589933	32268873	38034097	41605682	0.630
	TA	37132759	43867398	52079726	58099620	63200298	
	Ratio	0.58	0.63	0.62	0.65	0.67	

NIBL	L & A	26996652	36241207	40318308	41095514	41636998	0.680
	TA	38873306	53010803	57305413	58356828	65756231	
	Ratio	0.69	0.68	0.70	0.70	0.63	
SCBNL	L & A	13718597	13679757	15956955	18427270	19575968	0.408
	TA	33335788	40066571	40213320	43810520	41677052	
	Ratio	0.41	0.34	0.40	0.42	0.47	
HBL	L & A	19497520	24793155	27980629	31566976	34965433	0.630
	TA	36175532	39330132	42717125	46736204	54364427	
	Ratio	0.54	0.63	0.66	0.68	0.64	
SBI	L & A	12113698	15131748	17480548	21365771	26142094	0.512
	TA	17187446	30916682	38047679	46088234	58059707	
	Ratio	0.70	0.49	0.46	0.46	0.45	
EBL	L & A	18339085	23884674	27556356	31057691	35910974	0.662
	TA	27149343	36916849	41382761	46236212	55813129	
	Ratio	0.68	0.65	0.67	0.67	0.64	
BOK	L & A	12462637	14647297	16664931	17468194	18813937	0.696
	TA	17721925	20496005	23396192	24757750	28881996	
	Ratio	0.70	0.71	0.71	0.71	0.65	
NIC	L & A	11264678	13679394	12732014	14933939	17242306	0.690
	TA	15238736	18750633	20309331	22090376	25579528	
	Ratio	0.74	0.73	0.63	0.68	0.67	
KBL	L & A	11335088	14593347	14765912	14626074	17614348	0.734
	TA	15026599	18538565	20522475	20491785	25131400	

	Ratio	0.75	0.79	0.72	0.71	0.70	
Total Average of nine sample banks							0.627

The 4.9 table show, which the credit risk ratio of all banks is in fluting trend in study period.

The mean ration of KBL i.e. 0.7340 is higher than of other eightbanks. It means credit risk of KBL is higher than of other bank.

From the above analysis it can be concluded that EBL's degree of risk is higher and more variable than other banks.

4.1.4.2 Liquidity Risk Ratio

The liquidity risk ratio measures the level of risk associated with the liquid assets i.e. cash and bank balance that are kept in the banks for the purpose of satisfying the depositor's demand for cash. Higher the ratio, lower is the liquid risk. This ratio is calculated by dividing cash and bank balance by total deposits.

This can be expressed as,

$$\text{Liquidityriskratio} = \frac{\text{Cash \& Bank Balance}}{\text{Total Deposit}}$$

Table 4.10

Liquidity Risk Ratio

(Rs. In “000”)

Fiscal Year		2007/08	2008/09	2009/10	2010/11	2011/2012	Average
NABIL	C & B	2671141	3372512	1400098	2458550	4294046	0.066
	TD	31915045	37348256	46340701	49608376	55023695	
	Ratio	0.084	0.090	0.030	0.050	0.078	
NIBL	C&B	3754942	7918004	6815890	8140371	11803749	0.157
	TD	34451726	46698100	50094725	50138122	57010603	

	Ratio	0.109	0.169	0.136	0.162	0.207	
SCBNL	C&B	2050243	3137164	1929307	2975795	6366231	0.094
	TD	29473999	35871721	35182721	37999242	35965630	
	Ratio	0.070	0.088	0.055	0.078	0.177	
HBL	C & B	1448143	3048527	3866491	2964651	6362294	0.088
	TD	31842789	34681345	37611202	40920627	47730993	
	Ratio	0.045	0.088	0.103	0.072	0.133	
SBI	C&B	1342960	1903906	3441261	4877826	5508381	0.097
	TD	13715395	27957221	34896424	42415443	53337264	
	Ratio	0.098	0.068	0.099	0.115	0.103	
EBL	C & B	2667972	6164371	7818815	6122863	10363305	0.173
	TD	23976298	33322946	36932310	41127901	50006100	
	Ratio	0.111	0.185	0.212	0.149	0.207	
BOK	C & B	1440467	2182112	1798367	1678931	3382709	0.103
	TD	15833738	18083980	20315834	21018417	24991448	
	Ratio	0.091	0.120	0.089	0.080	0.135	
NIC	C & B	1192349	1461151	2086130	1677057	2755389	0.106
	TD	13084689	15579931	15968918	18394435	22111851	
	Ratio	0.091	0.094	0.130	0.091	0.125	
KBL	C & B	933842	1776299	2723829	1168524	3722626	0.116
	TD	12774281	15710925	17432253	16986279	21985198	
	Ratio	0.073	0.113	0.156	0.069	0.169	
Total Average of nine sample banks							0.111

The 4.10 table shows that the liquidity risk ratio all banks are fluctuating trend in study period.

The mean ratio of EBL i.e. 0.173 higher than of other eight banks. It means liquidity risk ratio of EBL is higher than other banks.

From the above analysis it can be concluded that EBL's degree of risk is higher and more variable than other banks.

4.2 Trend Analysis

Trend analysis of nine sample banks facts in very significance from the view of forecasting its discloses. Trend analysis enables whether the working capital of the company is improving to deteriorating in the coming year. To analyze the trend of data shows in the financial statements it is necessary to have statement for at least five years or more years and it involves the calculation of percentage relationship that each statement items relating to base years is taken as 100% and percentage relationship are calculated for other remaining years on the base of base years. Trend percentage discloses change in financial operating data between specific period and on this basis forecast for future can be made. For this purpose base year should be made formal year. So, the trend analysis of the significance item of the company's financial year with tabulation and presentation of them by charts and graphs research is going analyze some of the following significant items contained in the financial statement with the help of trend analysis of nine sample banks. The tools that are used to show grandly increases or decreased of variables over a period of time are known as trend analysis. With the help of trend analysis the tendency of variables over the period can be clearly.

4.2.1 Trend Value Analysis of Total Deposit

From the calculation of total deposit amount trend as per Appendix III {(i), (ii), (iii), (iv), (v), (vi), (vii), (viii), (ix)} the value of constant 'a' and 'b' of respective banks are as follows:

Table-4.11
Trend Value Analysis of Total Deposit

Sample Banks	'a'	'b'
NABIL	2.665	0.58
NIBL	3.298	0.49
SCBNL	3.0398	0.15
HBL	2.716	0.38

SBI	0.6264	0.94
EBL	1.907	0.60
BOK	1.3673	0.2125
NIC	1.0757	0.209
KBL	1.1068	0.197

Source: AppendixIII {(i), (ii), (iii), (iv), (v), (vi), (vii), (viii), (ix)}

The amount of change on total deposit ‘b’ is positive in all nine sample banks but it is higher in SBI. It implies that the total deposit amount is increasing higher in SBI in comparison to other eight sample banks.

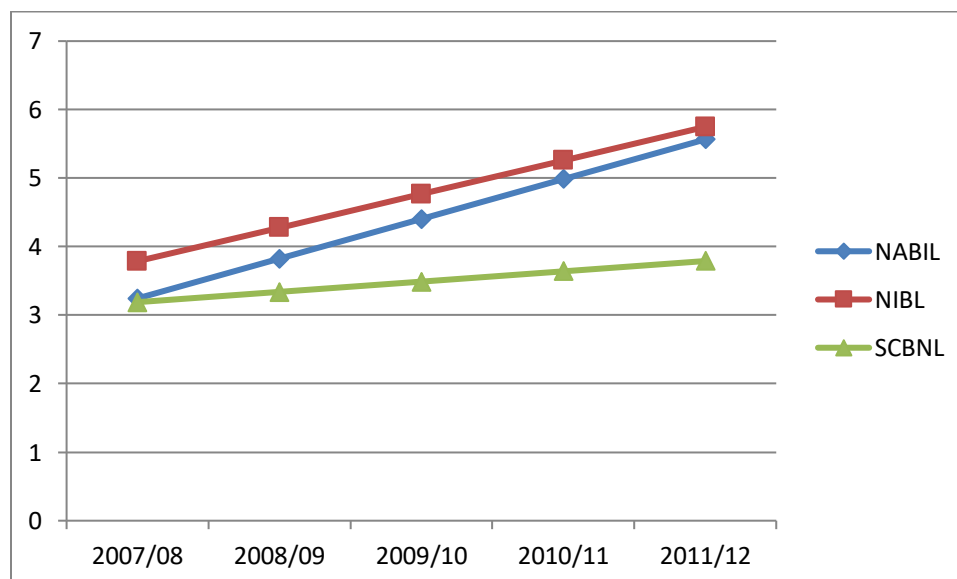
Trend Value Analysis of Total Deposit NABIL, NIBL & SCBNL

Table - 4.1(A)

Year	2007/08	2008/09	2009/10	2010/11	2011/12
NABIL	3.245	3.825	4.405	4.985	5.565
NIBL	3.788	4.278	4.768	5.258	5.748
SCBNL	3.1898	3.3398	3.4898	3.6398	3.7898

Trend Value Analysis of Total Deposit NABIL, NIBL & SCBNL

Figure – 4.1(A)



The Figure & Table No.-4.1(A) depicts that the trend line of total deposits amount of NIBL is always higher than other three sample banks. The trend line of all three sample banks are upward sloping. It helps to conclude that the NIBL are better than NABIL and SCBNL.

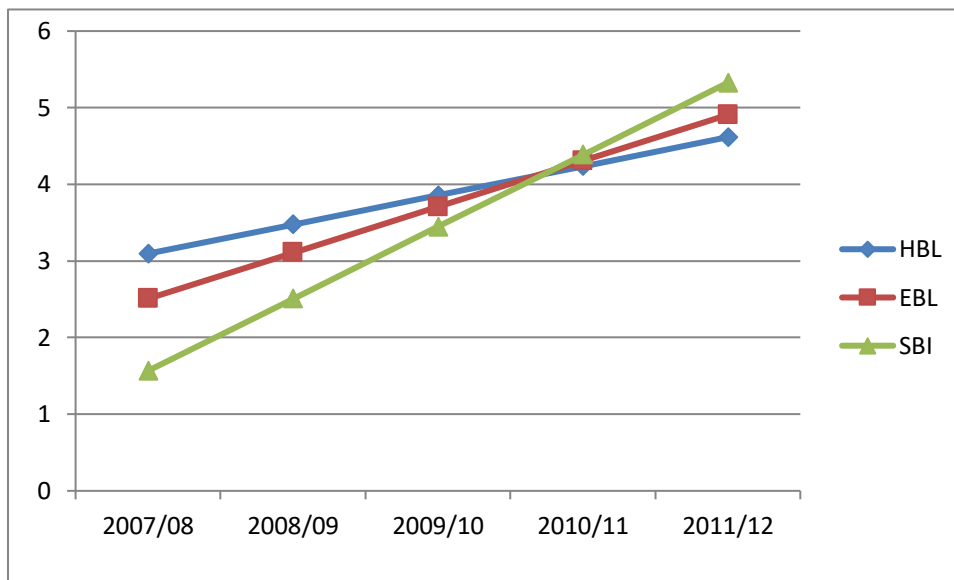
Trend Value Analysis of Total Deposit HBL, EBL & SBI

Table – 4.1(B)

Year	2007/08	2008/09	2009/10	2010/11	2011/12
HBL	3.096	3.476	3.856	4.236	4.616
EBL	2.5070	3.1070	3.7070	4.3070	4.9070
SBI	1.5664	2.5064	3.4464	4.3864	5.3264

Trend Value Analysis of Total Deposit HBL, EBL & SB

Figure – 4.1(B)



The Figure No.- 4.1(B) depicts that the trend of total deposit amount is fluctuating. In FY 2007/08, 2008/09 & 2009/10 higher in EBL and after that time highest in HBL. The trend line of all three sample banks is upward sloping. This analysis helps to conclude that the net profit after tax amount of HBL is better than EBL and SBI.

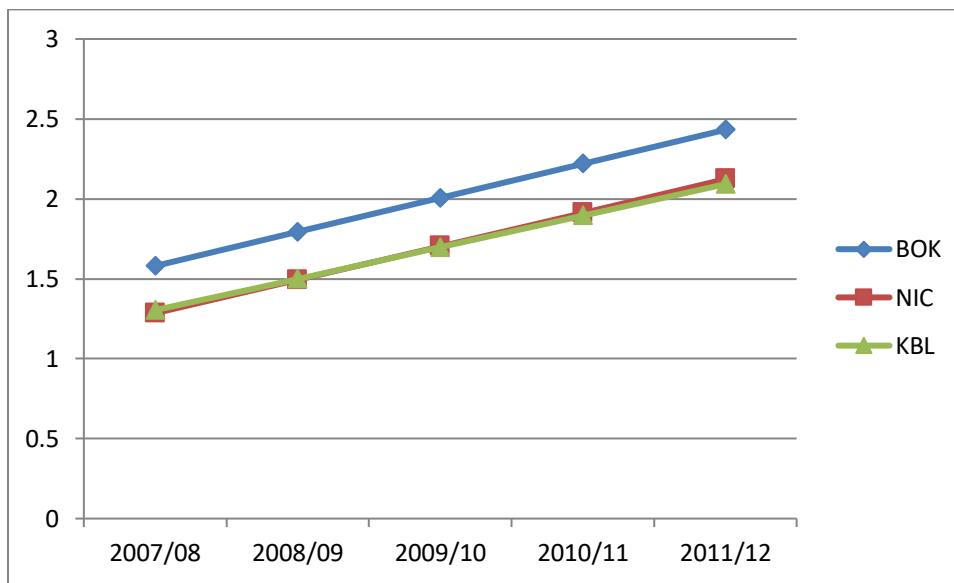
Trend Value Analysis of Total Deposit BOK, NIC & KBL

Table – 4.1(C)

Year	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	1.580	1.793	2.006	2.219	2.432
NIC	1.285	1.494	1.703	1.912	2.123
KBL	1.304	1.50	1.698	1.895	2.092

Trend Value Analysis of Total Deposit BOK, NIC & KBL

Figure – 4.1(C)



The Figure No.-4.1(C) depicts that the trend line of total deposits amount of BOK is always higher than NIC and KBL. The trend line of all three sample banks are upward sloping. It helps to conclude that the total deposit amount of BOK are better than NIC and KBL.

From the analysis of above three Figure it helps to conclude the all nine sample banks total deposit trend is increasing in during the study period. The trend line of total deposit of EBL is higher then all other eight sample banks. It helps to concluded that the total deposit amount of EBL is better then other sample banks

4.2.2 Trend Value Analysis of Net Profit After Tax

From the calculation of net profit after tax amount trend as per Appendix IV {(i), (ii), (iii), (iv), (v), (vi) (vii), (viii), (ix)} the value of constant ‘a’ and ‘b’ of respective banks are as follows:

Table-4.12

Trend Value Analysis of Net Profit After Tax

Sample Banks	'a'	'b'
NABIL	0.528	0.221
NIBL	0.7275	0.0961
SCBNL	0.8054	0.0794
HBL	0.5188	0.077
SBI	0.1940	0.062
EBL	0.3134	0.1571
BOK	0.3183	0.0636
NIC	0.2367	0.0476
KBL	0.197	0.0194

Source: Appendix IV {(i), (ii), (iii), (iv), (v), (vi) (vii), (viii), (ix)}

The rate of change on net profit after tax amount 'b' is positive in all nine sample banks but it is higher in NABIL. It implies that the net profit after tax amount is increasing higher in NABIL in comparison to other eight sample banks.

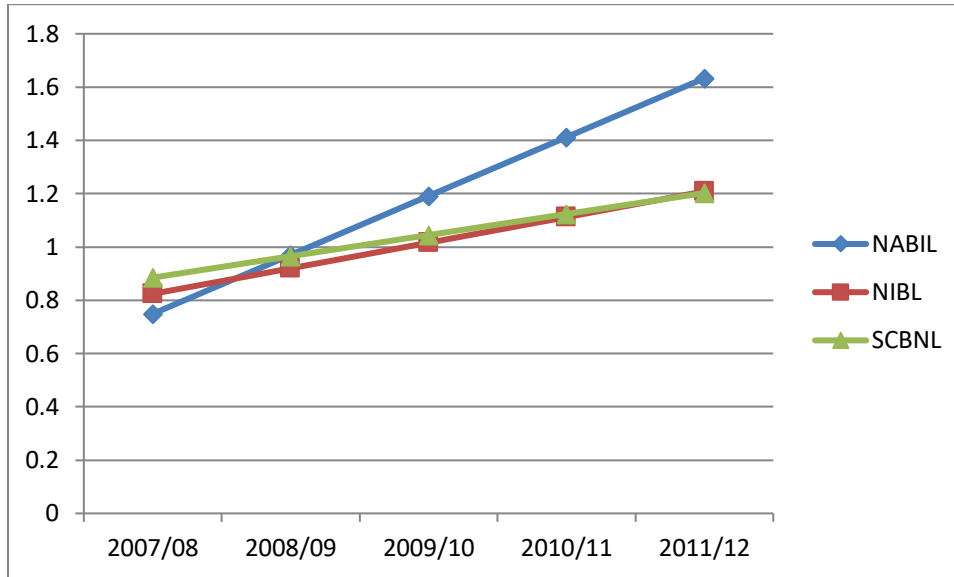
Trend Value Analysis of Net Profit After Tax NABIL, NIBL & SCBNL

Table – 4.2(A)

Year	2007/08	2008/09	2009/10	2010/11	2011/12
NABIL	0.749	0.97	1.191	1.412	1.633
NIBL	0.8241	0.9202	1.0163	1.1124	1.2085
SCBNL	0.8848	0.9642	1.0436	1.123	1.2024

Trend Value Analysis of Net Profit After Tax NABIL, NIBL & SCBNL

Figure – 4.2(A)



The Table & FigureNo.- 4.2(A) depicts that the trend of net profit after tax amount is fluctuating. In FY 2007/08, 2008/09 higher in SCBNL and after that time highest in NIBL. The trend line of all three sample banks is upward sloping. This analysis helps to conclude that the net profit after tax amount of NABIL is better than SCBNL and NIBL.

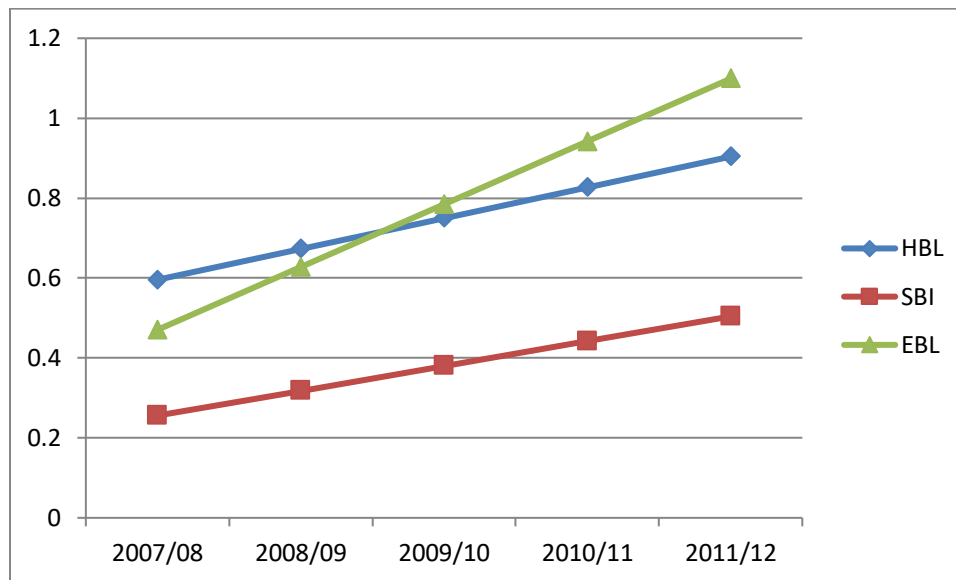
Trend Value Analysis of Net Profit After Tax HBL, SBI & EBL

Table – 4.2(B)

Year	2007/08	2008/09	2009/10	2010/11	2011/12
HBL	0.5958	0.6728	0.7498	0.8268	0.9038
SBI	0.2560	0.3180	0.38	0.4420	0.5040
EBL	0.4705	0.6276	0.7847	0.9418	1.0989

Trend Value Analysis of Net Profit After Tax HBL, SBI & EBL

Figure – 4.2(B)



The Table & Figure No.-4.2(B) depicts that the trend line of net profit after tax amount of HBL highest in first three fiscal year after that time highest amount of EBL. The trend line of all three sample banks is upward sloping. This analysis helps to conclude that the net profit after tax amount of HBL and EBL is better than SBI.

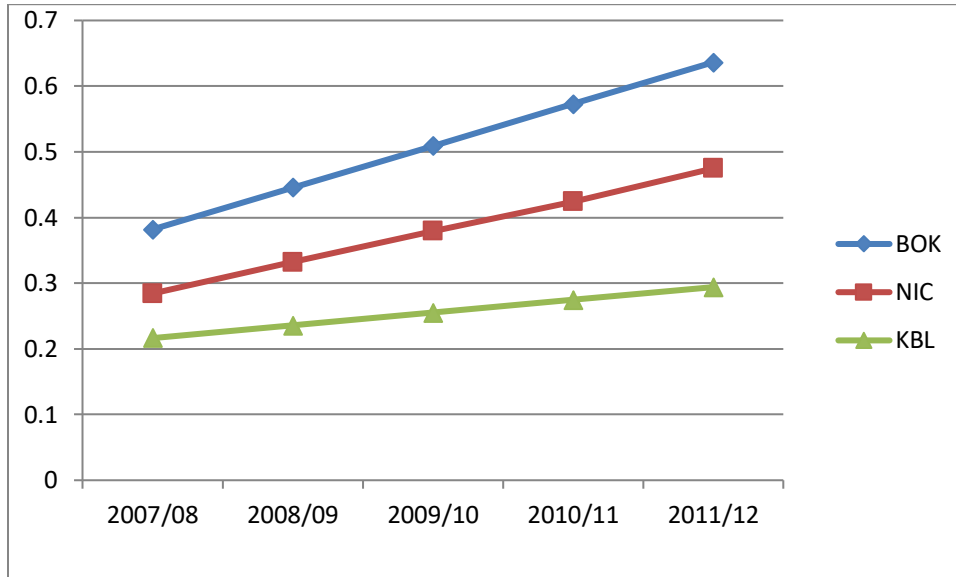
Trend Value Analysis of Net Profit After Tax BOK, NIC & KBL

Table – 4.2(C)

Year	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	0.3819	0.4455	0.5091	0.5727	0.6363
NIC	0.2843	0.3319	0.3795	0.4241	0.4747
KBL	0.2164	0.2358	0.2552	0.2746	0.2940

Trend Value Analysis of Net Profit After Tax BOK, NIC & KBL

Figure – 4.2(C)



The Tale & Figure No.-4.2(C) depicts that the trend line of net working capital of BOK is always higher than NIC and KBL. The trend line of all three sample banks is upward sloping. This analysis helps to conclude that the net working capital value of BOK is better than NIBL and SCBNL

4.2.3 Trend Value Analysis of Loan & Advance

From the calculation of total deposit amount trend as per Appendix V {(i), (ii), (iii), (iv), (v), (vi), (vii), (viii), (ix)} the value of constant ‘a’ and ‘b’ of respective banks are as follows:

Table-4.13
Trend Value Analysis of Loan & Advance

Sample Banks	‘a’	‘b’
NABIL	1.6913	0.5087
NIBL	2.7018	0.3413
SCBNL	1.1333	0.1646
HBL	1.6447	0.3771
SBI	0.8159	0.3429
EBL	1.4656	0.4231
BOK	1.1355	0.1552
NIC	1.00	0.1321
KBL	1.081	0.1259

Source: Appendix V{(i), (ii), (iii), (iv), (v), (vi), (vii), (viii), (ix)}

The amount of change on total deposit ‘b’ is positive in all nine sample banks but it is higher in

NABIL. It implies that the total deposit amount is increasing higher in NABIL in comparison to other eight sample banks

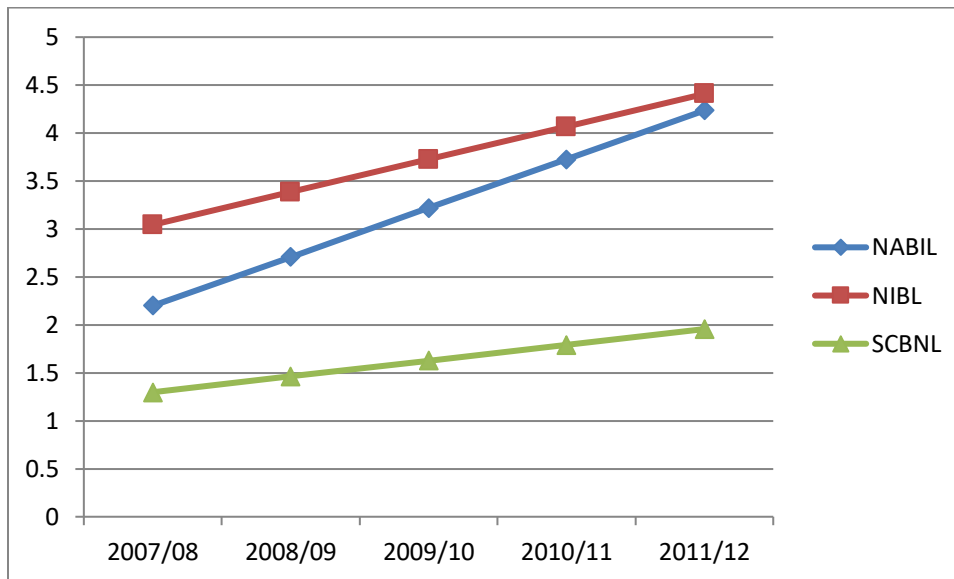
Trend Value Analysis of Loan & Advance NABIL, NIBL & SCBNL

Table – 4.3(A)

Year	2007/08	2008/09	2009/10	2010/11	2011/12
NABIL	2.2	2.7087	3.2174	3.7261	4.2348
NIBL	3.0431	3.3844	3.7257	4.0670	4.4083
SCBNL	1.2979	1.4625	1.6271	1.7917	1.9563

Trend Value Analysis of Loan & Advance NABIL, NIBL & SCBNL

Figure – 4.3(A)



TheTable & Figure No.-4.3(A) depicts that the trend line of net working capital of NIBL is always higher than NABIL and SCBNL. The trend line of all three sample banks is upward sloping. This analysis helps to concluded then the net working capital value of NIBL is better than NABIL and SCBNL.

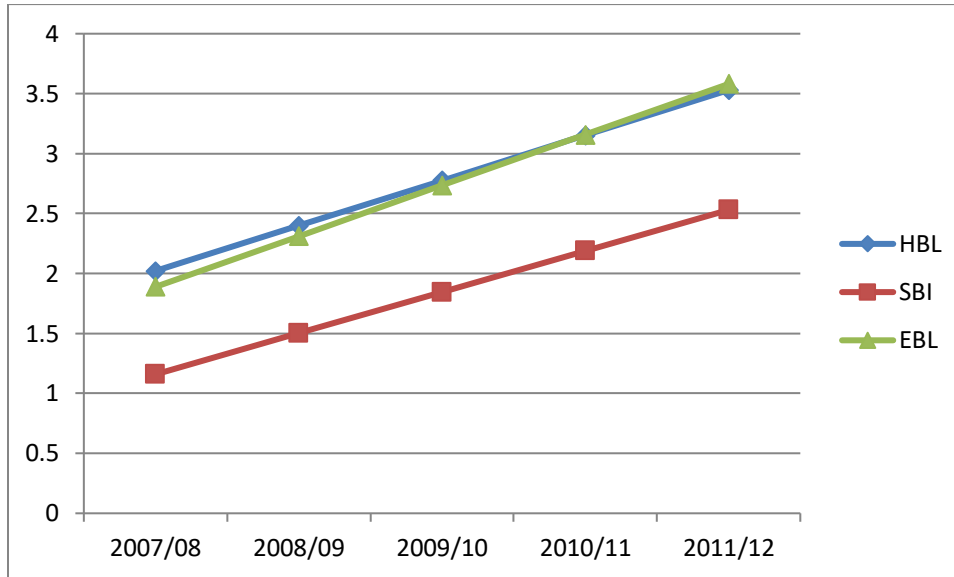
Trend Value Analysis of Loan & Advance HBL, EBL & SBI

Table – 4.3(B)

Year	2007/08	2008/09	2009/10	2010/11	2011/12
HBL	2.0218	2.3989	2.7760	3.1531	3.5302
SBI	1.1588	1.5017	1.8446	2.1875	2.5304
EBL	1.8887	2.3118	2.7349	3.1580	3.5811

Trend Value Analysis of Loan & Advance HBL, EBL & SBI

Figure – 4.3(B)



The Table & Figure No.-4.3(B) depicts that the trend line of total deposits amount of HBL is always higher than other three sample banks. and after that EBL is higher than SBI. The trend line of all three sample banks are upward sloping. It helps to conclude that the HBL are better than SBI and EBL.

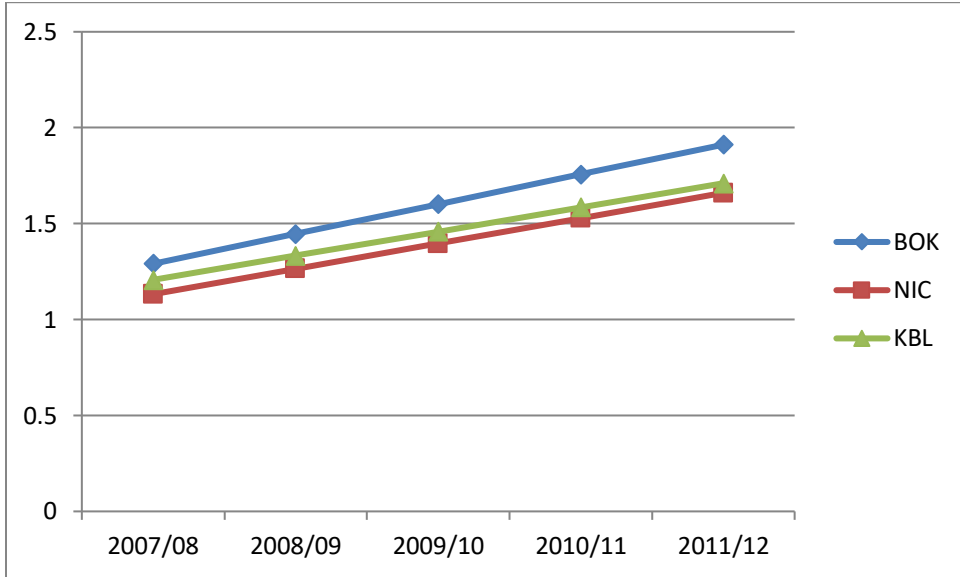
Trend Value Analysis of Loan & Advance BOK, NIC & KBL

Table- 4.3(C)

Year	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	1.2907	1.4459	1.6011	1.7563	1.9115
NIC	1.1321	1.2642	1.3963	1.5284	1.6605
KBL	1.2069	1.3328	1.4587	1.5846	1.7105

Trend Value Analysis of Loan & Advance BOK, NIC & KBL

Figure – 4.3(C)



The Table & Figure No.-4.3(C) depicts that the trend line of Loan & Advance value of BOK is always higher than NIC and KBL. The trend line of all three sample banks is upward sloping. This analysis helps to conclude that the gross working capital value of BOK is better than NIC and KBL.

4.2.4 Trend Value Analysis of Investment

From the calculation of total deposit amount trend as per Appendix VI {(i), (ii), (iii), (iv), (v), (vi), (vii), (viii), (ix)} the value of constant 'a' and 'b' of respective banks are as follows:

Table-4.14
Trend Value Analysis of Investment

Sample Banks	'a'	'b'
NABIL	0.9344	0.10
NIBL	0.60	0.0716
SCBNL	1.8337	-0.0492
HBL	1.1827	-0.0656
SBI	0.0698	0.04838
EBL	0.4106	0.0740
BOK	0.2028	0.0558
NIC	0.2267	0.0520
KBL	0.1395	0.0363

Source: Appendix VI{(i), (ii), (iii), (iv), (v), (vi), (vii), (viii), (ix)}

The amount of change on total deposit 'b' is positive & negative in all nine sample banks but it is higher in EBL. It implies that the total deposit amount is increasing higher in EBL in comparison to other eight sample banks.

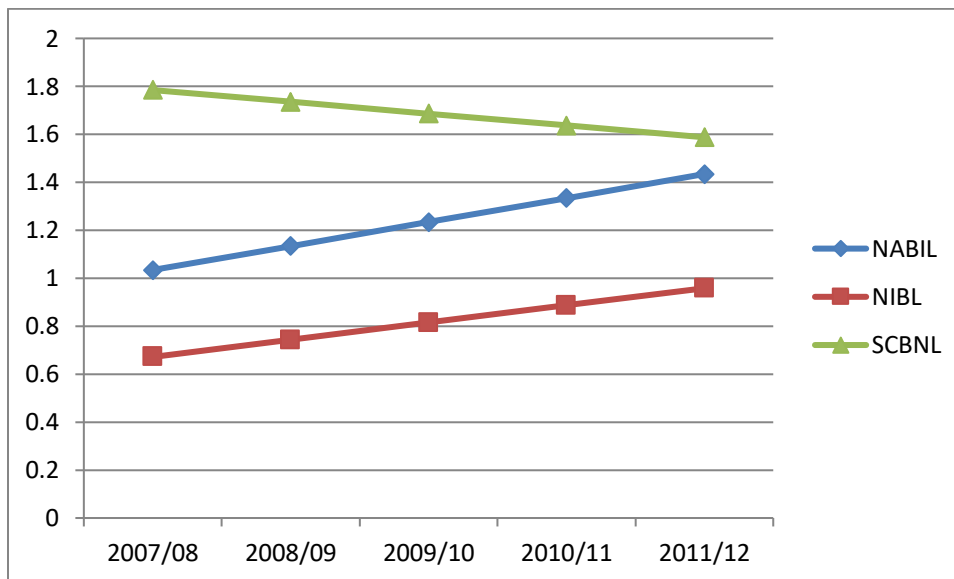
Trend Value Analysis of Investment NABIL, NIBL & SCBNL

Table – 4.4(A)

Year	2007/08	2008/09	2009/10	2010/11	2011/12
NABIL	1.0344	1.1344	1.2344	1.3344	1.4344
NIBL	0.6716	0.7432	0.8148	0.8864	0.958
SCBNL	1.7845	1.7353	1.6861	1.6369	1.5877

Trend Value Analysis of Investment NABIL, NIBL & SCBNL

Table – 4.4(A)



The Table & Figure No.-4.4(A) depicts that the trend line of investment of NABIL is always higher than NIBL and SCBNL. The trend line of all three sample banks is upward sloping. This analysis helps to conclude that the net working capital value of NABIL is better than NIBL and SCBNL.

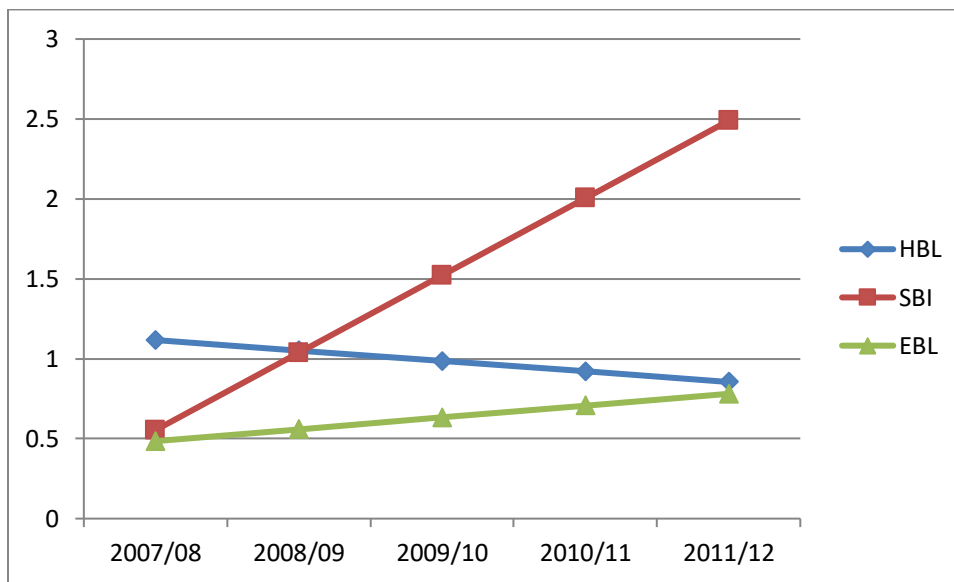
Trend Value Analysis of Investment HBL, SBI&EBL

Table - 4.4(B)

Year	2007/08	2008/09	2009/10	2010/11	2011/12
HBL	1.1171	1.0515	0.9859	0.9203	0.8547
SBI	0.5536	1.0374	1.5212	2.005	2.4888
EBL	0.4846	0.5586	0.6326	0.7066	0.7808

Trend Value Analysis of Investment HBI, SBI &EBL

Figure – 4.4(B)



The Table & Figure No.-4.4(B) depicts that the trend line investment of SBI is always higher than HBL and EBL. The trend line of all three sample banks is upward sloping. This analysis helps to conclude that the net working capital value of SBI is better than HBL and EBL.

Trend Value Analysis of Investment BOK, NIC & KBL

Table – 4.4 (C)

Year	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	0.2643	0.3201	0.3759	0.4317	0.4875
NIC	0.2787	0.3307	0.3827	0.4347	0.4867
KBL	0.1758	0.2121	0.2484	0.2847	0.3210

Trend Value Analysis of Investment BOK, NIC & KBL

Figure – 4.4(C)



The Table & Figure No.-4.4(C) depicts that the trend line investment of BOK is always higher than NIC and KBL. The trend line of all three sample banks is upward sloping. This analysis helps to conclude that the net working capital value of BOK is better than NIC and KBL.

4.3 Correlation Analysis

Correlation is the statistical tool that we can use to describe the degree to which one variable is linearly related to another. The coefficient of correlation measures the degree of relationship between two sets of figures. If two quantities vary in a related manner so that a movement in one tends to be accompanied by a movement in the same or opposite direction in the other, they are called correlated. If the relationship is direct they are called positively correlated and if the relationship is inverted they are called negatively correlated. If any change in one does not affect the other variable they are called uncorrected. The correlation may be perfect, imperfect or zero. Among the various methods of finding out coefficient of correlation, Karl Pearson's method is applied in the study. The result of coefficient of correlation is always between +1 and -1, when r is +1, it means there is perfect relationship between two variables and vice versa. When r is 0, it means there is no relationship between two variables.

It is calculated by inputting the data directly in two arrays of the command.

Using Standard Error (S.Er) where,

$$S.E (r) = \frac{(1-r^2)}{\sqrt{n}}$$

$$P.E. (r) = 0.6745 \times S.E (r)$$

The Probable Error is used to test whether the calculated value of sample correlation coefficient is significant or not. A few rules for the interpretation of the significance of correlation coefficient are as follows:

- i. If $r < P.E. (r)$, then the value of 'r' is not significant (i.e., insignificant)
- ii. If $r > 6 \times P.E. (r)$, then r is definitely significant

iii In other situations, nothing can be calculated with certainty

4.3.1 Co-efficient of Correlation between Deposit and Loan and Advances

It is already mentioned that investment is dependent upon saving i.e., deposit. Longer the duration of deposit, higher the bankers' ability to acquire long term asset. In the other words bankers can't invest more, on long term asset if the duration of deposit is short. In this sense it can be said the investment is the function of deposit.

Theoretically it is assumed that long term asset yield higher return. It means longer the duration of deposit, higher would be the profitability of the banks. But investment may not be the function of deposit only. Sometimes investment is made from the funds raised from other sources. In such situation investment is not dependent upon deposit only. Co-efficient of correlation between deposit and loan and advances measure the degree of relationship between these two variables. In this analysis deposit is independent variable (X_1) and loan and advance is dependent variable (X_2).

The details calculation in this regard are done in Annexure and the following table show the value r, and P.E. and 6P.E.r between deposit and loan and advance of NABIL, NIBL, SCBNL, HBL, SBI, EBL, BOKL, NIC and KBL banks during the study period.

Table 4.15

Correlation between Deposit and Loan and Advances Co-efficient of Correlation between Total Deposit and Loan and Advance

Bank	r	P.Er	6 P.Er
NABIL	0.9990	0.0006	0.0036
NIBL	0.990	0.0060	0.0360
SCBNL	0.991	0.0054	0.0324
HBL	0.997	0.0018	0.0109
SBI	0.991	0.0054	0.0324
EBL	0.999	0.0006	0.0036
BOK	0.999	0.0006	0.0036
NIC	0.999	0.0006	0.0036
KBL	0.974	0.0311	0.1865

Source: Appendix VII{(i), (ii), (iii), (iv), (v), (vi), (vii), (viii), (ix)}

From the above table 4.15, it is found that in case of NABIL, NIBL, SCBNL, HBL, NSBIL, EBL, BOK, NIC and KBL, coefficient of correlation between deposit (independent) and total investment (dependent) value of 'r' of all banks are 0.990, 0.990, 0.991, 0.997, 0.991, 0.999, 0.999, 0.999 & 0.974 respectively. It shows highly positive relationship between these variables in all nine sample banks. By considering the probable error, since the value of 'r' of all nine sample banks is more than six times of PEr, the value of 'r' is highly significant i.e. there is significant relationship between total deposit and loan and advance in all sample banks.

From the above analysis, it can be concluded that there is significant relationship between deposit to loan & advance in all sample banks. But higher value of 'r' in BOK, NABIL, EBL & NIC show better relationship as well as better utilization of deposit to loan and advance than other five sample banks.

4.3.2 Co-efficient of Correlation between Deposit and Investment

Co-efficient of correlation (r) between deposit and investment measures the degree of relationship between these two variables here deposit is independent variable (x) and total investment is dependent variable (y). The purpose of computing co-efficient of correlation between deposit and total investment is to find out whether deposit is significantly used as investment or not.

The table 4.15 shows the value of r , PEr and 6 PEr between deposit and total investment of NABIL, NIBL, SCBNL, HBL, SBI, EBL, BOK, NIC and KBL for the study period of 2007/08 to 2011/12.

Table-4.16
Result of Coefficient of Correlation

Sample Banks	r	PEr	6PEr
NABIL	0.990	0.0006	0.0036
NIBL	0.9963	0.0022	0.0132
SCBNL	0.9855	0.0087	0.0522
HBL	0.9603	0.9221	0.1410
SBI	0.9962	0.0023	0.00138
EBL	0.9902	0.0059	0.0354
BOK	0.9803	0.0118	0.0708
NIC	0.9690	0.0184	0.1104
KBL	0.9441	0.8913	0.1968

Source: Appendix VII {(i), (ii), (iii), (iv), (v), (vi), (vii), (viii), (ix)}

From the above Table-4.16 we can find the coefficient of correlation between total deposits to investment value ' r ' is 0.990 in NABIL, 0.9963 in NIBL, 0.9855 in SCBNL, 0.9603 in HBL, 0.9962 in SBI, 0.9902 in EBL, 0.9803 in BOK, 0.9690 in NIC, and 0.9441 in KBL. It shows the highly positive relationship between these variables all nine sample banks. By considering the probable error, since the value of ' r ' of all sample banks is more than six times of PEr, the value of ' r ' is highly significant i.e. there is significant relationship between total deposits to investment in these all nine sample banks.

From the above analysis, it can be concluded that all banks have utilized its total deposits to investment effectively. But higher value of ' r ' in NIBL show better relationship as well as better utilization of deposits to investment then other sample banks.

4.3.3 Coefficient of Correlation between Investment and Net Profit

Coefficient of correlation 'r' between investment and net profit measures the degree of relationship between these two variables. Here, investment is independent variable (X) and net profit is dependent variable (Y).

The purpose of computing co-efficient of correlation between investment and net profit is to find out whether the net profit is significantly correlated with respective total assets or not.

Table 4.16 shows the value of r, PEr, 6PEr between investment and net profit in NABIL, NIBL, SCBNL, HBL, SBI, EBL, BOK, NIC and KBL for the Study period 2007/08 to 2011/12

Table-4.17
Results of Coefficient of Correlation

Sample Banks	r	PEr	6PEr
NABIL	0.9936	0.0038	0.0228
NIBL	0.9917	0.0050	0.0300
SCBNL	0.9857	0.0086	0.0516
HBL	0.9521	0.0282	0.1692
SBI	0.9731	0.0160	0.0960
EBL	0.9883	0.0070	0.0420
BOK	0.9794	0.0123	0.0737
NIC	0.9974	0.0015	0.0090
KBL	0.9356	0.0376	0.2256

Source: Appendix IX {(i), (ii), (iii), (iv), (v), (vi), (vii), (viii), (ix)}

From the above Table-4.17 we can find the coefficient of correlation between government securities and total deposits value 'r' is 0.9936 in NABIL, 0.9917 in NIBL, 0.9857 in SCBNL, 0.9521 in HBL, 0.9731 in SBI, 0.9883 in EBL, 0.9794 in BOK, 0.9974 in NIC, and 0.9356 in KBL. It shows highly positive relationship between these variables in all sample banks. By considering the probable error, since the value of 'r' of all nine sample banks more than the calculated value of probable error thus, there is significant relationship between investments to net profit. Since 'r' is much greater than 6 P.E. there is evidence of correlation. In other words, the Karl Pearson's coefficient between investment to net profit are of relevant banks are significant.

From the above analysis, it can be concluded that there is significant relationship between Investments to net profit in all nine sample banks. . But higher value of ‘r’ in NIC show better relationship as well as better utilization of investment to net profit than other eight sample banks.

4.4 Major Findings of the Study

The major findings of this study during the period of five years in NABIL, NIBL, SCBNL, HBL, SBI, EBL, BOK, NIC, and KBL from the analysis are summarized below:-

- The average ratio of cash and bank balance to current assets ratio is higher of EBL i.e. 0.17 and NABIL had lowest average ratio of cash and bank balance to current assets ratio. The position of sample banks are EBL>NIBL>SBI> KBL&SCBNL> NIC> BOK>HBL> NABIL i.e. 0.17> 0.15> 0.12> 0.10> 0.099> 0.098> 0.087> 0.070. The ratio should not be large, because higher ratio indicates the poor cash management so it can be concluded that NABIL has better than that of other sample banks.
- The average ratio of investment on government securities to current assets, it can be concluded the NIBL has invested its less portion of current assets as government securities. Ratio of NIBL is i.e. 0.076 than that of other higher ratio is SCBNL i.e. 0.265 and SCBNL liquidity portion from the point of view of investment on government securities is richer than that of other banks.
- The average value of loan and advances to total deposit ratio is highest of KBL i.e. 0.87 and SCBNL had the lowest average ratio of loan and advances to total deposit ratio i.e. 0.46. The position of sample banks are KBL> NIC>BOK> NIBL> EBL> NABIL> HBL>SBI>SCBNL i.e. 0.87>0.83> 0.80>0.78>0.74>0.73> 0.71> 0.58>0.46. Total deposit turnover ratio of KBL is better than that of other sample banks. Because of the lower amount of total deposit, the ratio becomes higher of KBL than NABIL, NIBL, SCBNL, HBL, BOK, EBL, NIC and SBI. KBL is employing the funds more efficiently for the profit generating purpose on loan and advances than other sample banks.

- The average ratio investment to total deposit of highest ratio is SCBNL i.e. 0.48 & lowest ratio is KBL i.e. 0.15 KBL is in weak condition to mobilize its deposits by investing in different sectors is comparison of other selected banks.
- The average ratio of investment on government securities to total asset SCBNL highest ratio is 0.20 & lowest ratio NIBL i.e. 0.068. SCBNL higher than other eight banks. From the above finding it helps to conclude that SCBNL is comparatively successful in its on balance sheet operation is compared to other banks. It predicts the SCBNL has successfully maintained and managed its assets toward different income generating activities.
- The average ratio of net profit to total assets ratios is higher of SCBNL i.e. 0.0264 and SBI had lowest average ratio of net profit to total assets ratio i.e. 0.0105. The position of banks are SCBNL > NABIL > BOK > NIBL & EBL > NIC > HBL > KBL > SBI i.e. 0.0264 > 0.023 > 0.0220 > 0.019 > 0.0184 > 0.0172 > 0.0128 > 0.0105. SCBNL is better than eight other sample banks. It implies that SCBNL is more efficiently using its working fund of assets to earn higher rate of profit. NABIL, BOK, NIBL has also used its working fund of assets quite satisfactorily but BOK, NIBL, NIC, EBL, HBL, KBL and SBI is weak in utilizing its working funds of assets.
- The average ratio of net profit to total deposit ratios is higher of SCBNL i.e. 0.030 and SBI had lowest average ratio of net profit to total deposit ratio i.e. 0.0120. The position of banks are SCBNL > NABIL > BOK > NIC > EBL > NIBL > HBL > KBL > SBI i.e. 0.030 > 0.0268 > 0.0248 > 0.224 > 0.212 > 0.0210 > 0.0196 > 0.0152 > 0.0120. The net profit to total deposit ratio of SCBNL is better than eight other sample banks. It implies that SCBNL has better performance on mobilization of total deposits. NABIL, BOK, NIC, NIBL & EBL also shows satisfactory performance on the mobilization of total deposits but HBL, KBL, & SBI is very weak in that respect.
- The average ratio net profit to total loan and advance highest ratio is SCBNL i.e. 0.0648 and lowest ratio is KBL i.e. 0.0174.
- The average ratio of cash and bank balance to total deposit ratio is higher of EBL i.e. 0.173 and NABIL had lowest average ratio, it shows some difficulties to meet the demand of its customers on their deposit to pay at any time but it may be earning more by investing cash to different sectors. But it should ensure to have enough liquid funds to serve its customer.

- The liquidity risk ratio average ratio highest ratio is KBL i.e. 0.734 & lowest ratio is SCBNL i.e. 0.408. Credit risk ratio KBL is greater than other banks. So, it can be concluded the KBL's degree of risk is higher and more variable than other banks.
- Coefficient of Correlation between deposits to loan of NABIL is 0.9990, NIBL is 0.990, SCBNL is 0.991, HBL is 0.997, SBI is 0.991, EBL is 0.999, BOK is 0.999, NIC is 0.999, and KBL is 0.974 all nine sample banks coefficient of correlation between deposit to loan is more than 6Per. It can be concluded that there is significant relationship between deposit to loan in all nine sample banks.
- Coefficient of Correlation between total deposit to investment of NABIL is 0.990, NIBL is 0.9963, SCBNL is 0.9855, HBL is 0.9603, SBI is 0.9962, EBL is 0.9902, BOK is 0.9803, NIC is 0.9690, and KBL is 0.9441 all nine sample banks coefficient of correlation between total deposit to investment is more than 6Per. It can be concluded that there is significant relationship between total deposit to investment in all nine sample banks.
- Coefficient of Correlation between investment to net profit of NABIL is 0.9936, NIBL is 0.9917, SCBNL is 0.9857, HBL is 0.9521, SBI is 0.9731, EBL is 0.9883, BOK is 0.9794, NIC is 0.9974, and KBL is 0.9356 all nine sample banks coefficient of correlation between investment to net profit is more than 6Per. It can be concluded that there is significant relationship between investment to net profit in all nine sample banks.
- The all nine sample banks total deposit trend is increasing in during the study period. The trend line of total deposit of NIBL is higher then all other eight sample banks. It helps to concluded that the total deposit amount of NIBL is better then other sample banks.
- The all nine sample banks net profit after tax trend is increasing in during the study period. The trend line of average net profit after tax of NABIL is higher then all other eight sample banks. It helps to concluded that the net profit after tax amount of NABIL is better then other sample banks.
- The all nine sample banks total loan & advance trend is increasing in during the study period. The trend line of total deposit of NIBL is higher then all other eight sample banks. It helps to concluded that the total loan & advance amount of NIBL is better then other sample banks.

- The all nine sample banks total investment trend is increasing in during the study period. The trend line of total deposit of SBI is higher then all other eight sample banks. It helps to concluded that the total investment amount of SBI is better then other sample banks

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter is used to summarize the whole study, to draw the major findings, conclusion of the study and forward the applicable recommendations for more better and efficient management of investment policy of first nine commercial banks namely Nabil Bank Limited, Nepal Investment Bank Limited, Standard Chartered Bank Nepal Limited, Himalayan Bank Limited, Nepal SBI Bank Limited, Everest Bank Limited, Bank of Kathmandu Limited, NIC Bank Limited and Kumari Bank Limited.

5.1 Summary

Economic development of country cannot be imagined without the development of commerce and industry. No doubt, banking promotes the development of commerce to its extreme, as banking itself is the part of commerce. Commercial banks play a vital role in the economic development of the country. It occupies an important place in the framework of the every economy. It provides capital for the development of industry, trade, business and other resource deficit sectors by investing the saving collected as deposits. Beside this, commercial banks provide numerous services to their customers in view of facilitating their economic and social life. The accepting of deposit providing loans to the needy person and organization are its main factions. The other services performed by banks are payment of subscription, purchases and sale of securities remittance of money, advisory services and assistance in foreign trade etc. Hence the commercial banks play an important role in the modern economy.

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 saving collected as deposits from public joint venture banks are the commercial banks formed by joining the two or more enterprises for the purpose for carrying out specific operation such as investment in trade, business and industry as well as in the form of negotiation between various groups of industry or traders to achieve mutual exchange of goods and services. Commercial Banks formulate sound investment policies to make it more effective which eventually contribute to the economic growth of a country.

The economic development is possible only when domestic resources are properly mobilized and utilized. Similarly, for integrated and speedy development of the country the competitive banking and financial services should reach every corner of the country. Successful formulation and effective implementation of investment policy is the prime essential for the successful performance of banks and other financial institutions. A good investment policy has a positive impact on economic development of the country and vice versa.

Commercial banks should be careful while performing the credit creation function investment policy should ensure minimum risk and maximum profit from lending, good investment policy ensures maximum of investment to all sector with proper utilization.

Banking in Nepal in true sense started from the establishment of the first commercial banks, Nepal Bank Limited in 1994 B.S. government sector. The establishment of Nepal Rastra Bank, central Bank of Nepal in 2013 B.S. was a significant dimension in the development of banking sector.

The main purpose of this study was to study the investment policy as well as financial performance of commercial banks of Nepal. Under this study nine commercial banks are taken into consideration sample banks especially in Nabil Bank Ltd., Nepal Investment Bank Ltd., Standard Chartered Bank Nepal Ltd., Himalayan Bank Ltd., Nepal SBI Bank Ltd., Everest Bank Ltd., Bank of Kathmandu Ltd., NIC Bank Ltd., and Kumari Bank Ltd. To make this thesis more understandable to the readers available data and information are presented in different suitable table, diagrams with appropriate analysis and interpretations. This thesis work has been divided into five chapters. They are: Introduction, Review of Literature, Research Methodology,

Presentation and Data Analysis and finally Summary, Conclusion and Recommendation. To fulfill this objective of this study and other specific objective as described in chapter one, an appropriate research methodology has been developed which includes the ratio analysis as financial tools and trend analysis, correlation coefficient as statistical tools. The major ratio analysis consists of the composition of liquidity ratio, assets management ratio, risk ratio, profitability position other related ratios. Under these, main ratios and their trend position are studied in the chapter four. In order to test the relationship between the various components of investment policy, Karl Pearson's correlation coefficient r is calculated and analyzed. And in this chapter findings of the whole study and some suggestions & recommendation, which can be used by the concerned bank to improve its present situation, has been presented at the end of study period.

To carry out thesis work secondary data have been used. The necessary data are derived from the balance sheet and Profit and Loss Account of all nine sample banks in their related reports for the period of five years from the fiscal year 2007/08 to 2011/12.

5.2 Conclusion

After drawing above findings we can draw the following conclusion. This study is basically related to various aspect of investment policy. I took data of nine commercial banks and analyze data as our requirement and find something the researcher wants to draw the conclusion the basis of the forward objective. The cash and bank balance to current assets ratio should not be large, because higher ratio indicates the poor cash management so it can be concluded that NABIL has better than that of other sample banks due to its lower ratio. The average ratio of investment on government securities to current assets, it can be concluded the NIBL has invested its less portion of current assets as government securities. Higher ratio SCBNL liquidity portion from the point of view of investment on government securities is richer them that of other banks. The activity turnover position on loan and advances to total deposit ratio of KBL is highest, from which it can be considered that KBL is employing the funds more efficiently for the profit generating purpose on loan and advances than other sample banks. The average ratio investment to total deposit of highest ratio is SCBNL. Lowest ratio is KBL is weak condition to mobilize its deposits by investing is different sectors is comparison of other

selected banks. The investment on government securities to total assets SCBNL higher than other eight banks. From the above finding it helps to concludes that SCBNL is comparatively successful in its on balance sheet operation is compared to other banks. It predicts the SCBNL has successful maintained and managed its assets toward different income generating activities. The net profit to total assets ratio of SCBNL is better than eight other sample banks. It implies that SCBNL is more efficiently using its working fund of assets to earn higher rate of profit. The net profit to total deposit ratio of SCBNL is better than eight other sample banks. It implies that SCBNL has better performance on mobilization of total deposits. The average ratio net profit to total loan and advance highest ratio is SCBNL and lowest ratio is KBL. The average ratio of cash and bank balance to total deposit ratio is higher of EBL and NABIL had lowest average ratio, it shows some difficulties to meet the demand of its customers on their deposit to pay at any time but it may be earning more by investing cash to different sectors. But it should ensure to have enough liquid funds to serve its customer. The liquidity risk ratio average ratio highest ratio is KBL & lowest ratio is SCBNL. Credit risk ratio KBL is greater than other banks. So, it can be concluded the KBL's degree of risk is higher and more variable than other banks. All nine sample banks coefficient of correlation between deposit to loan is more than 6Per. It can be concluded that there is significant relationship between deposits to loan in all nine sample banks. But higher value of 'r' in NABIL, BOK, NIC & EBL show better relationship as well as better utilization of deposits in loan and advances then other sample banks. All nine sample banks coefficient of correlation between total deposit to investment is more than 6Per. It can be concluded that there is significant relationship between total deposit to investment in all nine sample banks. But higher value of 'r' in NIBL show better relationship as well as better utilization of deposits to investment then other sample banks. All nine sample banks coefficient of correlation between investment to net profit is more than 6Per. It can be concluded that there is significant relationship between investment to net profit in all nine sample banks. higher value of 'r' in BOK show better relationship as well as better utilization of investment to net profit then other sample banks. The all nine sample banks total deposit trend is increasing in during the study period. The trend line of total deposit of NIBL is higher then all other eight sample banks. It helps to concluded that the total deposit

amount of NIBL is better than other sample banks. The all nine sample banks net profit after tax trend is increasing during the study period. The trend line of average net profit after tax of NABIL is higher than all other eight sample banks. It helps to conclude that the net profit after tax amount of NABIL is better than other sample banks. The all nine sample banks total loan & advance trend is increasing during the study period. The trend line of total deposit of NIBL is higher than all other eight sample banks. It helps to conclude that the total loan & advance amount of NIBL is better than other sample banks. The all nine sample banks total investment trend is increasing during the study period. The trend line of total deposit of SBI is higher than all other eight sample banks.

5.3 Recommendations

Nine sample banks under consideration are commercial banks. All banks have been passing through a very tough phase. For the viewpoint of ratio the proper identification of the extent of bank ability of these banks are successful to some extent to meet their operational as well as the investment policy goals. On the basis of analysis and findings of this study following recommendations are made.

- The average ratio of cash and bank balance to current assets ratio is higher of EBL and NABIL had lowest average ratio of cash and bank balance to current assets ratio. The ratio should not be large, because higher ratio indicates the poor cash management so it can be concluded that NABIL has better than that of other sample banks.
- The average ratio of investment on government securities to current assets, it can be concluded the NIBL has invested its less portion of current assets as government securities. Ratio of NIBL is than that of other higher ratio is SCBNL and SCBNL liquidity portion from the point of view of investment on government securities is richer than that of other banks.
- The average value of loan and advances to total deposit ratio is highest of KBL and SCBNL had the lowest average ratio of loan and advances to total deposit ratio. Total deposit turnover ratio of KBL is better than that of other sample banks. Because of the lower amount of total deposit, the ratio becomes higher of KBL than NABIL, NIBL,

SCBNL, HBL, BOK, EBL, NIC and SBI. KBL is employing the funds more efficiently for the profit generating purpose on loan and advances than other sample banks.

- The average ratio investment to total deposit of highest ratio is SCBNL & lowest ratio is KBL. KBL is in weak condition to mobilize its deposits by investing in different sectors in comparison of other selected banks.
- The average ratio of investment on government securities to total asset SCBNL highest ratio & lowest ratio NIBL. SCBNL higher than other eight banks. From the above finding it helps to conclude that SCBNL is comparatively successful in its on balance sheet operation as compared to other banks. It predicts that SCBNL has successfully maintained and managed its assets toward different income generating activities.
- In practice joint ventured banks are urban based service quite a few elite, a fluent big customer are heavily dependent on free based activities. To overcome its situation they should be accessible to rural areas and possible loan and advances to its deposit. So the customers are enjoying by getting deposit borrowing and other services.
- In the light of growing competition in the banking sector the business of the bank is customer oriented. It should strengthen and activate its marketing function as it is an effective tool of attracting and retaining customers. The bank should develop an "Innovative approach to bank marketing and formulate new strategies of serving customers in a more convenient way.
- The banks are suggested to review their overall capital structures and investment portfolios to make a better mix in capital structure as well as investment portfolio.
- The least the banks should keep in pace with the changing banking technologies, improve organizational structure, provide quality services to its customers and actively participate in social welfare programmes'. Organizational culture that acquires, develops, utilizes and maintains the employees in a high morale is preferred.

- The liquidity risk ratio average ratio highest ratio KBL& lowest ratio is SCBNL . Credit risk ratio KBL is greater than other banks. So, it can be concluded the KBL's degree of risk is higher and more variable than other banks.
- Profitability ratios of banks are not satisfactory. If resources held idle bank have to beared more cost and result would be lower profit margin. So portfolio condition of a bank should be regularly revised from time to time. It should always try to maintain the equilibrium in the portfolio condition of the bank. The bank should use its funds in more portfolio sectors. It should utilize its risky assets and share holders' funds and it should reduce its express and should try to collect cheaper fund being more profitable.
- To get success itself and to encourage financial and economic development of the country through industrialization and commercialization a commercial banks must mobilize its fund and debenture 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 then loan or getting sufficient dividend on their share or interest on their debentures. Commercial banks needed to strength 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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APPENDIX I**Current Assets Component of NABIL**

(Rs. In '000')

Fiscal Year	Cash and Bank Balance	Money at Call or Short Notice	Loan and Advances	Government Securities	Misc. Current Assets	Total Current Assets
2007/08	2671141	1952361	21365053	378838/7	606394	30383336
2008/09	3372512	552888	27589933	1838819	864696	34218848
2009/10	1400098	3118144	32268873	5865885	910214	43563214
2010/11	2458550	2452512	38034098	6489955	1209998	50645113
2011/12	4275822	826435	41605682	4494594	-	51202533

Current Assets Component of NIBL

(Rs. In '000')

Fiscal Year	Cash and Bank Balance	Money at Call or Short Notice	Loan and Advances	Government Securities	Misc. Current Assets	Total Current Assets
2007/08	3754942	-	26996652	315500	276847	34183441
2008/09	7918004	-	36241207	2531300	390653	47081164
2009/10	6815890	-	40318308	3911850	399438	51445486
2010/11	8140371	150000	41095515	3564600	439388	53389874
2011/12	11803749	205363	41636998	5282960	615193	59544263

Current Assets Component of SCBNL

(Rs. In '000')

Fiscal Year	Cash and Bank Balance	Money at Call or Short Notice	Loan and Advances	Government Securities	Misc. Current Assets	Total Current Assets
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2007/08	2050243	2197538	13718597	7157732	1349319	26473429
2008/09	3137164	2055549	13679757	9050988	820687	28744145
2009/10	1929307	1669460	15956955	7878574	691547	28125843
2010/11	2975795	4280888	18427270	9309111	761812	35754876
2011/12	6366231	2126035	19575968	7214567	580966	35863767

Current Assets Component of HBL

(Rs. In '000')

Fiscal Year	Cash and Bank Balance	Money at Call or Short Notice	Loan and Advances	Government Securities	Misc. Current Assets	Total Current Assets
2007/08	1448143	518530	19497520	7166534	634787	29265514
2008/09	3048527	1170794	24793155	3907342	632074	33551892
2009/10	3866491	308840	27980629	3455030	1054384	36665374
2010/11	2964651	734000	31566977	4725585	1513144	41504357
2011/12	6362294	264600	34965433	6402963	1435153	49430443

Current Assets Component of SBI

(Rs. In '000')

Fiscal Year	Cash and Bank Balance	Money at Call or Short Notice	Loan and Advances	Government Securities	Misc. Current Assets	Total Current Assets
2007/08	1342960	304013	12113698	2762829	217665	16741165
2008/09	1903906	-	15131748	2933849	341265	20310768
2009/10	3441261	-	17480548	3720592	401992	25044393
2010/11	4877826	-	21365771	4682118	516613	31442328
2011/12	5508381	178250	26142094	3417984	1051608	36298317

Current Assets Component of BOK

(Rs. In '000')

Fiscal Year	Cash and Bank Balance	Money at Call or Short Notice	Loan and Advances	Government Securities	Misc. Current Assets	Total Current Assets
2007/08	1440467	72680	12462638	1281185	154346	15411316
2008/09	2182112	243352	14647297	907254	222606	18202621
2009/10	1798367	931989	16664931	2148538	240405	21784230
2010/11	1678931	479920	17468194	3189875	342111	23159031
2011/12	3382709	518622	18813937	4046459	374427	27136154

Current Assets Component of NIC

(Rs. In '000')

Fiscal Year	Cash and Bank Balance	Money at Call or Short Notice	Loan and Advances	Government Securities	Misc. Current Assets	Total Current Assets
2007/08	1192349	160000	11264678	1385248	115066	14117341
2008/09	1461151	-	13679394	1973615	324038	17438198
2009/10	2086130	100000	12732014	2893428	147217	17958789
2010/11	1677057	-	14933940	2682641	255683	19549321
2011/12	2755389	-	17242307	2387778	1183490	23568964

Current Assets Component of KBL

(Rs. In '000')

Fiscal Year	Cash and Bank Balance	Money at Call or Short Notice	Loan and Advances	Government Securities	Misc. Current Assets	Total Current Assets
2007/08	933842	55360	11335088	1278195	338370	13940855
2008/09	1776299	30000	14593347	882520	380258	17662426
2009/10	2723829	120000	14765912	1522342	330222	19462305
2010/11	1168524	451520	14626074	2577192	405768	19229078
2011/12	10363305	-	35910974	3119591	1127295	50521165

APPENDIX II

Component of Current Liabilities of NABIL

(Rs. In '000')

Fiscal Year	2007/08	2008/09	2009/10	2010/11	2011/12
Saving Deposit	12159966	14620407	13783586	14288520	17994746
Call & Other Deposit	5563441	8438271	9295058	12110043	15566683
Bill Payable	238422	463139	425444	415768	179142
Staff Bonus	108899	147867	162518	190943	241638
Tax Provision	-	-	-	-	-
Short term Loan	1360000	1681305	74900	1650599	31180
Dividend Payable	-	23314	43057	27303	35197
Other Current Liabilities	5633	5535	8677	7448	49015
Total Current Liabilities	19436361	25379838	23793240	28690624	34377501

Component of Current Liabilities of NIBL

(Rs. In '000')

Fiscal Year	2007/08	2008/09	2009/10	2010/11	2011/12
Saving Deposit	13688767	17066252	14324256	13490307	17276028
Call & Other Deposit	9072995	13513907	14140027	13568019	12194672
Bill Payable	78839	82338	38144	8250	2977
Staff Bonus	101996	129860	180821	167803	148837
Tax Provision	1941	17821	27183	28211	16568
Short term Loan	-	38800	37315	280764	567579
Dividend Payable	-	4040	16822	28715	26066
Other Current Liabilities	141417	211867	173865	32529	252530
Total Current Liabilities	23085955	31064885	28938433	27604598	30485257

Component of Current Liabilities of SCBNL

(Rs. In '000')

Fiscal Year	2007/08	2008/09	2009/10	2010/11	2011/12
Saving Deposit	17856134	19146004	12430009	11619815	15502306
Call & Other Deposit	1938246	2973067	3563245	4405895	3617542
Bill Payable	87397	72942	89220	65966	86378
Staff Bonus	119337	146721	153637	159832	167550
Tax Provision	-	-	-	-	-
Short term Loan	-	300000	-	350000	-
Dividend Payable	-	10313	12093	16872	25773
Other Current Liabilities	59532	238999	217862	190558	84482
Total Current Liabilities	20060646	22888046	16466066	16808938	19484031

Component of Current Liabilities of HBL

(Rs. In '000')

Fiscal Year	2007/08	2008/09	2009/10	2010/11	2011/12
Saving Deposit	17972441	20061048	16298680	15994564	21915374
Call & Other Deposit	2017072	4359767	5295390	6505078	8393410
Bill Payable	102670	113509	216159	31656	19003
Staff Bonus	94884	106661	75573	123773	138909
Tax Provision	19814	-	-	-	-
Short term Loan	83178	-	-	10000	-
Dividend Payable	-	-	15398	21943	24548
Other Current Liabilities	189974	189505	296708	453978	438184
Total Current Liabilities	20480033	24830490	22197908	23140992	30929428

Component of Current Liabilities of SBI

(Rs. In '000')

Fiscal Year	2007/08	2008/09	2009/10	2010/11	2011/12
Saving Deposit	4171176	5822294	7348970	8079244	10344583
Call & Other Deposit	828795	1645264	2413541	1917075	2700997
Bill Payable	75115	62947	72368	80685	78616
Staff Bonus	34803	44303	53836	65347	68665
Tax Provision	468	417	-	-	-
Short term Loan	1627480	727466	-	-	-
Dividend Payable	-	-	4981	11574	14071
Other Current Liabilities	62034	96652	8369	2140	178854
Total Current Liabilities	6799871	8399343	9902065	10156065	13385786

Component of Current Liabilities of EBL

(Rs. In '000')

Fiscal Year	2007/08	2008/09	2009/10	2010/11	2011/12
Saving Deposit	11883857	14782331	13360037	13039109	17269289
Call & Other Deposit	2780648	6294006	8412803	7550045	12952163
Bill Payable	49430	148656	145515	49717	692398
Staff Bonus	65869	89132	118799	133102	155803
Tax Provision	-	-	-	-	-
Short term Loan	-	312000	404600	482000	-
Dividend Payable	-	12444	17639	24167	40974
Other Current Liabilities	57670	81855	190101	78228	71454
Total Current Liabilities	14837474	21720424	22649494	21356368	31182081

Component of Current Liabilities of BOK

(Rs. In '000')

Fiscal Year	2007/08	2008/09	2009/10	2010/11	2011/12
Saving Deposit	6596110	7260305	6723174	6607560	8116501
Call & Other Deposit	3198116	3823396	4093903	3907324	6060885
Bill Payable	51576	51125	35702	19051	28144
Staff Bonus	52790	66127	73187	86505	87647
Tax Provision	-	-	-	-	-
Short term Loan	100000	100000	300000	464900	182900
Dividend Payable	-	-	17752	25770	32385
Other Current Liabilities	19450	29844	36063	55235	50311
Total Current Liabilities	10018042	11330797	11279781	11166345	14558773
Call & Other Deposit	2814408	3069276	3357597	3291606	5644186
Bill Payable	32564	265107	17543	17536	39263

Staff Bonus	35519	45464	64465	70777	56125
Tax Provision	-	-	-	-	-
Short term Loan	335000	660405	1723250	773300	132376
Dividend Payable	-	1996	1841	33567	52722
Other Current Liabilities	12041	101674	22032	11194	2078
Total Current Liabilities	6897429	8137638	8902575	8067825	11170584

Component of Current Liabilities of KBL

(Rs. In '000')

Fiscal Year	2007/08	2008/09	2009/10	2010/11	2011/12
Saving Deposit	4138809	4169789	5132141	6551422	5887118
Call & Other Deposit	4124556	6135569	4272544	2851606	5804839
Bill Payable	65297	70087	42313	8118	20698
Staff Bonus	25744	36704	45749	35846	39336
Tax Provision	-	-	-	-	-
Short term Loan	100000	293420	429740	660925	5403
Dividend Payable	-	-	-	11491	7806
Other Current Liabilities	267083	348618	142985	95218	75804
Total Current Liabilities	8721489	11054187	10065472	10214626	11841004

Appendix III

(i) **NABIL**

Trend of Total Deposit

(Rs. in '000000000')

Year	Year (X)	X ²	Total deposit (Y)	XY
2007/08	1	1	3.1915	3.1915
2008/09	2	4	3.7348	7.4696
2009/10	3	9	4.634	13.9020
2010/11	4	16	4.9608	19.8432
2011/12	5	25	5.5023	27.5115
Total	15	55	22.0234	71.9178

Here, Actual Equation of the linear trends is $Y = a + bx$

Two normal equations are

$$\Sigma Y = na + b\Sigma X$$

$$\Sigma XY = a\Sigma X + b\Sigma X^2$$

Putting the value on normal equation from the above table

$$22.0234 = 5a + 15b \dots\dots\dots (i)$$

$$71.9178 = 15a + 55b \dots\dots\dots (ii)$$

To solve the equation we multiply equation (i) by 3 and subtracted

$$66.0702 = 15a + 45b$$

$$71.9178 = 15a + 55b$$

$$\underline{\quad - \quad - \quad -}$$

$$- 5.8476 = - 10b$$

$$\therefore b = 0.5848 \approx 0.58$$

Substituting the value of b in equation (i) we get

$$22.0234 = 5a + 15 \times 0.58$$

$$\therefore a = 2.665$$

Thus requirement trends

$$Y = 2.665 + 0.58X$$

$$2007/08 = 2.665 + 0.58 \times 1 = 3.245$$

$$2008/09 = 2.665 + 0.58 \times 2 = 3.825$$

$$2009/10 = 2.665 + 0.58 \times 3 = 4.405$$

$$2010/11 = 2.665 + 0.58 \times 4 = 4.985$$

$$2011/12 = 2.665 + 0.58 \times 5 = 5.565$$

(ii) NIBL

Trend of Total Deposit

(Rs. in '000000000')

Year	Year (X)	X ²	Total deposit (Y)	XY
2007/08	1	1	3.4451	3.4451
2008/09	2	4	4.6698	9.3396
2009/10	3	9	5.0094	15.0282
2010/11	4	16	5.0138	20.0552
2011/12	5	25	5.7010	28.5050
Total	15	55	23.8391	76.3731

Here, Actual Equation of the linear trends is $Y = a + bx$

Two normal equations are

$$\Sigma Y = na + b\Sigma X$$

$$\Sigma XY = a\Sigma X + b\Sigma X^2$$

Putting the value on normal equation from the above table

$$23.8391 = 5a + 15b \dots\dots\dots (i)$$

$$76.3731 = 15a + 55b \dots\dots\dots (ii)$$

To solve the equation we multiply equation (i) by 3 and subtracted

$$\begin{array}{r} 71.5173 = 15a + 45b \\ 76.3731 = 15a + 55b \\ \hline -4.8558 = -10b \\ \therefore b = 0.49 \end{array}$$

Substituting the value of b in equation (i) we get

$$23.8391 = 5a + 15 \times 0.49$$

$$\therefore a = 3.298$$

Thus requirement trends

$$Y = 3.298 + 0.49X$$

$$2006/07 = 3.298 + 0.49 \times 1 = 3.788$$

$$2007/08 = 3.298 + 0.49 \times 2 = 4.278$$

$$2008/09 = 3.298 + 0.49 \times 3 = 4.768$$

$$2009/10 = 3.298 + 0.49 \times 4 = 5.258$$

$$2010/11 = 3.298 + 0.49 \times 5 = 5.748$$

(iii) SCBNL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 17.4490, \Sigma XY = 53.8582$$

$$b = 0.1511 \approx 0.15, a = 3.0398$$

Thus requirement trends

$$Y = 3.0398 + 0.15X$$

$$2007/08 = 3.0398 + 0.15 \times 1 = 3.1898$$

$$2008/09 = 3.0398 + 0.15 \times 2 = 3.3398$$

$$2009/10 = 3.0398 + 0.15 \times 3 = 3.4898$$

$$2010/11 = 3.0398 + 0.15 \times 4 = 3.6398$$

$$2011/12 = 3.0398 + 0.15 \times 5 = 3.7898$$

(iv) HBL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 19.2784, \Sigma XY = 61.6367$$

$$b = 0.38, a = 2.716$$

Thus requirement trends

$$Y = 2.716 + 0.275X$$

$$2007/08 = 2.716 + 0.38 \times 1 = 3.096$$

$$2008/09 = 2.716 + 0.38 \times 2 = 3.476$$

$$2009/10 = 2.716 + 0.38 \times 3 = 3.856$$

$$2010/11 = 2.716 + 0.38 \times 4 = 4.236$$

$$2011/12 = 2.716 + 0.38 \times 5 = 4.616$$

(v) SBI

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 17.2320, \Sigma XY = 61.0662$$

$$b = 0.94, a = 0.6264$$

Thus requirement trends

$$Y = 0.6264 + 0.94X$$

$$2007/08 = 0.6264 + 0.94 \times 1 = 1.5664$$

$$2008/09 = 0.6264 + 0.94 \times 2 = 2.5064$$

$$2009/10 = 0.6264 + 0.94 \times 3 = 3.4464$$

$$2010/11 = 0.6264 + 0.94 \times 4 = 4.3864$$

$$2011/12 = 0.6264 + 0.94 \times 5 = 5.3264$$

(vi) EBL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 18.5357, \Sigma XY = 61.5954$$

$$b = 0.60, a = 1.907$$

Thus requirement trends

$$Y = 1.907 + 0.60X$$

$$2007/08 = 1.907 + 0.60 \times 1 = 2.5070$$

$$2008/09 = 1.907 + 0.60 \times 2 = 3.1070$$

$$2009/10 = 1.907 + 0.60 \times 3 = 3.7070$$

$$2010/11 = 1.907 + 0.60 \times 4 = 4.3070$$

$$2011/12 = 1.907 + 0.60 \times 5 = 4.9070$$

(vii) BOK

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 10.024, \Sigma XY = 32.1971$$

$$b = 0.2125, a = 1.3673$$

Thus requirement trends

$$Y = 1.3673 + 0.213X$$

$$2007/08 = 1.3673 + 0.213 \times 1 = 1.580$$

$$2008/09 = 1.3673 + 0.213 \times 2 = 1.793$$

$$2009/10 = 1.3673 + 0.213 \times 3 = 2.006$$

$$2010/11 = 1.3673 + 0.213 \times 4 = 2.219$$

$$2011/12 = 1.3673 + 0.213 \times 5 = 2.432$$

(viii) NIC

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 8.5136, \Sigma XY = 27.6277$$

$$b = 0.209, a = 1.0757$$

Thus requirement trends

$$Y = 1.0757 + 0.209X$$

$$2007/08 = 1.0757 + 0.209 \times 1 = 1.285$$

$$2008/09 = 1.0757 + 0.209 \times 2 = 1.494$$

$$2009/10 = 1.0757 + 0.209 \times 3 = 1.703$$

$$2010/11 = 1.0757 + 0.209 \times 4 = 1.912$$

$$2011/12 = 1.0757 + 0.209 \times 5 = 2.123$$

(ix) KBL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 8.4887, \Sigma XY = 27.4359$$

$$b = 0.197, a = 1.1068$$

Thus requirement trends

$$Y = 1.1068 + 0.197X$$

$$2007/08 = 1.1068 + 0.197 \times 1 = 1.304$$

$$2008/09 = 1.1068 + 0.197 \times 2 = 1.5$$

$$2009/10 = 1.1068 + 0.197 \times 3 = 1.698$$

$$2010/11 = 1.1068 + 0.197 \times 4 = 1.895$$

$$2011/12 = 1.1068 + 0.197 \times 5 = 2.092$$

Appendix IV

(i) NABIL

Trend of Net Profit After Tax

(Rs. in '00000000')

Year	Year (X)	X ²	NPAT (Y)
2007/08	1	1	0.7465
2008/09	2	4	1.0311
2009/10	3	9	1.1386
2010/11	4	16	1.344
2011/12	5	25	1.6962
Total	15	55	5.9564

Here, Actual Equation of the linear trends is $Y = a + bx$

Two normal equations are

$$\Sigma Y = na + b\Sigma X$$

$$\Sigma XY = a\Sigma X + b\Sigma X^2$$

Putting the value on normal equation from the above table

$$5.9564 = 5a + 15b \dots\dots\dots (i)$$

$$20.0815 = 15a + 55b \dots\dots\dots (ii)$$

To solve the equation we multiply equation (i) by 3 and subtracted

$$17.8692 = 15a + 45b$$

$$20.0815 = 15a + 55b$$

$$\begin{array}{r} - \\ \hline \end{array}$$

$$- 2.2123 = - 10b$$

$$\therefore b = 0.221$$

Substituting the value of b in equation (i) we get

$$5.9564 = 5a + 15 \times 0.221$$

$$\therefore a = 0.528$$

Thus requirement trends

$$Y = 0.528 + 0.221X$$

$$2007/08 = 0.528 + 0.221 \times 1 = 0.749$$

$$2008/09 = 0.528 + 0.221 \times 2 = 0.97$$

$$2009/10 = 0.528 + 0.221 \times 3 = 1.191$$

$$2010/11 = 0.528 + 0.221 \times 4 = 1.412$$

$$2011/12 = 0.528 + 0.221 \times 5 = 1.633$$

(i) NIBL

Trend of Net Profit After Tax

(Rs. in

'00000000')

Year	Year (X)	X ²	NPAT (Y)
2007/08	1	1	0.6967
2008/09	2	4	0.9006
2009/10	3	9	1.266
2010/11	4	16	1.1766
2011/12	5	25	1.0392
Total	15	55	5.0791

Here, Actual Equation of the linear trends is $Y = a + bx$

Two normal equations are

$$\Sigma Y = na + b\Sigma X$$

$$\Sigma XY = a\Sigma X + b\Sigma X^2$$

Putting the value on normal equation from the above table

$$5.0791 = 5a + 15b \dots\dots\dots (i)$$

$$16.1983 = 15a + 55b \dots\dots\dots (ii)$$

To solve the equation we multiply equation (i) by 3 and subtracted

$$15.2373 = 15a + 45b$$

$$16.1983 = 15a + 55b$$

$$- \quad - \quad -$$

$$-0.9610 = -10b$$

$$\therefore b = 0.0961$$

Substituting the value of b in equation (i) we get

$$5.0791 = 5a + 15 \times 0.0961$$

$$\therefore a = 0.7275$$

Thus requirement trends

$$Y = 0.728 + 0.0961X$$

$$2007/08 = 0.728 + 0.0961 \times 1 = 0.8241$$

$$2008/09 = 0.728 + 0.0961 \times 2 = 0.9202$$

$$2009/10 = 0.728 + 0.0961 \times 3 = 1.0163$$

$$2010/11 = 0.728 + 0.0961 \times 4 = 1.1124$$

$$2011/12 = 0.728 + 0.0961 \times 5 = 1.2085$$

(ii) SCBNL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 5.2178, \Sigma XY = 16.4474$$

$$b = 0.0794, a = 0.8054$$

Thus requirement trends

$$Y = 3.0513 + 0.0794X$$

$$2007/08 = 0.8054 + 0.0794 \times 1 = 0.8848$$

$$2008/09 = 0.8054 + 0.0794 \times 2 = 0.9642$$

$$2009/10 = 0.8054 + 0.0794 \times 3 = 1.0436$$

$$2010/11 = 0.8054 + 0.0794 \times 4 = 1.123$$

$$2011/12 = 0.8054 + 0.0794 \times 5 = 1.2024$$

(iii) HBL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 3.7490, \Sigma XY = 12.0179$$

$$b = 0.077, \quad a = 0.5188$$

Thus requirement trends

$$Y = 0.5188 + 0.077X$$

$$2007/08 = 0.5188 + 0.077 \times 1 = 0.5958$$

$$2008/09 = 0.5188 + 0.077 \times 2 = 0.6728$$

$$2009/10 = 0.5188 + 0.077 \times 3 = 0.7498$$

$$2010/11 = 0.5188 + 0.077 \times 4 = 0.8268$$

$$2011/12 = 0.5188 + 0.077 \times 5 = 0.9038$$

(iv) SBI

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 1.9, \Sigma XY = 6.3139$$

$$b = 0.062, \quad a = 0.1940$$

Thus requirement trends

$$Y = 0.1940 + 0.062X$$

$$2007/08 = 0.1940 + 0.062 \times 1 = 0.2560$$

$$2008/09 = 0.1940 + 0.062 \times 2 = 0.3180$$

$$2009/10 = 0.1940 + 0.062 \times 3 = 0.38$$

$$2010/11 = 0.1940 + 0.062 \times 4 = 0.4420$$

$$2011/12 = 0.1940 + 0.062 \times 5 = 0.5040$$

(v) EBL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 3.9234, \Sigma XY = 13.3414$$

$$b = 0.1571, \quad a = 0.3134$$

Thus requirement trends

$$Y = 0.3134 + 0.1571X$$

$$2006/07 = 0.3134 + 0.1571 \times 1 = 0.4705$$

$$2007/08 = 0.3134 + 0.1571 \times 2 = 0.6276$$

$$2008/09 = 0.3134 + 0.1571 \times 3 = 0.7847$$

$$2009/10 = 0.3134 + 0.1571 \times 4 = 0.9418$$

$$2010/11 = 0.3134 + 0.1571 \times 5 = 1.0989$$

(vi) NIBL

Trend of Net Profit After Tax

(Rs. in '00000000')

Year	Year (X)	X ²	NPAT (Y)	XY
2007/08	1	1	0.6967	0.6967
2008/09	2	4	0.9006	1.8012
2009/10	3	9	1.266	3.7980
2010/11	4	16	1.1766	4.7064
2011/12	5	25	1.0392	5.1960
Total	15	55	5.0791	16.1983

Here, Actual Equation of the linear trends is $Y = a + bx$

Two normal equations are

$$\Sigma Y = na + b\Sigma X$$

$$\Sigma XY = a\Sigma X + b\Sigma X^2$$

Putting the value on normal equation from the above table

$$5.0791 = 5a + 15b \dots\dots\dots (i)$$

$$16.1983 = 15a + 55b \dots\dots\dots (ii)$$

To solve the equation we multiply equation (i) by 3 and subtracted

$$15.2373 = 15a + 45b$$

$$16.1983 = 15a + 55b$$

$$\begin{array}{r} - \\ \hline -0.9610 = -10b \end{array}$$

$$\therefore b = 0.0961$$

$$\therefore b = 0.0961$$

Substituting the value of b in equation (i) we get

$$5.0791 = 5a + 15 \times 0.0961$$

$$\therefore a = 0.7275$$

Thus requirement trends

$$Y = 0.728 + 0.0961X$$

$$2007/08 = 0.728 + 0.0961 \times 1 = 0.8241$$

$$2008/09 = 0.728 + 0.0961 \times 2 = 0.9202$$

$$2009/10 = 0.728 + 0.0961 \times 3 = 1.0163$$

$$2010/11 = 0.728 + 0.0961 \times 4 = 1.1124$$

$$2011/12 = 0.728 + 0.0961 \times 5 = 1.2085$$

(vii) SCBNL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 5.2178, \Sigma XY = 16.4474$$

$$b = 0.0794, a = 0.8054$$

Thus requirement trends

$$Y = 3.0513 + 0.0794X$$

$$2007/08 = 0.8054 + 0.0794 \times 1 = 0.8848$$

$$2008/09 = 0.8054 + 0.0794 \times 2 = 0.9642$$

$$2009/10 = 0.8054 + 0.0794 \times 3 = 1.0436$$

$$2010/11 = 0.8054 + 0.0794 \times 4 = 1.123$$

$$2011/12 = 0.8054 + 0.0794 \times 5 = 1.2024$$

(viii) HBL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 3.7490, \Sigma XY = 12.0179$$

$$b = 0.077, a = 0.5188$$

Thus requirement trends

$$Y = 0.5188 + 0.077X$$

$$2007/08 = 0.5188 + 0.077 \times 1 = 0.5958$$

$$2008/09 = 0.5188 + 0.077 \times 2 = 0.6728$$

$$2009/10 = 0.5188 + 0.077 \times 3 = 0.7498$$

$$2010/11 = 0.5188 + 0.077 \times 4 = 0.8268$$

$$2011/12 = 0.5188 + 0.077 \times 5 = 0.9038$$

(ix) SBI

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 1.9, \Sigma XY = 6.3139$$

$$b = 0.062, a = 0.1940$$

Thus requirement trends

$$Y = 0.1940 + 0.062X$$

$$2007/08 = 0.1940 + 0.062 \times 1 = 0.2560$$

$$2008/09 = 0.1940 + 0.062 \times 2 = 0.3180$$

$$2009/10 = 0.1940 + 0.062 \times 3 = 0.38$$

$$2010/11 = 0.1940 + 0.062 \times 4 = 0.4420$$

$$2011/12 = 0.1940 + 0.062 \times 5 = 0.5040$$

(x) EBL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 3.9234, \Sigma XY = 13.3414$$

$$b = 0.1571, a = 0.3134$$

Thus requirement trends

$$Y = 0.3134 + 0.1571X$$

$$2006/07 = 0.3134 + 0.1571 \times 1 = 0.4705$$

$$2007/08 = 0.3134 + 0.1571 \times 2 = 0.6276$$

$$2008/09 = 0.3134 + 0.1571 \times 3 = 0.7847$$

$$2009/10 = 0.3134 + 0.1571 \times 4 = 0.9418$$

$$2010/11 = 0.3134 + 0.1571 \times 5 = 1.0989$$

(i) BOK

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 2.5450, \Sigma XY = 8.2708$$

$$b = 0.0636$$

$$a = 0.3183$$

Thus requirement trends

$$Y = 0.3183 + 0.0636X$$

$$2007/08 = 0.3183 + 0.0636 \times 1 = 0.3819$$

$$2008/09 = 0.3183 + 0.0636 \times 2 = 0.4455$$

$$2009/10 = 0.3183 + 0.0636 \times 3 = 0.5091$$

$$2010/11 = 0.3183 + 0.0636 \times 4 = 0.5727$$

$$2011/12 = 0.3183 + 0.0636 \times 5 = 0.6363$$

(ii) BOK

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 2.5450, \Sigma XY = 8.2708$$

$$b = 0.0636$$

$$a = 0.3183$$

Thus requirement trends

$$Y = 0.3183 + 0.0636X$$

$$2007/08 = 0.3183 + 0.0636 \times 1 = 0.3819$$

$$2008/09 = 0.3183 + 0.0636 \times 2 = 0.4455$$

$$2009/10 = 0.3183 + 0.0636 \times 3 = 0.5091$$

$$2010/11 = 0.3183 + 0.0636 \times 4 = 0.5727$$

$$2011/12 = 0.3183 + 0.0636 \times 5 = 0.6363$$

(iii) NIC

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 1.8976, \Sigma XY = 6.1685$$

$$b = 0.0476$$

$$a = 0.2367$$

Thus requirement trends

$$Y = 0.2367 + 0.0476X$$

$$2007/08 = 0.2367 + 0.0476 \times 1 = 0.2843$$

$$2008/09 = 0.2367 + 0.0476 \times 2 = 0.3319$$

$$2009/10 = 0.2367 + 0.0476 \times 3 = 0.3795$$

$$2010/11 = 0.2367 + 0.0476 \times 4 = 0.4241$$

$$2011/12 = 0.2367 + 0.0476 \times 5 = 0.4747$$

(iv) KBL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 1.2764, \Sigma XY = 4.0233$$

$$b = 0.0194$$

$$a = 0.197$$

Thus, requirement trends

$$Y = 0.197 + 0.0194X$$

$$2007/08 = 0.197 + 0.0194 \times 1 = 0.2164$$

$$2008/09 = 0.197 + 0.0194 \times 2 = 0.2358$$

$$2009/10 = 0.197 + 0.0194 \times 3 = 0.2552$$

$$2010/11 = 0.197 + 0.0194 \times 4 = 0.2746$$

$$2011/12 = 0.197 + 0.0194 \times 5 = 0.2940$$

Appendix V

(i) NABIL

Trend of Loan & Advance

(Rs. in '000000000')

Year	Year (X)	X ²	L & A (Y)	XY
2007/08	1	1	2.1365	2.1365
2008/09	2	4	2.7589	5.5118
2009/10	3	9	3.2268	9.6804
2010/11	4	16	3.8034	15.2136
2011/12	5	25	4.1605	20.8025

Total	15	55	16.0861	53.3448
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Here, Actual Equation of the linear trends is $Y = a + bx$

Two normal equations are

$$\Sigma Y = na + b\Sigma X$$

$$\Sigma XY = a\Sigma X + b\Sigma X^2$$

Putting the value on normal equation from the above table

$$16.0861 = 5a + 15b \dots\dots\dots (i)$$

$$53.3448 = 15a + 55b \dots\dots\dots (ii)$$

To solve the equation we multiply equation (i) by 3 and subtracted

$$\begin{array}{r} 48.2583 = 15a + 45b \\ 53.3448 = 15a + 55b \\ \hline -5.0865 = -10b \end{array}$$

$$\therefore b = 0.5087$$

Substituting the value of b in equation (i) we get

$$16.0861 = 5a + 15 \times 0.5087$$

$$\therefore a = 1.6913$$

Thus requirement trends

$$Y = 1.6913 + 0.5087X$$

$$2007/08 = 1.6913 + 0.5087 \times 1 = 2.2$$

$$2008/09 = 1.6913 + 0.5087 \times 2 = 2.7087$$

$$2009/10 = 1.6913 + 0.5087 \times 3 = 3.2174$$

$$2010/11 = 1.6913 + 0.5087 \times 4 = 3.7261$$

$$2011/12 = 1.6913 + 0.5087 \times 5 = 4.2348$$

(ii) NIBL

Trend of Loans & Advance

(Rs. in '000000000')

Year	Year (X)	X ²	L & A (Y)	XY
2007/08	1	1	2.6996	2.6996
2008/09	2	4	3.6241	7.2482
2009/10	3	9	4.0318	12.0954
2010/11	4	16	4.1095	16.4380
2011/12	5	25	4.1636	20.8180
Total	15	55	18.6286	59.2992

Here, Actual Equation of the linear trends is $Y = a + bx$

Two normal equations are

$$\Sigma Y = na + b\Sigma X$$

$$\Sigma XY = a\Sigma X + b\Sigma X^2$$

Putting the value on normal equation from the above table

$$18.6286 = 5a + 15b \dots\dots\dots (i)$$

$$59.2992 = 15a + 55b \dots\dots\dots (ii)$$

To solve the equation we multiply equation (i) by 3 and subtracted

$$55.8858 = 15a + 45b$$

$$59.2992 = 15a + 55b$$

$$\underline{- \quad - \quad -}$$

$$- 3.4134 = - 10b$$

$$\therefore b = 0.3413$$

Substituting the value of b in equation (i) we get

$$18.6286 = 5a + 15 \times 0.3413$$

$$\therefore a = 2.7018$$

Thus requirement trends

$$Y = 2.7018 + 0.3413X$$

$$2007/08 = 2.7018 + 0.3413 \times 1 = 3.0431$$

$$2008/09 = 2.7018 + 0.3413 \times 2 = 3.3844$$

$$2009/10 = 2.7018 + 0.3413 \times 3 = 3.7257$$

$$2010/11 = 2.7018 + 0.3413 \times 4 = 4.0670$$

$$2011/12 = 2.7018 + 0.3413 \times 5 = 4.4083$$

(iii) SCBNL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 8.1355, \Sigma XY = 26.0527$$

$$b = 0.1646, a = 1.1333$$

Thus requirement trends

$$Y = 1.1333 + 0.1646X$$

$$2007/08 = 1.1333 + 0.1646 \times 1 = 1.2979$$

$$2008/09 = 1.1333 + 0.1646 \times 2 = 1.4625$$

$$2009/10 = 1.1333 + 0.1646 \times 3 = 1.6271$$

$$2010/11 = 1.1333 + 0.1646 \times 4 = 1.7917$$

$$2011/12 = 1.1333 + 0.1646 \times 5 = 1.9563$$

(iv) HBL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 13.8801, \Sigma XY = 45.4113$$

$$b = 0.3771, a = 1.6447$$

Thus requirement trends

$$Y = 1.6447 + 0.3771X$$

$$2007/08 = 1.6447 + 0.3771 \times 1 = 2.0218$$

$$2008/09 = 1.6447 + 0.3771 \times 2 = 2.3989$$

$$2009/10 = 1.6447 + 0.3771 \times 3 = 2.7760$$

$$2010/11 = 1.6447 + 0.3771 \times 4 = 3.1531$$

$$2011/12 = 1.6447 + 0.3771 \times 5 = 3.5302$$

(v) SBI

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 9.2231, \Sigma XY = 31.0986$$

$$b = 0.3429, a = 0.8159$$

Thus requirement trends

$$Y = 0.8159 + 0.3429X$$

$$2007/08 = 0.8159 + 0.3429 \times 1 = 1.1588$$

$$2008/09 = 0.8159 + 0.3429 \times 2 = 1.5017$$

$$2009/10 = 0.8159 + 0.3429 \times 3 = 1.8446$$

$$2010/11 = 0.8159 + 0.3429 \times 4 = 2.1875$$

$$2011/12 = 0.8159 + 0.3429 \times 5 = 2.5304$$

(vi) EBL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 13.6747, \Sigma XY = 45.2553$$

$$b = 0.4231, a = 1.4656$$

Thus requirement trends

$$Y = 1.4656 + 0.4231X$$

$$2007/08 = 1.4656 + 0.4231 \times 1 = 1.8887$$

$$2008/09 = 1.4656 + 0.4231 \times 2 = 2.3118$$

$$2009/10 = 1.4656 + 0.4231 \times 3 = 2.7349$$

$$2010/11 = 1.4656 + 0.4231 \times 4 = 3.1580$$

$$2011/12 = 1.4656 + 0.4231 \times 5 = 3.5811$$

(vii) BOK

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 8.0054, \Sigma XY = 25.5685$$

$$b = 0.1552$$

$$a = 1.1355$$

Thus requirement trends

$$Y = 1.1355 + 0.1552X$$

$$2007/08 = 1.1355 + 0.1552 \times 1 = 1.2907$$

$$2008/09 = 1.1355 + 0.1552 \times 2 = 1.4459$$

$$2009/10 = 1.1355 + 0.1552 \times 3 = 1.6011$$

$$2010/11 = 1.1355 + 0.1552 \times 4 = 1.7563$$

$$2011/12 = 1.1355 + 0.1552 \times 5 = 1.9115$$

(viii) NIC

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 6.985, \Sigma XY = 22.276$$

$$b = 0.1321$$

$$a = 1$$

Thus requirement trends

$$Y = 1 + 0.1321X$$

$$2007/08 = 1 + 0.1321 \times 1 = 1.1321$$

$$2008/09 = 1 + 0.1321 \times 2 = 1.2642$$

$$2009/10 = 1 + 0.1321 \times 3 = 1.3963$$

$$2010/11 = 1 + 0.1321 \times 4 = 1.5284$$

$$2011/12 = 1 + 0.1321 \times 5 = 1.6605$$

(ix) KBL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 7.2933, \Sigma XY = 23.139$$

$$b = 0.1259$$

$$a = 1.081$$

Thus, requirement trends

$$Y = 1.081 + 0.1259X$$

$$2007/08 = 1.081 + 0.1259 \times 1 = 1.2069$$

$$2008/09 = 1.081 + 0.1259 \times 2 = 1.3328$$

$$2009/10 = 1.081 + 0.1259 \times 3 = 1.4587$$

$$2010/11 = 1.081 + 0.1259 \times 4 = 1.5846$$

$$2011/12 = 1.081 + 0.1259 \times 5 = 1.7105$$

Appendix VI

(i) NABIL

Trend of Investment

(Rs.0000000000')

Year	Year (X)	X ²	Investment (Y)	XY
2007/08	1	1	0.9966	0.9966
2008/09	2	4	1.0874	2.1748
2009/10	3	9	1.3714	4.1142
2010/11	4	16	1.3085	5.234
2011/12	5	25	1.4083	7.0415
Total	15	55	6.1722	19.5611

Here, Actual Equation of the linear trends is $Y = a + bx$

Two normal equations are

$$\Sigma Y = na + b\Sigma X$$

$$\Sigma XY = a\Sigma X + b\Sigma X^2$$

Putting the value on normal equation from the above table

$$6.1722 = 5a + 15b \dots\dots\dots (i)$$

$$19.5611 = 15a + 55b \dots\dots\dots (ii)$$

To solve the equation we multiply equation (i) by 3 and subtracted

$$18.5166 = 15a + 45b$$

$$19.5166 = 15a + 55b$$

$$\underline{- \quad - \quad -}$$

$$-1 = -10b$$

$$\therefore b = 0.10$$

Substituting the value of b in equation (i) we get

$$6.1722 = 5a + 15 \times 0.10$$

$$\therefore a = 0.9344$$

Thus requirement trends

$$Y = 0.9344 + 0.10X$$

$$2007/08 = 0.9344 + 0.10 \times 1 = 1.0344$$

$$2008/09 = 0.9344 + 0.10 \times 2 = 1.1344$$

$$2009/10 = 0.9344 + 0.10 \times 3 = 1.2344$$

$$2010/11 = 0.9344 + 0.10 \times 4 = 1.3344$$

$$2011/12 = 0.9344 + 0.10 \times 5 = 1.4344$$

(ii) NIBL

Trend of Investment

(Rs. in '000000000')

Year	Year (X)	X ²	Investment (Y)	XY
2007/08	1	1	0.6874	0.6874
2008/09	2	4	0.7403	1.4806
2009/10	3	9	0.8638	2.5914
2010/11	4	16	0.7425	2.97
2011/12	5	25	1.0441	5.2205
Total	15	55	4.0781	12.9499

Here, Actual Equation of the linear trends is $Y = a + bx$

Two normal equations are

$$\Sigma Y = na + b\Sigma X$$

$$\Sigma XY = a\Sigma X + b\Sigma X^2$$

Putting the value on normal equation from the above table

$$4.0781 = 5a + 15b \dots\dots\dots (i)$$

$$12.9499 = 15a + 55b \dots\dots\dots (ii)$$

To solve the equation we multiply equation (i) by 3 and subtracted

$$\begin{array}{r} 12.2343 = 15a + 45b \\ 12.9499 = 15a + 55b \\ \hline - = - 10b \end{array}$$

$$\therefore b = 0.0716$$

Substituting the value of b in equation (i) we get

$$4.0781 = 5a + 15 \times 0.0716$$

$$\therefore a = 0.60$$

Thus requirement trends

$$Y = 0.60 + 0.0716X$$

$$2007/08 = 0.60 + 0.0716 \times 1 = 0.6716$$

$$2008/09 = 0.60 + 0.0716 \times 2 = 0.7432$$

$$2009/10 = 0.60 + 0.0716 \times 3 = 0.8148$$

$$2010/11 = 0.60 + 0.0716 \times 4 = 0.8864$$

$$2011/12 = 0.60 + 0.0716 \times 5 = 0.958$$

(iii) SCBNL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 8.4306, \Sigma XY = 24.8002$$

$$b = -0.0492, a = 1.8337$$

Thus requirement trends

$$Y = 1.8337 - 0.0492X$$

$$2007/08 = 1.8337 - 0.0492 \times 1 = 1.7845$$

$$2008/09 = 1.8337 - 0.0492 \times 2 = 1.7353$$

$$2009/10 = 1.8337 - 0.0492 \times 3 = 1.6861$$

$$2010/11 = 1.8337 - 0.0492 \times 4 = 1.6369$$

$$2011/12 = 1.8337 - 0.0492 \times 5 = 1.5877$$

(iv) HBL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 4.9294, \Sigma XY = 14.1323$$

$$b = -0.0656, a = 1.1827$$

Thus requirement trends

$$Y = 1.1827 - 0.0656X$$

$$2007/08 = 1.1827 - 0.0656 \times 1 = 1.1171$$

$$2008/09 = 1.1827 - 0.0656 \times 2 = 1.0515$$

$$2009/10 = 1.1827 - 0.0656 \times 3 = 0.9859$$

$$2010/11 = 1.1827 - 0.0656 \times 4 = 0.9203$$

$$2011/12 = 1.1827 - 0.0656 \times 5 = 0.8547$$

(v) SBI

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 7.6053, \Sigma XY = 27.6534$$

$$b = 0.4838, a = 0.0698$$

Thus requirement trends

$$Y = 0.0698 + 0.4838X$$

$$2007/08 = 0.0698 + 0.4838 \times 1 = 0.5536$$

$$2008/09 = 0.0698 + 0.4838 \times 2 = 1.0374$$

$$2009/10 = 0.0698 + 0.4838 \times 3 = 1.5212$$

$$2010/11 = 0.0698 + 0.4838 \times 4 = 2.005$$

$$2011/12 = 0.0698 + 0.4838 \times 5 = 2.4888$$

(vi) EBL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 3.1628, \Sigma XY = 10.2283$$

$$b = 0.0740, \quad a = 0.4106$$

Thus requirement trends

$$Y = 0.4106 + 0.0740X$$

$$2007/08 = 0.4106 + 0.0740 \times 1 = 0.4846$$

$$2008/09 = 0.4106 + 0.0740 \times 2 = 0.5586$$

$$2009/10 = 0.4106 + 0.0740 \times 3 = 0.6326$$

$$2010/11 = 0.4106 + 0.0740 \times 4 = 0.7066$$

$$2011/12 = 0.4106 + 0.0740 \times 5 = 0.7806$$

(vii) BOK

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 1.8793, \Sigma XY = 6.1960$$

$$b = 0.0558$$

$$a = 0.2085$$

Thus requirement trends

$$Y = 0.2085 + 0.0558X$$

$$2007/08 = 0.2085 + 0.0558 \times 1 = 0.2643$$

$$2008/09 = 0.2085 + 0.0558 \times 2 = 0.3201$$

$$2009/10 = 0.2085 + 0.0558 \times 3 = 0.3759$$

$$2010/11 = 0.2085 + 0.0558 \times 4 = 0.4317$$

$$2011/12 = 0.2085 + 0.0558 \times 5 = 0.4875$$

(viii) NIC

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 1.9143, \Sigma XY = 6.2633$$

$$b = 0.0520$$

$$a = 0.2267$$

Thus requirement trends

$$Y = 0.2267 + 0.0520X$$

$$2007/08 = 0.2267 + 0.0520 \times 1 = 0.2787$$

$$2008/09 = 0.2267 + 0.0520 \times 2 = 0.3307$$

$$2009/10 = 0.2267 + 0.0520 \times 3 = 0.3827$$

$$2010/11 = 0.2267 + 0.0520 \times 4 = 0.4347$$

$$2011/12 = 0.2267 + 0.0520 \times 5 = 0.4867$$

(ix) KBL

$$\Sigma x = 15, \Sigma x^2 = 55, \Sigma Y = 1.2419, \Sigma XY = 4.0884$$

$$b = 0.0363$$

$$a = 0.1395$$

Thus, requirement trends

$$Y = 0.1395 + 0.0363X$$

$$2007/08 = 0.1395 + 0.0363 \times 1 = 0.1758$$

$$2008/09 = 0.1395 + 0.0363 \times 2 = 0.2121$$

$$2009/10 = 0.1395 + 0.0363 \times 3 = 0.2484$$

$$2010/11 = 0.1395 + 0.0363 \times 4 = 0.2847$$

$$2011/12 = 0.1395 + 0.0363 \times 5 = 0.321$$

APPENDIX VII(i)

NABIL

**Calculation Coefficient of Correlation between Total Deposit to Loan & Advance
(Rs. In '000000000')**

Year	T D(x)	L & A (y)	X = x - \bar{x}	Y = y - \bar{y}	X ²	Y ²
2007/08	31	21	31	21	961	441
2008/09	37	27	37	27	1369	729
2009/10	46	32	46	32	2116	1024
2010/11	49	38	49	38	2401	1444
2011/12	55	41	55	41	3025	1681
Total	218	159	218	159	9872	5319

i) Calculation of mean

For Total Deposit

$$\text{Mean X} = \frac{\sum X}{n} = \frac{218}{5} = 43.6$$

For Loan & Advance

$$\text{Mean Y} = \frac{\sum Y}{n} = \frac{159}{5} = 31.8$$

ii) Calculation of Correlation Coefficient between Investment on Government Securities and Total Deposit

$$r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}} = \frac{7239}{\sqrt{9872} \sqrt{5391}} = 0.9990$$

iii) Calculation of Probable Error (P.E.)

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

r ²	1-r ²	0.6745 × (1-r ²)		P.E. $\sqrt{5}$	6P.E.
0.9980	0.0020	0.0014	2.2361	0.0006	0.0036

APPENDIX VII(ii)

NIBL

**Calculation Coefficient of Correlation between Total Deposit to Loan & Advance
(Rs. In '00000000')**

Year	Total Deposit (x)	Loan & Advance(y)	X = x - \bar{x}	Y = y - \bar{y}	X ²	Y ²
2007/08	34	26	34	26	1156	676
2008/09	46	36	46	36	2116	1296
2009/10	50	40	50	40	2500	1600
2010/11	50	41	50	41	2500	1681
2011/12	57	41	57	41	3249	1681
Total	237	184	237	184	11521	6934

i) Calculation of mean

For Total Deposit

$$\text{Mean X} = \frac{\sum X}{n} = \frac{237}{5} = 47.4$$

For Loan & Advance

$$\text{Mean Y} = \frac{\sum Y}{n} = \frac{184}{5} = 36.5$$

ii) Calculation of Correlation Coefficient between Investment on Government Securities and Total Deposit

$$r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}} = \frac{8927}{\sqrt{11521} \sqrt{6934}} = 0.990$$

iii) Calculation of Probable Error (P.E.)

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

r ²	1-r ²	0.6745 × (1-r ²)	$\sqrt{5}$	P.E.	6P.E.
0.9801	0.0199	0.0134	2.2361	0.0060	0.0360

APPENDIX VII (iii)

SCBNL

ii) Calculation of Correlation Coefficient between Total Deposit to Loan & Advance

$$r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}} = \frac{2688}{\sqrt{5885} \sqrt{1248}} = 0.991$$

iii) Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$		P.E. $\sqrt{5}$	6P.E.
0.9821	0.0179	0.0121	2.2361	0.0054	0.0324

APPENDIX VII (iv)

HBL

ii) Calculation of Correlation Coefficient between Total Deposits to Loan & Advance

$$r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}} = \frac{5242}{\sqrt{7295} \sqrt{3783}} = 0.997$$

iii) Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.994	0.0060	0.0040	2.2361	0.0018	0.0109

APPENDIX VII (v)

SBI

ii) Calculation of Correlation Coefficient between Total Deposits to Loan & Advance

$$r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}} = \frac{3399}{\sqrt{6627} \sqrt{1775}} = 0.9910$$

iii) Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$		P.E. $\sqrt{5}$	6P.E.
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		r^2)			
0.9822	0.0178	0.0120	2.2361	0.0054	0.0322

APPENDIX VII(vi)

EBL

ii) Calculation of Correlation Coefficient between Total Deposit to Loan & Advance

$$r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}} = \frac{5166}{\sqrt{7095} \times \sqrt{3768}} = 0.999$$

iii) Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.9980	0.0020	0.0013	2.2361	0.0006	0.0036

APPENDIX VII (vii)

BOK

ii) Calculation of Correlation Coefficient between Total Deposit to Loan & Advance

$$r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}} = \frac{1541}{\sqrt{1966} \sqrt{1209}} = 0.999$$

iii) Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$		P.E. $\sqrt{5}$	6P.E.
0.998	0.0020	0.0013	2.2361	0.0006	0.0036

APPENDIX VI (viii)

NIC

ii) Calculation of Correlation Coefficient between Investment on Government Securities and Total Deposit

$$r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}} = \frac{1144}{\sqrt{1427} \sqrt{919}} = 0.999$$

iii) Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.998	0.0020	0.0013	2.2361	0.0006	0.0036

APPENDIX VII (ix)

KBL

ii) Calculation of Correlation Coefficient between Investment on Government Securities and Total Deposit

$$r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}} = \frac{154977296854504}{\sqrt{12915667780142} \sqrt{1113891570941490}} = 0.9471$$

iii) Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.8970	0.1030	0.0695	2.2361	0.0311	0.1865

APPENDIX VIII

(i) NABIL

Calculation Coefficient of Correlation between Total Deposit to Investment

(Rs. In '00000000')

Year	Total Deposit (x)	Investment (y)	$X = x - \bar{x}$	$Y = y - \bar{y}$	X^2	Y^2	XY
07/08	31	9	31	9	961	81	279
08/09	37	10	37	10	1369	100	370
09/10	46	13	46	13	2116	169	598
10/11	49	13	49	13	2401	169	637
11/12	55	14	55	14	3025	196	770
Total	218	59	218	59	9872	715	2654

i) Calculation of mean

For Total Deposit

$$\text{Mean } X = \frac{\sum X}{n} = 43.6$$

For Investment

$$\text{Mean } Y = \frac{\sum Y}{n} = 11.8$$

ii) Calculation of Correlation Coefficient between L&A and NP

$$r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}} = 0.9990$$

iii) Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.9980	0.0020	0.0013	2.2361	0.0006	0.0036

(ii) NIBL

Calculation Coefficient of Correlation between Total Deposit to Investment

(Rs. In '00000000')

Year	Total Deposit (x)	Investment (y)	$X = x - \bar{x}$	$Y = y - \bar{y}$	X^2	Y^2	XY
2007/08	34	6	34	6	1156	36	204
2008/09	46	7	46	7	2116	49	322
2009/10	50	8	50	8	2500	64	400
2010/11	50	7	50	7	2500	49	350
2011/12	57	10	57	10	3249	100	570

Total	237	38	237	38	11521	298	1846
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i) Calculation of mean

For Total Deposit

$$\text{Mean X} = \frac{\sum X}{n} = 47.4$$

For Investment

$$\text{Mean Y} = \frac{\sum Y}{n} = 9.5$$

ii) Calculation of Correlation Coefficient between Total Deposit & Investment

$$r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}} = 0.9963$$

iii) Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.9926	0.0074	0.0050	2.2361	0.0022	0.0132

(iii) SCBNL

Correlation Coefficient (r) = 0.9855

Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.9712	0.0288	0.0194	2.2361	0.0087	0.0522

(iv) HBL

Correlation Coefficient (r) = 0.9603

Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.9221	0.0779	0.0525	2.2361	0.0235	0.1410

(v) SBI

Correlation Coefficient (r) = 0.9962

Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.9924	0.0076	0.0051	2.2361	0.0023	0.00138

(vi) EBL

Correlation Coefficient (r) = 0.9902

Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.9904	0.0196	0.0132	2.2361	0.0059	0.0354

(vii) BOK

Correlation Coefficient (r) = 0.9803

Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.9610	0.0390	0.0263	2.2361	0.0118	0.0708

(viii) NIC

Correlation Coefficient (r) = 0.9690

Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.9390	0.0610	0.0411	2.2361	0.0184	0.1104

(ix) KBL

Correlation Coefficient (r) = 0.9441

Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.8913	0.1087	0.0733	2.2361	0.0328	0.1968

APPENDIX IX

(i) NABIL

Calculation Coefficient of Correlation between Investment and Net Profit

(Rs. In '00000000')

Year	Investment (x)	NP (y)	$X = x - \bar{x}$	$Y = y - \bar{y}$	X^2	Y^2	XY
07/08	9	0.7464	9	0.7464	81	0.5571	6.7176
08/09	10	1	10	1	100	1	10
09/10	13	1	13	1	169	1	13
10/11	13	1	13	1	169	1	13
11/12	14	1	14	1	196	1	14
Total	59	4.7464	59	4.7464	715	4.5571	56.7176

i) Calculation of mean

For Investment

$$\text{Mean X} = \frac{\sum X}{n} = 11.8$$

For NP

$$\text{Mean Y} = \frac{\sum Y}{n} = 0.9493$$

ii) Calculation of Correlation Coefficient between Investment and NP

$$r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}} = 0.9936$$

iii) Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.9873	0.0127	0.0086	2.2361	0.0038	0.0228

(ii) NIBL

Calculation Coefficient of Correlation between Investment and Net Profit

(Rs. In '00000000')

Year	Investment (x)	NP (y)	X = x - \bar{x}	Y = y - \bar{y}	X ²	Y ²	XY
2007/08	6	0.6967	6	0.6967	36	0.4854	4.1802
2008/09	7	0.9006	7	0.9006	49	0.8110	6.3042
2009/10	8	1	8	1	64	1	8
2010/11	7	1	7	1	49	1	7
2011/12	10	1	10	1	100	1	10
Total	38	4.5973	38	4.5973	298	4.2965	35.4844

i) Calculation of mean

For Investment

Mean X = $\frac{\sum X}{n} = 7.6$

For NP

Mean Y = $\frac{\sum Y}{n} = 0.9195$

ii) Calculation of Correlation Coefficient between Investment and NP

$r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}} = 0.9917$

iii) Calculation of Probable Error (P.E.)

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

r ²	1-r ²	0.6745 × (1-r ²)	√5	P.E.	6P.E.
0.9834	0.0166	0.0112	2.2361	0.0050	0.0300

(iii) SCBNL

Correlation Coefficient (r) = 0.9857

Calculation of Probable Error (P.E.)

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

r ²	1-r ²	0.6745 × (1-r ²)	√5	P.E.	6P.E.
0.9716	0.0284	0.0192	2.2361	0.0086	0.0516

(iv) HBL

Correlation Coefficient (r) = 0.9521

Calculation of Probable Error (P.E.)

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

r ²	1-r ²	0.6745 × (1-r ²)	√5	P.E.	6P.E.
0.9065	0.0935	0.0631	2.2361	0.0282	0.1692

(v) SBI

Correlation Coefficient (r) = 0.9731

Calculation of Probable Error (P.E.)

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

r ²	1-r ²	0.6745 × (1-r ²)	√5	P.E.	6P.E.
0.9469	0.0531	0.0358	2.2361	0.0160	0.0960

(vi) EBL

Correlation Coefficient (r) = 0.9883

Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.9768	0.0232	0.0156	2.2361	0.0070	0.0420

(vii) BOK

Correlation Coefficient (r) = 0.9794

Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.9593	0.0407	0.0275	2.2361	0.0123	0.0737

(viii) NIC

Correlation Coefficient (r) = 0.9974

Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.9949	0.0051	0.0035	2.2361	0.0015	0.0090

(ix) KBL

Correlation Coefficient (r) = 0.9356

Calculation of Probable Error (P.E.)

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

r^2	$1-r^2$	$0.6745 \times (1-r^2)$	$\sqrt{5}$	P.E.	6P.E.
0.8754	0.1246	0.0840	2.2361	0.0376	0.2256