CHAPTER - I
INTRODUCTION

1.1 Background of the Study

For the entire development of any country each and every sector should be robust. Among them, economic sector is one of the major sectors. Normally each and every measure of development of the country depends upon the economic development. In fact financial sectors play an important role for economic developments. Banks are among the most important financial institutions in the economy .They are principal sources of credit for millions of individuals and families and many units of government .Moreover for small local business ranging from grocery stores to automobile dealers. Banks are major sources of credit." A financial intermediately accepting deposits and giving loans affairs the widest menu of services of many financial institutions.

The evolution of the banking industry had started a long time back. There was reference to the activities of moneychangers in Jerusalem in the New Testament.In ancient Greece the famous temple of Delphi and Olympia served as the great depositors for the peoples surplus fund and there was the centers of money lending transitions. Indeed the traces of "rudimentary banking" were found in the Chadian Egyptians and Phoenician history. The development of banking in ancient Rome roughly followed the Greece pattern. Banking suffered oblivion after the fall of the Roman Empire after death of emperor Justinian in 565 AD, and it was not until the revival of trade and commerce in the middle ages that the lesson of finance were learn anew from beginning. Money lending in the middle ages was, however, largely considered to the Jews since the Christians were forbidden by the canon law to indulge in the sinful act of lending money to the others for interest. However. As the hold of the church loosened with development of trade and commerce about the Thirteen century Christians also took to the lucrative business of money lending thereby entering competition with the Jews who had hitherto monopolized the business.

As a public enterprise, banking made its first beginning around the middle of the twelveth century in the in the Italy and the Bank of Venice founded in 1157 was the first public

institutions. Following it were established the Bank of Barcelona and the Bank of Genoa in 1401 and 1407 respectively. The Bank of Venice and bank of Genoa continued to operate until the end of the eighteenth century, with the expansion of commercial activities in the Northern Europe. There sprang up a number of private Banking houses in Europe and slowly it spread through the world .In Nepal modern banking starts from the establishment of Nepal Bank limited.

As per commercial bank   act 2031 " A commercial bank means bank which deals in exchanging currency, accepting deposits, giving loans and doing commercial transaction." Commercial banks are the major as the component in they work intermediary between depositors and lenders and facilitate in overall development of the economy, with major thrust in industrial development. the financial system. Commercial bank came into existence mainly with the objectives of collecting the idle funds, mobilizing then into productive sector and causing an over all economic development. The bankers have the responsibility of safeguarding the interest of the depositors, the shareholders and the society they are serving. A sound banking system is important because of the key roles it plays in the economy, intermediation, and maturity transformation, facilitating payment flow, credit allocation and maintaining financial decision among borrowers. Banks are the gathers of saving, allocators of the resources and providers of liquidity and payment services.

The commercial banking in Nepal started from 1937 AD (30th Baisakh 1994 BS) with the establishment of Nepal Bank limited. Nepal Bank limited was incorporated in 1937 AD under the Nepal Bank act of 1937 with an authorized capital share of Rs.100 lakhs. It was established with 51% ownership of his majesty's government and 49% of equity participation from private sector. Now government owns only 40% share with suggestion of World Bank to transfer the ownership to the private sector for better functioning of financial sector. But it not breeds result as expected. Nepal bank limited had a Herculean responsibility of attracting peoples for toward banking sector from predominant Sahu Mahajan's transaction and of introducing other banking service as well. Being a commercial bank it was natural that Nepal bank limited paid more attention to profit generating business but it is duty of the government to look into neglected sector too.

Having felt the need of development of banking sector and to help, the government formulates monetary policies; Nepal Rastra bank was set up in 14th Baisakh 2013 BS. Since then it has been functioning on the government's bank and has contributed to the growth of financial sector. It was established with the purpose of developing banking system in the country to promote industry, trade and agriculture as well as to circulate Nepalese currency all over the country. Though Nepal Rastra bank has at present adopted a deregulatory approach; it requires continuous modification interiors or fast changing world.

"Integrated and speedy development of the country is possible only when competitive banking service reaches nooks and corners of the country. Being the central bank, NRB had its own limitation and reluctance of NBL to go to the unprofitable sectors/are not illogical. To cope with these difficulties government set up Rastriya Banijya Bank in 2022 BS as a fully government owned commercial bank."

With an objective to enhance efficiency, healthy competition and quality banking service by introduction foreign investment and technology in banking sector. With the opening of NABIL bank in1984 the door of opening commercial banks was opened to the private sector. The whole lot of commercial banks was opened in Nepal. Today all the banks except Nepal bank limited and Rastriya Banijya bank are making profit. The inefficiency of these two public sector banks has lead to success of other private banks.

At present there are 30 commercial banks, 62 development banks, 78financial institute and 12, co-operative banks. They all have got their own rules and regulations and own vision but ultimately they are serving nation to build huge financial resources and mobilizing it in the best possible way.

The banking sectors remained still for a long period time but as the time passed on many developments occurred. In the present scenario, Nepal banking system is evolving itself as a powerful instrument of planning and economic growth of all the developed and undeveloped sectors. The scope and scale of banking too have undergone substantial change in response to the saving and credit needs of people.

Nepal's Financial System

Organization	No.
1. Central Bank	1
2. Commercial Banks	30
3. Finance Companies	78
4. Development Banks	62
5. Co-operatives	16
6 .NGO's. Non Government Organizations	46

1.2 Development of Joint Venture Banks in Nepal

In global perspectives, joint venture are a mode of trading through partnership among nations and also a form of negotiation between various groups of industries and trader to achieve mutual exchange of goods and services for sharing comparative advantages.

A joint venture an association of two or more persons or parties having exceptional advantages in a specific operation is undertaken to make the operation highly remunerative with their collective efforts. In 1980's government introduced ' financial sector reforms' which facilitated the establishment of joint venture banks, which gave a new horizon to the Nepalese banking sector.

A joint venture is defined as "The joining of forces between two or more enterprises for the purpose of carrying out a specific operation (industrial of commercial investment production or trade)".

In the fiscal year 2039/40, new banking policy was introduced for the establishment of new banks by the joint investment of foreign nature. Its objective was to create healthy, competitive banking system to provide cheap banking facilities to the people and to meet the shortage of funds needed for investment in the development work. After the introduction of new banking policy, Nepal Arab bank (NABIL) was established in 2041 BS. Nabil was the first joint venture bank in Nepal. It was established under the collaboration with Dubai bank of United Arab Emirates. Nabil is the pioneer bank to

introduce computerized banking system, to establish PC-LAN network with locally developed software packages and to adopt modern banking concepts such as scientific credit evaluation, investment on project techniques to adopt modern banking concepts.

The second joint venture bank was Nepal Indosuez Bank Ltd. It was established in Falgun 2042 under the collaboration with Indosuez bank of Paris. It was established with computerized programs and techniques to adopt modern banking concepts.

In Magh 16, 2043 Standard Chartered Bank Nepal Ltd. came into existence as a joint venture between ANZ Grindlays and Nepal Bank Ltd. It started its business with a Rs30 million paid up capital. After acquiring of the ANZ operation in the region by the Standard Chartered. It has become a subsidiary of SC Grindlays, which holds 50% of shareholdings in the bank. Now from the July 2001, it is named as Standard Charter Bank Nepal Ltd. after takeover by standard charter.

Himalayan Bank was established in 1992 AD under company act 1964 (commercial bank act 2021/135) by the distinguished business personalities of Nepal in the partnership with employees provident fund and Habib Bank Ltd., one of the largest commercial bank of Pakistan.

In other words it is a joint venture bank with Habib bank started from 1993 in the month of February. It is the first commercial bank of Nepal with maximum share holding by the Nepalese sectors. Besides commercial activities, the bank also offers Industrial and Merchant Banking services. Himalayan Bank Ltd. has introduced Tele-Banking system and credit cards.

 Nepal SBI Bank Ltd. is a joint venture between Employees Provident Fund and state Bank of Indian bank holds 50% of the equity. The initial paid up capital was Rs.119095 million in 2050.

Nepal Bangladesh Bank was established in 2050 (1993) in technical collaboration with I.F.I.C Bank Ltd. of Bangladesh.

Everest Bank Ltd. started its operation in 2051 (October 1994). It entered into joint venture with Punjab National Bank of India (PNB) in January 1997 only. PNB holds 20% equity shares in the bank.

Bank of Kathmandu Ltd. was started as a joint venture with Syam Bank of Thailand during the year 2051/11/28.

Nepal Credit and Commerce Bank is a joint venture with a leading bank of Sri Lanka. NMB Bank was started as a joint venture with Young Lion Reality SDN BHD of Malaysia during the year 2065/02/22.Young Lion Reality SDN BHD holds 15% equity shares in the bank. The initial paid up capital was Rs.1000 million in 2065.

Table 1.1

Lists of Joint Venture Banks

S.N	Bank	Date of operatin	Paid up share capital in Rs million	Forign share	Forign Bank
1	Nepal SBI Bank Ltd	2050-3-23	877.4	50	State Bank of India; India
2	Everest Bank Ltd	2051-7-1	831.4	20	Punjab National Bank; India
3	NABIL Bank Ltd	2041-3-29	689.2	50	National Bank Ltd; Bangladesh
4	Standard chartered Bank Ltd	2043-10-16	620.8	75	Standard chartered Grind LaysBank Ltd; Australia & UK
5	Nepal Bangladesh Bank Ltd	2051-2-23	744.1	25	IFIC Bank; Bangladesh
6	Himalayan Bank Ltd	2049-10-5	1013.5	20	Habib Bank Ltd ;Pakistan
7	NMB Bank Ltd	2065-2-20	1000.	15	Young Lion Reality SDN BHD;Malaysia

1.3 Capital and Assets Management

Total Assets

It is total property of the bank. It includes all the cash and other bank balances, investments and other assets as land, building, furniture and stationery at hand. Its structure indicates how the resources of the bank are utilized.

Total Liabilities/ Capital

It is total capital of the bank. It includes all the share capital, reserves generated by the bank, borrowings from other banks and institutions as well as all the deposits accepted by the bank from its customer and other liabilities accepted from customer.

Capital and assets structure management of commercial bank is the key to short the intermediate term decision-making in today's dynamic and volatile banking environment. Broadly defined capital and assets structure management includes all policies and approaches designed to obtain funds from deposits and investment.

The banking sector has to play development role to boost the economy by adopting the growth oriented capital and assets structure management policy and building up the financial structure for economic development. Formulation of sound capital and assets structure management policies, co-ordination and planned efforts push forward the forces of economic growth.

Liabilities and assets structure management is the primary focus of funds management today. The essence of capital and assets structure management is co-ordination of the inter relation between the sources and uses of funds in the short-term financial planning and decision making.

1.4 Statement of the Problem

The joint venture banks have been operating well from their very establishment. Their experience on international banking, prompt and computerized services, professional attitude are factors for their rapid progress. They have been taking advantages from

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weaknesses and inefficiency of domestic commercial banks. These banks have succeeded to capture a remarkable market share of Nepalese banking sector or financial services industry in a relatively short period of time.

But deposit utilization rate for these banks are found to be in a fluctuating trend. In these situations the growing competition among financial institution, recent increase in transaction of security and capital markets as well as the taxation laid on higher deposits in banks might be adversely affect bank's deposits collection function. The commercial banks in Nepal haven't succeeded much in mobilizing capital for productive purposes. A proper effective, efficient and economic media for collecting resources hasn't been devised in Nepal, so commercial banks have to try their best to induce Nepalese peoples to save and deposit their saving in banks and to utilize such deposits to the maximum possible extent.

Inefficiency and weaknesses can be traced with the analysis financial statements in same aspects of these banks's financial performance. For instance these bank's cash and bank balance and NRB balance have been in fluctuating and declining trend but various deposits have been increasing which reflect sin efficiency in liquidity management of the banks.

Carpet, garments and tourism industries have been the main areas for bank's investment but these areas are adversely affected by recent unfavorable international economic conditions. Consequently transactions are also suffering from the same.

We may seen banks provide only short term credit while demand for long and medium term credit has to meet in the process of development. The margin ratio for providing loans is too high, which makes deposits unutilized.

Because of these problems the assets liabilities management of the commercial banks are not satisfactory to the present requirements. Thus to analyze the components of balance sheet has permanent importance. One of the measuring rod to judge the overall

performance of bank is to analyze its balance sheet components i.e. assets and liabilities. In this study it has been tried to describe the structure of assets and liabilities of joint venture banks in Nepal.

Attempts are also being made to explore the answer to the following question.

a. How efficiently are joint venture banks managing their liquidity assets and capital structure?

b. How far joint venture banks have been able to convert the mobilized resources into investment?

c. To what extend these banks have been able to raise their profitability?

d. What is the relationship of investment and loan and advance with deposit and total net profit?

1.5 Objectives of the study

The specific objectives of this study are to assist the liabilities and assets structure of Joint venture banks. Following subsidiary objectives have been framed to assist the basic objective.

a. To analyze the composition of assets and liabilities of joint venture banks in Nepal.

b. To examine the utilization of assets

c. To evaluate the trend of deposits and loans of joint venture banks in Nepal.

d. To evaluate liquidity, profitability, capital structure activity and capital adequacy position of joint venture banks in Nepal.

e. To provide suggestions and recommendation on the basis of findings and analyses to improve the commercial banks.

1.6 Significance of the Study

The joint venture bank manages deposit liquidity to get the profit. If there is imbalance in the deposit and liquidity it affects the profitability of the joint venture bank. So under this study effort is made to assist the liabilities and assets structure, to examine impact of liquidity and deposit on profitability of the joint venture banks in Nepal.

On the other side, the study would provide information to the management of bank that would help to manage deposit and liquidity to get maximum profit. This study will be beneficial for those persons who are directly and indirectly involved in the capital structure management.

1.7 Limitations of the Study

This study is conducted for the partial fulfillment of MBS degree. So it possesses some limitation of its own kind. The limitations of the study are as follows:

a. There are seven joint venture banks operating in Nepal. Because of time and resources constraints, the study is only confined to five of them.

b. This study is mostly based on the published financial statements of concernedbanks along with other related journals, newspapers, magazines, bulletins, textbooks etc. Thus the limitation of these materials may be inherent on this study.

c. This study has covered only five financial year's data.

1.8 Organization of the Study

The main objective of the study is to find out financial weakness of the commercial joint venture bank and impact on profitability due to the proportion of deposit and liquidity. This study has been divided into five chapters and they are as follows:

The first chapter is "Introduction" where the general introduction, statement of the problem, significance of the study, objectives of the study, and limitation of the study and organization of the study is included.

The second chapter is "Review of Literature". Here, the previous study done by different persons both individually and institutionally are reviewed is reviewed. Similarly different articles, journals, books and periodical are also to be reviewed.

The third chapter deals with the "Research Methodology". In this chapter, different statistical and financial tools, which are used to tabulate and analysis the data available from the primary and secondary sources are discussed.

The fourth chapter is the main body of research. It deals with presentation and analysis of data.

Finally the fifth chapter provides summary, conclusion and recommendation of the study. This chapter presents the major finding and recommends suggestions to impact the level of the general public as discovered from the research study. The appendices and bibliography will also be incorporated at the last chapter.

CHAPTER - II
REVIEW OF LITERATURE

In this chapter, review of basic literatures along with different theories, articles, as well as previous researches are reviewed generalizing the topic. In other words, this chapter encompasses review of theories related to the topic in a more descriptive and concrete manner. Books of different writers, articles, previous researches, as well as definitions in different websites are explored. On the other hand, consultations with teacher are also presented.

The first section of this chapter contains brief description regarding theories of investment, and its risk and return aspects. It also includes information about technical analysis, fundamental analysis, and efficient market theories. Similarly, the second section provides reviews on pragmatic experience of previous studies.

1. Conceptual review
2. Review of related studies

2.1 Conceptual Review

One of the main functions of banks is to accept deposits. Deposits may be fixed, saving; current etc. Banks will have to pay interest to the customers on the basis of the amount deposited by them. Deposits are used for the purpose of lending but since banks are using other people's money to do business, it should make sure that it will be able to repay the deposits to the respective customers when they claim for it. The management of all this is called deposit management.

Liquidity Management   is having cash when needed. For a bank, liquidity means having sufficient funds to meet regulatory, contractual and relationship obligations when required and at a reasonable cost to the bank. Liquidity needs of commercial banks are unique because in no other types of business there will be such a large proportions of deposits payable on demand. In other organizations too, liquidity is required for various purposes. Inadequate liquidity does damage credit standing of those organizations but if

banks fail to repay the deposits on demand, the bank loses the trust of the public. So, liquidity is the lifeline of the bank. In this regard, the term liquidity management is used to describe money and assets that are readily convertible into money within very short span of time." Liquidity is the availability of cash in the amount and at the time needed at a reasonable cost" (Rose, 2002: 345).

"Liquidity refers to bank's capacity to pay off the liabilities in all those currencies. Maintaining excess liquidity in one currency while demand is for other currencies is not effective liquidity management because the liability in the demanded currency can not be met" (Dahal and Dahal, 2002: 95).

"Liquidity management is the part of risk management framework of the financial services industry, which concerns all financial institutions whether they are commercial banks or development banks or finance companies or other financial institutions" (Shrestha, 2061 BS: 16).

"Banking is the business of collecting and safeguarding money as deposits and lending of same. The banker's business is then to take the debt of other people to offer his own in exchange and there by to create money. He may be a dealer in debts, but in debtress is only the observe of wealth and it would be equally permissible to describe the banker as a liquefies of wealth" (Crowther Geoffrey, 1945).

As a system approach, asset/liability management is likely to become approach important to goal achievement because of the increasing scope and complexity of banking. Asset/Liability management incorporates features of other approaches to funds management such as pool-of- funds and liability management. Equally important, it incorporates management experience and judgment into the decision process. Successful asset/liability management requires managers to take an overall rather than narrow functional view of the bank, provides the means to break down complex problems for decision making allows for changes in the banking environment and provide decisions perceived consistent with wealth maximization.

In the words of Olson, Sollen Barger and Connell, interactive nature of bank decisions is to bread down this system of interrelationship into key variable, which affects the attainment of wealth maximization. While each decision affects the goal, practical day-to-day decisions making should focus on the key variables attesting wealth maximization. (1) Spread management (2) Liquidity management (3) overhead cost control, and (4) capital management. Of these variables, the first two are probably most appropriate to the relatively short decisions horizon of asset/liability management.

These key variables assist management in establishing and carrying out policy in the major is of bank management obtaining funds and maintaining adequate liability, investment and capital.

Mr. Bradley and Crane express the views. "Potentially the most important use of management science in banking is in system oriented approaches to "balance sheet management"(Bradley and Crane, 1975).

Balance sheet management is concerned with the coordinated management of the entire balance sheet and its inter relationship. It incorporates the concept of asset/liability management approaches. Balances sheet management facilitates improved overall profit planning and performance, while maintaining liquidity solvency and deposit safety in an uncertain world consistent with management policy and bank regulations.

The application of management science to bank funds management may be more appropriately called "dynamic" refers to the face that bank planning and decisions making should not be made in a single period context. The dynamic nature of the banking environment requires an assessment of the multiperiod implications of today's forecasts and decisions.

The financial soundness and its strength of a bank depend to a large extent on the composition of capital and assets structure. Capital structure of a bank presents its resource capacity and viability whereas its assets structure presents its worthiness.

Balance Sheet

"The assets and liabilities of a modern bank are continued in its balance sheet which a bank is required to issue every week. We can know good deal of working of a bank by carefully examining its assets and liabilities"(Dosajh , 1972).

"Balance Sheet is the most significant financial statement. It indicates the financial condition or the state of affairs of a business at a particular moment of time. More specially, balance sheet contains information about resource and obligations of a business entirely and about its owner's interest in the business at a particular point of time. In the language of accounting, balance sheet communicates information about asset, liabilities and owner's equity for a business firm as on a specific date. It provides a snapshot of the financial position of the firm at the close of the firm's accounting period" (Professor Pandey, 1995).

"The Balance sheet is a statement at a particular date showing on one side the trader's property and on the other hand the liabilities "(Palmer,1967).

Assets

"The right hand column in the balance sheet shows assets of a bank. Assets representing economic resources are the valuable possessions owned by the firm. These are possessing should be capable of being measured in monetary terms.

Assets are the future benefits they represents:
   a. Stored purchasing power (eg. Cash)
   b. Money claims (eg. receivable, Stock)
   c. Tangible and intangible items that can be sold or used in business to generate earnings.

Tangible items include land, building, plant, equipment or stocks of materials and finished goods and all such other items, which have physical substance.

Intangible items do not have physical existence but they have value to a firm. They include patents copyrights, trade name or good will.

Assets may be classified as (1) Current assets and (2) Long term assets

Current Assets

Current assets, sometime also called liquid assets are there resources of a firm, which are either held in the form of cash or are expected to be converted into cash within the accounting period or the operating cycle of the business. The accounting period is of one-year duration. The operating cycle is the time taken to convert raw material into finished goods, sell finished goods and convert receivables (goods sold on credit) into cash. Hotly operating cycle is equal to or less than the accounting period. Current assets include cash marketable securities, book debt (account receivable) and stock of raw materials; work in process and finished goods.

"Cash is the most liquid form of asset. A bank holds it to meet the demand of its customers and so it is the first line of defense."

Each bank knows from its experience what preparation it should in reserve.

"The banks in western countries generally keep a reserve of 10 percent of their deposits. In India however, this reserve is between 20 to 25 percent of the deposits. It is because the people not developed banking habits" (Dosajh , 1972).

Cash is the current purchasing power in the hands of bank and can be used for the purposes of acquiring some resources paying some obligations. Cash includes actual money in hand and cash deposit in bank account.

Marketable securities are the temporary or short-term investments in shares, debentures, bank and other securities. These securities are reading marketable and can be converted into cash within the accounting period. A firm usually invests in marketable securities when it has temporary surplus cash (Professor Pandey, 1995).

Money at call and short – notice represents loans given by the bank to businessmen etc for the short periods. A bank can call upon them to repay such loans immediately. These loans are generally backed by adequate first cash bills or securities.

Next come the investment of a bank. A bank mostly invests in government securities or municipal bond etc. These investments give a fixed income and steady profit to a bank. A bank can sell these securities when the demand for loans increases and buys them when the demand for loans decreases. These securities are considered to be less liquid than bills. Some of these can be easily sold at the time of need, hence it can be consider as current assets while others may fall in value and so current be sold in a crisis. Thus a bank should keep its reserve as liquid as possible.

The other term or assets it the loans and advances which the bank has granted to its customers. These loans may take three forms they are loans, cash credit or over drafts usually loans are advanced on the basis of approved securities and shares. Cash credit or overdrafts are advanced to customers of strong financial position on their personal security. Such overdrafts are for very short periods. So they are automatically adjusted when the customers pay in money. Usually loans and advance are also included in current assets in India and Nepal. Except for the advance payment for current supplies, it is nor proper to include loans and advances in current assets.

Discounting of bills is the most important forms in which bank lend money with out any collateral security such bills mater after a fixed period (not more than 90 days in any cash). Investment on them is very safe.

Bills receivable represent the promises made in writing by debtors to pay definite sums of money after a specified period of time. Bills are written by the firm and become effective when accepted by debtors.

Book debts (or account receivables) are the amounts due form debts (customers) to whom goods or services have been sold on credit. These amounts are generally realizable into within the accounting period. Debts, which will be never collected as, called bad debts.

Prepaid expresses and accrued income are also included in a current asset. Prepaid expenses are the expenses of future period paid in advance. Examples of prepaid expenses are prepaid insurance, prepaid rent or taxes paid in advance. They are current assets because their benefits will be received with in the accounting period. Accrued incomes are the benefits, which the firm has earned but they have not been received in cash yet. They include items such as accrued dividend, accrued commission or accrued interest.

Long Term Assets

Long term assets are held for periods longer than accounting period. They are held for use in business, and not for the purpose of sale. Long term assets would normally include fixed assets. Long term investment and other non current assets. Fixed assets would generally form a major group in the manufacture firms.

Tangible fixed assets include land building, machinery, equipment, furniture etc. These are normally recorded at cost. Costs of tangible fixed assets are allocated over their useful lines. The amount so allocated each year is called depreciation. Costs of tangible fixed assets are reduced every year by the amount of depreciation. Depreciating the assets is a process of allocating cost and doesn't involve any cash outlay.

Investments

Long term investment represents the firm's investment in shores, debentures and bonds of other firms or government bodies for profits and control. These investments are held for a period of time great of than the accounting period.

Other Non Current Assets

All other assets which cannot be included in any of the above categories are grouped as other assets usually they represent deferred charges. Prepayments for services or benefits for period longer than the accounting period are referred to as deferred charges and include advertising, Preliminary expenses etc. (Professor Pandey, 1995).

Liabilities

Liabilities are the obligations of the business firm to the outsiders which are increased from events which were already happened. In another words, liabilities means amount owing to out-siders as a result of a past transactions or events .Liabilities also can be defined as claim s of out siders on the assets of the business organization.

The left-hand column in the balance sheet shows liabilities. These liabilities refer to the total claims that the depositors, shareholders and other can make on the bank. Liabilities are debt payable in future by the banks to its creditors. They represent economic obligations to pay cash or provide goods or services in some future period. Generally liabilities are created by borrowing money or purchasing goods or services on credit.

Examples of liabilities are creditors, bill payable, wages and salaries payables, interest payable, taxes payable, bonds, debentures, shares, borrowing from banks and financial institutions, public deposits etc.

Liabilities may be two types;
   1. Current Liabilities
   2. Long -Term Liabilities

1. Current Liabilities

Current liabilities are debts payable within an accounting period. Current assets are converted into cash to pay current liabilities. The typical examples of current liabilities are creditors, bills payable, borrowings, deposits, expenses payable and incomes received in advance.

Bills Payable

The unpaid drafts and telegraphic transfers issued by a bank are known as bills payable. Any draft or telegraphic transfer issued by a bank but which have not been paid up to the date when the balance sheet is made would be treated as liability on the issuing bank.

Bills of Collection

They are drawn by the seller of goods on their customers and sent to the bank for collection against railway receipt etc. This item is put on both side in the balance sheet because they are both assets and liabilities.

Deposits

Deposits are also a bank liability. All the deposits except 40-50 percentages of fixed deposits are considered as short-term obligation. They are of two kinds current or demand deposits and fixed or time deposits (Dosajh ,1972).

The current deposits can be withdrawn with out any notice to the bank while the time deposits are with draw able only after giving notice to the bank.

Borrowing from Other's Bank

Bank borrowing forms a substantial part of current liabilities of a large number. Commercial banks advance short-term credit to firms for financing their current assets. Banks may also provide funds (term loans) for financing a firm's fixed asset. Such loans will be grouped under long-term liabilities.

Provisions are other types of current liabilities. They include provision for taxes or provision for dividends. Every business has to pay taxes on its income. Usually it takes some time to finalize the amount of tax is estimated and shown as provision for taxes or tax liability in the balance sheet. Similarly provision for paying dividends to shareholders may be created and shown as current liability.

Expenses payable (or outstanding expenses) are also current liabilities. The firm may one payment to its employees and others at the end of accounting period for the services received in the current year. These payment are payable within a very short period. Examples of outstanding expenses are wages, payable, rent payable or commission payable.

2. Long-term Liabilities

Long-term liabilities, sometime also called fixed liabilities are the obligation or debts payable in a period of time greater than accounting period. Long-term liabilities usually represent borrowing for a long period of time.

Capital

On this side capital is the first item, paid up capital is the actual cash capital of the bank. It is the amount, which the shareholder has invested in the bank. Authorized capital is the maximum capital, which the bank is permitted to issue, and the subscribed capital is what has actually been subscribed for.

Reserve Fund

Capital and reserve funds ultimately belong to the shareholders. The reserve fund is not subscribed by the shareholders but it is built out of the profits of the bank.

Sec a of Indian company's Act says that every bank must transfer not less than 20% of the net profits of each year (before distributing the dividends) to the reserve fund until the amount of the reserve fund is equal to paid up capital. Thus the reserve fund is another safeguard for the customers. The bank can draw upon its reserve fund in case of heavy losses to it.

Statement of Assets and Liabilities

If a balance sheet shows the financial position of a concern the question arises: How the financial position of a concern ascertained?

The financial position or financial worth of a concern is indicated by its assets on a given date and its liabilities (excluding capital) on that date. Excess of assets over liabilities (other than capital) represents capital and is indicative of the financial soundness of a concern (Agrawal A.N, 1963).

Definition on Balance Sheet

We have discovered in this discussion, two cardinal principles of banking one of them is the principle of ratios, which we have encountered in the form of the minimum ratio of cash to deposits permitted by law or custom. The other principle is the equally of assets and liabilities. A bank's business is, in a very special sense, a balancing of assets and liabilities. A bank acquires assets by increasing its liabilities, not in directly as a result of trading, as any other business does but directly. The bank's assets are directly exchanged for its liabilities.

The liability side of the balance sheet is comparatively simple. It consists in the first place, of the bank's liabilities to there shareholders-the capital originally paid in and any accumulation of undistributed profits. The largest liability item is liability to the public, represented by notes (if any) and deposits.

The assets side of balance sheet is both more complicated and more interesting. In distributing its resources among the different types of assets open to it, the bank has to bear two considerations in mind. First of it must be able to meet any claims upon it in cash on demand. For this purpose bank should have to keep certain reserve of cash. In addition to make it more secure, it lends out another part of its resources on very short loan, some of them repayable on a day's notice.

The second consideration, which the banker must bear in mind, is income. He must arrange his assets in such a way that the return on them is sufficient to pay the wages of his staff, pay interest on his borrowings, accumulate reserves and leave a little over for dividends for the shareholders. The bankers can never afford to forget that he has liabilities against every one of its assets and he must not therefore, placed them where they cannot be liquidated. That at least is the ideal. In practical it cannot be attained. Some of bank's assets might take years to realize. But in his own defense, the banker keeps up the form of making only temporary loans, even though in facts a great many loans are renewed whenever they mature.

Liquidity and profitability therefore are opposing considerations. Cash has perfect liquidity but yields no return at all. At the other end are some loans, which yield high rate of interest, but are hardly liquid at all. The secret of successful banking is to distribute resources between the various forms of assets in such away as to get a sound balance between liquidity and profitability.

The banker is a merchant of debt, and his assets as well as his liabilities consists of debts, the whole system is built up of promises to pay erected on a narrow basis of cash.

Within the limits set by liquidity and by the needs for keeping a proportionate reserve of cash a bank (or strictly, a banking system) can make the total of its balance sheet precisely what it wants (Crowther, Geoffrey, 1945).

Function of the Balance Sheet

The three important function served by the balance sheet are

1 It gives a concise summary of the bank's resources (assets) and obligation (liabilities).
2 It measures the firm's liquidity.
3 It is the measure of the firm's solvency (Pandey, 1995).

Financial Analysis

Financial Analysis is the process of identifying the financial strengths and weakness of the firm by properly establishing relationships between the items of balance sheet and profit and loss account. Financial analysis can be undertaken by management of the firm or by parties outside the firm viz owners, creditors, investors and others.

Ratio analysis is a powerful tool of financial analysis. A ratio is defined as "the indicated quotient of two mathematical expressions" and "as the relationship between two things". In financial analysis a ratio is used as a benchmark for evaluating the financial position and performance of a firm.

Standard of Comparison

The ratio analysis involves comparison for a useful interpretation of financial statements. A single ratio in itself doesn't indicate favorable or unfavorable condition. It should be compared with some standard. Standard of comparison may consist of:

1. Past ratio-i.e. ratios calculated from the past financial statement of the same firm.
2. Projected ratios- i.e. ratios developed using the projected or Performa financial statement of the same firm.
3. Competitor's ratios-i.e. ratios of some selected firms, especially the most progressive and successful competitor, at the same point in time.
4. Industry ratio-i.e. ratios of the industry to which the firm belongs.

Types of Ratios

Several ratios calculated from the accounting data can be grouped into various classes according to financial activity or function to be evaluated. The parties interested in financial analysis are short and long term creditors, owners and management. Short- term creditors' main interest is in the liquidity position or the short solvency of the firm. Long tem creditors or the other are more interested in the long term solvency and profitability of the firm. Similarly owners concentrate on the firm's profit ability and financial condition. Management is interested in evaluating every aspect of firm's performance. They have to protect the interests of all parties and see that the firm grows profitability. In view of the requirement of various users of ratios we may classify them into following four groups;

1. Liquidity ratios-measure the firm's ability to meet current obligation.
2. Capital Adequacy ratios-show the bank's adequacy position. It shows the proportion of shareholder's fund in financing the firm's assets.
3. Activities ratios-reflect the firm's efficiency in utilizing its assets.
4. Profitability ratios-measure overall performance and effectiveness of the firm.

Ratio analysis is the process of determining and interpreting numerical relationships based on financial statements. A ratio is a statistical yardstick that provides a measure of the relationship between two variables or figures.

As ratio are simple to calculate and easy to understand, there is a tendency to employ them profusely. While such statistical calculations stimulate thinking and develop understanding, there is a danger of the accumulation of a mass of data that obscures rather than clarifies relationship. The financial analyst has to steer a careful course. His experience and objectives of analysis help him in determining which of the ratios are more meaningful in a given situation.

Commercial banks and trade creditors and the institutional lenders are mostly concerned with the ability of a borrowing enterprise to meet its financial obligation timely. As a result they are more interested in ratios like the current ratio, acid test, turnover of receivables, inventory turnover, coverage of interest by the level of earnings (Kuchhal,1981).

Utility of Ratio Analysis

The ratio analysis is the most powerful tool of the financial analysis. Many diverse groups of peoples are interested in analyzing the financial information to indicate the operating and financial efficiency and growth of the firm. These people use ratios to determine those financial Characteristics of the firm in which they are interested. With the help of ratios one can determine.

1. The ability of the firm to meet its current obligations.
2. The extent to which the firm has used its long-term solvency by borrowing funds.
3. The efficiency with which the firm is utilizing its assets in generating sales revenue.
4. The overall operating efficiency and performance of the firm

Statistical Analysis

Statistics is a body of methods of obtaining and analyzing data in order to base decision on them. It is a branch of scientific method used in dealing with phenomena that can be described numerically either by counts or by measurements. Thus the word statistics refer to a method of dealing with quantitative information. The methods by which statistical data are analyzed are called statistical methods. Such methods are applicable to a very

large number of fields. Economics, Sociology, Anthropology, Business, Agriculture, Psychology, Medicine, Education all lean heavily upon statistics.

It should be noted at the very outset that statistics is usually not studied for its own sake; rather it is widely employed as a tool and a highly valuable one in the analysis of problem in nature, physical and social sciences.

It is necessary to explain few definitions of statistics to understand the characteristics of statistical data.

Webster defined statistics as 'the classified facts represented by the condition of the people in state, especially those facts which can be stated in numbers or in tables of numbers or in any tabular or classified arrangement'.

Yale and Kendall defined statistics as 'By statistics we mean quantitative data affected to a market extend by multiplicity of causes'.

The coefficients of correlation, Trend analysis, calculation of probable error are applied on statistical analysis to achieve the objective of study.

Coefficient of Correlation

"Correlation analysis is the statistical tools generally used to describe the degree to which one variable is related to the another. On the basis theory of correlation one can study the comparative changes occurring in two related phenomena and their cause effect relation can be examined" (Kothari, 1981).

Correlation is defined as the 'relationship" or (association) between (among) the one dependent variable or factor and one (or more than one) independent variable(s) or factor (s).

"Correlation analysis deals with the association between two or more variables" (Simpson & Kafka).

"If two or more quantities vary in sympathy so that movement in one trend to be accompanied by corr"When the relationship is a quantitative nature, the appropriate statistical tool for discovering and measuring the relationship and expressing it in brief formula is known as correlation"

"When the relationship is a quantitative nature, the appropriate statistical tool for discovering and measuring the relationship and expressing it in brief formula is known as correlation"

"Correlation analysis attempts to determine the degree of relationship between variables"-Ya Lun Chou.

Correlation is an analysis of the co variation between two or more variables"-AM Title (Gupta, 1984).

Karl Pearson's measure, known as Pearsonian correlation coefficient between two variables (series) X and Y, usually denoted by r (X, Y) or rxy or simply r is a numerical measure of linear relationship between them. Symbolically,

Co-efficient of Correlation (r) $\quad = \quad \dfrac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{N\sum X^2 - (\sum X)^2}\ \sqrt{N\sum Y^2 - (\sum Y)^2}}$

Where,

    r=Correlation coefficient.

    $\sum x$ =Sum of the variable x.

    $\sum y$=Sum of the variable.

    $\sum xy$=Sum of products of x and y.

    N=Number of pairs of x and y.

The Karl Pearson Coefficient of Correlation (r) always fall between -1 to +1. The value of correlation in minus signifies the negative correlation and in plus signifies the positive correlation. As the value of correlation coefficient reaches near to the value of zero, it is said that there is no significant relationship between the variables.

Probable Error (PE) of Correlation Coefficient

The probable error of the correlation coefficient is applicable for the measurement of reliability of the computed value of the correlation coefficient "r". The probable error (PE) is defined by,

$$PE = 0.6745 \times \frac{1 - r^2}{\sqrt{N}}$$

Where,

r = correlation coefficient

N= number of pairs of observation.

If r<PE, the value of r is not significant

If r>6PE, the value of r is significant i.e. correlation is significant (Durba Prasad, 2057).

Trend Analysis

Trend analysis is very useful in terms of both commercial banks and to the shareholders. Through analysis bank can estimate the future investments, opportunities, rate of return, deposit liabilities etc. whether to stick in the present growth rate or to increase or decrease. In terms of shareholders, trend analysis helps to whether to invest on the bank or to leave as per the satisfaction of the growth rate. For depositors it provides degree of safety in the form of financial credit worthiness of the bank in the bank in the future and the borrowers, it assures about the financial capability of the banks to furnish their loans and advance in the future provided that the present trend continues.

Trend analysis implies straight line irrespective of the seasonal and cyclical swings and function. Trend analysis is used to measure the line of best fit or straight line is obtained or not. Trend analysis is also used to compare the overall performance of different selected study period. The term best fir is interpreted in accordance with the principle of least square which consists in minimizing the sum of the squares of the residual or the errors of estimates i.e. the deviations between the given observed value of the variables and their corresponding estimated values as given by the line of best fit. Absolute amount per unit of time can change by increasing or decreasing the trend value.

Trend analysis is also denoted by least squares linear trend analysis. Trend analysis describes the average relationship between two series where the one series relates to time

and other series to the value of available. Trend analysis gives the best possible mean values of dependent variable for a given value of independent variable. Under this topic, trend of total deposit, loan and advances, total investment, net profit, cash flow etc will be studied. The equation of trend analysis can be presented as follows:

$$Y = a + b\chi$$

Where,

Y = the value of depended variable, the estimated value of y for given values of x .

Obtained from line of regression of y on x.

a = intercept of trend line or mean of y value.

b = Slope of trend line or rate of change.

x = Value of independent variable, i.e. time.

In order to determine the line completely we obtain the values of 'a' and 'b' by the method of least square (i.e. the line should be drawn through the plotted points such that the sum of squares of deviation of actual Y – values from the computed or estimated Y – values is the least).   The estimated values of Y on the line $Y = a + b\chi$ corresponding to χ =$\chi 1, \chi 2$…….. χn are a + b χ 1 , a + b χ 2, ………., a + b χ and denoted by Yc. The actual values of Yc are Y 1, Y 2 ………. Yn**.**

We obtain the value of 'a' and 'b' by soNlving the following equation:

$$a = \frac{\sum \chi^2 \sum Y - \sum \chi \sum \chi Y}{N \sum \chi^2 - \left(\sum \chi\right)^2}$$

Note that 'a' and 'b' are also called parameters of the line. The following two normal equation are solved simultaneously to find out the values of a and b (Shrestha & Silwal, 2057).

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2.2 Review of Related Studies

Under this headings effort has been made to examine and review of some related studies published in different economic journals, magazines, newspapers and related books.

The Commercial Bank and the Proper Management of Assets

Modern commercial banks have various kinds of sets in their possession. Generally the size & volume of the assets depend on the volume and nature of deposits and different opportunities available for investment. Bank's existence and its proper functioning, no doubt solely depends on the scientific and rational management of assets.

A successful performance of the bank in the economy is determined by the size of market, the development of trade and commerce and the existence discount, stopcock and money market for assuring the safety and liquidity of assets.

With regard to the distribution of bank's assets the theory of commercial loan and Industrial loan has been an issue of controversy between bankers and economist. The commercial bank holds the view that the bank should confine themselves to advancing short term loan of self-liquidating nature, where as industrialist hold their views that a commercial bank being a voist reservoir of saving should expand their activities also to granting long term loans for development of country's industry. Economist upholds their views for granting of long term advance side by side with the short term loans. There are three main principles which the commercial banks adhere to. They are:

1. Profitability
2. Safety
3. Liquidity

Profitability

If the objectives are to earn maximum profit, a banker naturally likes to use a high percentage of its total resources in loans & advances.

Safety

Here safety means stability of volume of assets over a particular period of time and credit worthiness of debtors in payments of interest & repayment of the principles. If the interest rate is raised above the expected level, we say the assets are risky and vice versa. The credit worthiness of the debtors is another measure for degree of safety in the assets.

Liquidity

Liquidity means protection against the risk. The latter might occur if the banks are forced to sell the credit worthy assets in adverse market to meet the demand of depositors. That is liquidity means not only the bank's ability to meet the possible withdrawals of demand depositors but also to provide the legitimate credit needs of the community as well (Aryan, 1967-1970).

Like wise, Khem Ranjan Baral, the senior officer of Rastriya Banijya Bank said in his writing "Deposit Mobilization in commercial banks" that branch expansion increase in deposit interest rates, proper facilities to customers, deposit insurance policy, deposits from semi-government origination can help to collect more deposits and by expanding commercial bank branches and suitable rates play an important role in mobilization of the collected deposits (Baral,1998).

An article on "Basel Capital Accord: past, present and future" which is published on Info Himalayan try to explained on requirement of Basel Capital .The Basel Capital Accord is a manual for capital measurement and capital standards. The accord is prepared by the Basel committee on banking supervision. The Basel Committee issued the first Basel Capital accorded in 1988. By the end of 1992, the capital accorded was implemented worldwide. The present NRB directive on capital fund (Directive no1) is based on Basel Capital accorded in 1988.

The Basel Capital accorded 1988 has provided that the capital fund of a bank should be based on the measurement of risks associated with the assets of the bank. The assets could be on and off balance sheet items. The total capital fund is calculated by adding up the amount of tier-1 capital and tier-2 capital.

Tier-1 capital which is called core capital consists of share capital, share premium, non-preference shares, general reserve funds, cumulative profit/loss and current year profit. Tier-2capital also known as supplementary capital consists of loan loss provision, exchange equalization reserve, assets revaluation reserve, hybrid capital instruments, unsecured subordinated term debt, interest rate fluctuation fund and other free reserve. The capital adequacy ratio is the ratio of total capital fund to total risk weighted assets. The Basel capital Accorded 1988 had set the target standard ratio of capital to weighted risk assets (capital adequacy ratio) at 8% (of which the core capital element was at least 4%).

The Basel Capital Accorded 1988 only focuses on a single risk measure to overcome such draw backs in June 1999 the Basel committee released a proposal to replace the 1988 accord with a more risk sensitive framework. After going through the comments received from various sources, the committee published the new Basel capital accord in 2001 to be implemented by 2006 ((Bimonthly news letter of Himalayan Bank Ltd.).

Dr Govenda Bahadur Thapa has express his view that the commercial banks including foreign joint venture banks seem to be doing pretty well in mobilizing deposits. Likewise loans and advances of these banks are also increasing. But compared to the huge credit needs particularly by the newly emerging industries the banks still seem to lack adequate funds. The banks are increasing their lending to non-traditional sectors along with the traditional sectors (Thapa,1998).

Directive requiring commercial banks to maintain minimum paid up capital of RS 500 Million.A provision requiring the commercial banks established to operate in the Katmandu valley are required to maintain compulsory a minimum capital fund of Rs. 500 million by the end of this fiscal year 2000/01. The amount under the headings of paid-up capital, general reserve, share premium, non-redeemable preference share and retained earning would be considered for calculating the minimum capital funds.

The commercial banks could not use the retained earning included in the core capital funds to the extend of the minimum capital funds falling short of Rs.500 million. If the

commercial banks could not maintain capital fund of Rs.500 till the end of fiscal year 2000/01, they were not allowed to declare and distribute the dividend and bonus.

Directives on Money at Call

with effect from November 2,2000 a directive issued to treat investment with other banks (domestic as well as foreign) of the maturity of 7 days at the maximum or deposit that could be demanded at short notice (48 hour) as money at call. Other interest receivable lending with more than 7 days maturity period was required to kept in other headings.

Deprived Sector Credit

Commercial banks were required to extend the following proportion of their total outstanding loans to deprived sector based on their aging during the fiscal year 200/01(Nepal Rastra Bank – Economic Report, 2000/01).

With a view to provide freedom to commercial banks in selection of their loan portfolio, NRB phased out the priority sector lending programme since 2007/08. How ever the NRB has continued deprived sector lending programme in order to out reach credit access to marginalized, back ward, minorities, dalit, scheduled caste and deprived people (Nepal Rastra Bank-Economic Report.2008/09).

S.N.	Bank	Minimum required deprived sector lending(%total loan out standing)
1	NABIL Bank Limited	3.00
2	Himalayan Bank Limited	3.00
3	Everest Bank Limited	3.00
4	Nepal Bangladesh Bank Limited	3.00
5	Nepal SBI Bank Limited	3.00

A commercial bank with its headquarter outside the Kathmandu valley shall operate throughout the country including the Kathmandu valley only if its operations for at least

three years is found satisfactory, its paid up capital has been raised to a minimum of RS. 1.00 billion and it has meet other condition .With regard to already established regional level commercial bank, up on submission of anapplication, aprovision was made whereby it can open its office in Kathmandu valley even before the completion of three years, if it raises its paid up capital to Rs.1.00 billion and entered into a three- year technical services agreement with a foreign bank (Annual Report, 2008/09).

Bhisma Raj Dhungana (Deputy Director, Nepal Rastra Bank, Banking Operation Department) said in his writing "Why Assets management company is considering the Best Option to Resolve the non-performing Loan Problem?" that assets management company is the financial intermediatory to manage the non performing and distressed loans of banks and non bank financial institutions. The functions of AMC are to buy NPLs from the financial institutions and to take necessary steps to recover the maximum value from the acquired assets.

The concept is a new to the Nepalese financial system. A high level of NPLs can be regarded as a serious burden to the financial system and to the economy as well.

Basically, there are two approaches available to deal NPL problem .They are;
1. The Traditional options focus on negotiation with the borrowers to restructure the loans into a separate loan Recovery Unit within the bank. The traditional option is especially useful in dealing with small business loans or consumer loans where the personal touch is adopted and the borrower may not feel heavy burden in paying back the loan.
2. AMC seems a catch –all phrase that describe agencies establishment to deal with NPL problems in the financial system by removing NPLs from the financial intermedatories with the objectives of recovering value from the resolution or disposal of these loans or assets (Dhungana, 2058).

Leonard Matzs (2001) in*"Liquidity Risk Management and Self Paced A/L Management"* undoubtedly suggested that the quantity of liquidity you have or can get must be related

to the quantity of liquidity that you think you may need. The quantity of liquidity that you need is, mainly, the sum of current liabilities you may lose plus new assets you have to fund. Liquidity Risk, the amount of liquidity you might need, is highly scenario specific. Liquidity cannot be intelligently measured without using scenario analysis. Sources available in some scenarios are less available or unavailable in others. He emphasized that the essences of liquidity risk is cash flow. Therefore, fundamentally, liquidity gap analysis is simply an evaluation of the two requirements: "enough money" and "when we need it". Liquidity risk management tactics are more vital than managing the time profiles of maturing liabilities. He conducted four essential Liquidity Management tools: always keep some sset liquidity reserve, extend liability terms to reduce liquidity risk, be prepared to enhance liquidity quickly at the first signs of increased potential need and manage cash flow profiles. He further recommended that banks should analyze the likely impact of different stress scenarios on their liquidity position and set their limit accordingly. Limits should be appropriate to the size, complexity and financial condition of the bank. Management should define the specific procedures and approvals necessary for exceptions to policies and limits. The liquidity strategy should set out the general approach the bank will have to liquidity, including various quantitative and qualitative targets. This strategy should address the bank's goal of protecting financial strength and the ability to withstand stressful events in the marketplace. Optimal management of liquidity requires a delicate balance between liquidity risk and income. No bank can hold enough liquidity to survive anything close to a "worst case" liquidity crisis. The penalty for too little liquidity may be the failure of the bank but too much liquidity carries a penalty as well. So, liquidity risk is highly idiosyncratic, arbitrary and in consistent .

Risk Management Group of the Basel Committee on Banking Supervision in *"Sound practices for Managing Liquidity in Banking Organizations* "attributed Liquidity, or the ability to fund increases in assets and meet obligations as they come due, is crucial to the ongoing viability of any banking organization. Sound liquidity management can reduce the probability of serious problems. Indeed, the importance of liquidity transcends the individual bank, since a liquidity shortfall at a single institution can have system – wide repercussions. For this reason, the analysis of liquidity requires bank management not

only to measure the liquidity position of the bank on an ongoing basis but also to examine how funding requirements are likely to evolve under various scenarios, including adverse conditions. In its work of supervision of liquidity the Basel Committee has focused on developing a greater understanding of the way in which banks manage their liquidity on a global, consolidated basis. Recent technological & financial innovations have provided banks with new ways of funding their activities & managing their liquidity. In addition, a declining ability to rely on core deposits, increased reliance on wholesale funds& recent turmoil in financial markets globally has changed the way banks view liquidity. All of these changes have also resulted in new challenges for banks. A good management information system, analyze of net funding requirements under alternative scenarios, diversification of funding sources & contingency planning are crucial elements of strong liquidity management at a bank of any size or scope of operations. Each bank should have a measurement, monitoring and control system for its liquidity positions in the major currencies in which it is active.

In addition to assessing its aggregate foreign currency liquidity needs and the acceptable mismatch in combination with its domestic currency commitments, a bank should also undertake separate analysis of its strategy for each currency individually. Supervisors should conduct an independent evaluation of a bank's strategies, policies, procedures and practices related to the management of liquidity. Supervisors should require that a bank have an effective system in place to measure, monitor and control liquidity risk. Sufficient and timely information should be obtained to evaluate level of liquidity risk and to ensure the bank has adequate liquidity contingency plans. The committee also suggests that banks should have adequate internal controls to ensure the integrity of their liquidity risk management process. The internal controls should be an integral part of the bank's overall system of internal control. They should promote effective & efficient operations, reliable financial & regulatory reporting & compliance with relevant laws, regulations & institution policies. Public disclosure is an important element of liquidity management. Experience has shown that when there is a more continuous stream of information about a bank, it is easier to manage market perceptions during times of stress. In turn, these should be addressed by management in a timely and effective

manner. An essential aspect of a sound liquidity risk management is an ffective system of internal control (http://info.worldbank.org/etools/docs/library/86140/rm18.pdf).

2.3 Review of Related Dissertation

Under this heading effort has been made to examine and review of some related unpublished dissertation.

Prem Bahadur Baniya (1999) in his study on *"Capital and Assets structure management of commercial bank in Nepal."* on the basis of financial and statistical analysis, finding issues and gaps of the study. He remarked that the existence of a commercial bank in today's competitive banking environment is largely depends upon its financial strength and sound internal management. Negligence in designing efficient organization structure, capital and assets structure, plans and programs could be main cause of various crises in the bank and one of the main the reason of a bankruptcy. To overcome this situation all commercial banks are strongly recommended to maintain effective and sound capital structure policy.

Motivation, training programs and other co-ordination programmers may be the significant ingredients for the conceptual development and for adequate knowledge, which may lead to innovate in policy formulation.

Finally better performance through capital control and efficient internal and external management will ensure the effectiveness of bank capital and assets structure management policy.

Nani Baba Acharya (2035) in *"Deposit Mobilization of Commercial Banks in Nepal"* has concluded that the commercial banks have not been successful in the mobilization of deposits collected by the commercial banks. It is because of the facts that the commercials have not been able to motivate and facilitate to their clients except to change in the rate of interest. On the end she recommended that banking services should be extended in the unbaked area by which amount of investment will be increased.

Dinesh Raj Shakya (1995) in *"Financial Analysis of Joint Venture Banks in Nepal"* try to find out trend of deposits and loans and advances of Nabil and NGBL, beside this his objectives are to evaluate the liquidity, profitability, capital structure, activity and capital adequacy of these banks. He remarked that banks should operate new branches in non-representing urban areas for more deposits collection and more utilization of same, as well as to increase their transaction and to provide financial services and facilities to more customers. It is recommended to NABIL to increase its cash and bank Balance as well as Money at call for improving its liquidity position.

Yuba Raj Panta (2052) in his dissertation, "*A study on capital and assets structure of NIDC*" concluded that the growth rate of fixed assets is very high so the corporation should pay the attention to maintain the growth rate of fixed assets. He analyzed in his thesis that the liquidity ratio is normally high and the ratio is fluctuation, so it can be said that the corporation has not paying attention to maintain the liquidity ratio. He recommended that the corporation should stabilize a certain ratio, which is appropriate to the corporation.

Sanjeev Moktan (2006), in ,"*Liquidity Management of* Himalayan *Bank Limited* ". The main objective of the study is to visualize and analyze the Liquidity position of Himalayan Bank. Analyzing liquidity ratio of HBL, he found that the bank is able to meet its short-term obligations. The bank has also maintained the cash, cash equivalent and bank balance, balance in Nepal Rastra Bank, money at call, investment in government securities to meet daily cash requirements. Lastly, he suggests that HBL has to re think & reorganize major strategies on resources collection and mobilization.

Karishma Shrestha (2008) in "A study on management of Deposit ad Liquidity and its impact on profitability". The main objective of the study was to visualize and analyze the trend of deposits and loans and to evaluate the liquidity, profitability, capital structure activity and adequacy position of joint venture banks. Finally from the deposit analysis it may be concluded that both the NABIL and HBL perform best in collecting the total deposits thus they could get profit by mobilizing their deposits in productive sector.

Though the idle standard of the (2008) current ratio is 2:1 but none of the banks under study can perform that standard. The banks contained more current assets than current liabilities thus banks are readiness to serve its consumers deposits Among all banks under study, NABIL has been able to maintain high return on total deposit ratio i.e. 2.80% by mobilizing the total deposit properly in the productive sectors.Lastly she suggests that to maintain effective capital assets management they need to achieve innovative approach of banking, bringing professionalism in their business.

2.4 Research Gap

Considering above various research studies, articles and other publications to elaborate this Current study   is based on the study of management of deposit and liquidity and its impact on profitability of joint venture bank. The basic objective of the study is to analyze trend of deposits and loans and to evaluate the liquidity, profitability, capital structure activity and adequacy position of joint venture banks.

The basic objective of this research is to analyze the different aspects of joint venture bank by using different financial indicator, out of which profitability and efficiency is also important one. If any firm makes excess profit than the normal level, the firm is said to have successful management, efficient control mechanism. But sometimes, the profit earned by a firm can be affected by external factor like government policies relating to financial sector, internal policies and inflation. So, this study is also focused on how the bank utilizes the resources properly, deposit management, liquidity management, loan and advance, credit investment, capital structure, operating income &expenses, resource mobilization. To make the study reliable, relevant five years data of five joint venture bank have been taken But previous study is limited to only four joint venture bank. Maximum numbers of materials relating to liquidity position of banks like articles, magazines, journals & previous research work have been presented in this study. So, the latest data, some extra financial indicator's like trend analysis, correlation coefficient, probable error and different materials relating to liquidity and deposit have made the analysis of this study more clear.

CHAPTER - III
RESEARCH METHODOLOGY

3.1 Introduction

Research methodology refers to the various sequential steps to adopt by a research in studying a problem with certain objectives in view. In other words research methodology describes the methods, techniques and process applied in the entire aspect of the study thus an appropriate research in order to clearing the objectives of the study. The basic objective of this study is to measure the trends in the items of assets and liabilities of commercial banks. To accomplish this good, the study follows the research methodology described in this chapter.

The research methodology adopted for the present study is mentioned in this chapter, which deals with research design, population and sample, sources and types of data, data gathering procedures, method of analysis (or tools and techniques of analysis).

3.2 Research Design

"A research design is purely and simply the framework or plan for a study that guides the collection and analysis of the data". Research design is the main part of a thesis or any research work. This study tries to evaluate the capital and assets structure of commercial banks. To accomplish the objectives it has adopted the descriptive cum analytical type of research design. It tries to describe and analyze all these facts that have been collected for the purpose of the study.

This study is basically based on descriptive research and "Descriptive research is a fact finding operation searching for adequate information. It is a type of study, which is generally conducted to assess the opinions, behaviors or characteristics of a given population and to describe the situation and events occurring at present' Some statistical and financial tools have been applied to examine the situations and descriptive techniques have been adopted to evaluate the structure of commercial banks.

3.3 Sources of Data

This study is mainly based on secondary data the study is of assets and liabilities management of joint venture banks in Nepal hence the study is based on the facts collected from the balance sheet and income statement of concerned commercial banks. So the major sources and types of data are in published from such as:-

a. Financial statement of concerned banks under study.

b. Annual reports of the same banks.

c. Bulletins and reports periodically published by Nepal Rastra Banks.

d. Data of concerned banks published in Internet.

e. Tribhuwan University library documentation center.

3.4 Population and Sample

There were 30 commercial banks in the country as of mid janauary 2010. Out of these30 commercial banks, there are seven JVBS, two government banks i.e. NBL and RBB and rest one are domestic commercial banks all over the kingdom and their stocks are traded actively in stock market.

Out of these seven JVBS only five JVBS are selected as sample for the evaluation.*Similarly, financial statements of five years (beginning from 2004/05 to 2009/10) are selected as samples for the purpose of same.

* They are:

1. NABIL (Nepal Arab Bank Limited)

2. Himalayan Bank Limited

3. Nepal Bangladesh Bank Limited

4. Everest Bank Limited

5. Nepal SBI Bank Limited

3.5 Methods of Analysis

The data collected and arranged in proper form have been analyzed and interpreted through financial and statistical tool. Due to limited time and resources, simple analytical statistical tools such as that personas coefficient of correlation, the method of least square

and trend analysis are applied in this study, like wise some financial tools such as ratio analysis & economic tools such as growth analysis have also been used for financial analyses and economic analysis.

3.5.1 Financial Analysis

Financial analysis is the process of identifying the financial strength and weaknesses of the firm by properly establishing relationship between the items of balance sheet, which represents a snapshot of the firm's financial position at a moment in time and next, income statement, that depicts a summary of the firm's profitability overtime (Van Horne and Wachowicz, 2003:120).

In financial analysis, ratio is used as a benchmark for evaluating the financial position and performance of a firm. Financial Analysis is a technique of answering various questions regarding the performance of a firm in the past, present and the future.

3.5.1.1. Ratio Analysis

The ratios are designed to show relationships between financial statement accounts. By comparing each firm's debt to its assets and by comparing the interest it must pay to the income it has available for payment of interest. Such comparisons are made by ratio analysis. Predicting is the future is what financial statement analysis is all about, while ratio analysis is useful both as way to anticipate future conditions and, more important, as a starting point for planning actions that will influence the future course of events (Van Horne and Wachowicz, 2003:120).

The ratio is generally calculated from past financial statement... Ratio analysis is the process of identifying the financial strengths and weakness. It truly helps to exploit maximum benefits and repair the weakness to meet challenges. Ratio analysis has limitations, but used with care and judgment, it can be most helpful. Ratio is a parameter to improve the future performance. Ratio is generally express in percentage, proportion and charts. This study "Management of deposit and liquidity and its impact on profitability of joint venture bank" uses following ratio: liquidity ratio, assets

management ratio, activity turnover ratio, profitability ratio, growth/ market value ratio and leverage / capital structure ratio.

3.5.1.1.1. Liquidity Ratio

Liquidity ratios are used to measure a firm's ability to meet short- term obligations. They compare short- term obligation to short- term resources available to meet those obligations. From these ratios, much insight can be obtained into the present cash solvency of the firm and the firm's ability to remain solvent in the event of adversity (Van Horne and Wachowiez, 2003: 129).

This ratio helps management to turn the company smoothly with high degree of credibility in the market and used to measure the companies short- term obligation with short- term resources available at given point of time. Inadequate liquidity bears poor company image in the market and in such a case financial credibility term borrowing or overdraft may become problematic. In the worse case inadequate liquidity can lead to the insolvency of the institution. On the other hand excessive liquidity can tend to lease assets yields and contributes to poor earning performance. So, there is always a question about liquidity, which tools are suitable to analysis the expected result and there is always a mix answer.

According to Nepal Rastra Bank following ratio consider to analyze liquidity ratio:
a) Current Ratio
b) Cash and Bank Balance to Total Deposit Ratio

The Current ratio is computed as:
 a) Current Ratio

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

b) Cash and Bank Balance to Total Deposit Ratio

The ratio is calculated using following formula,

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

3.5.1.1.2. Activity ratio

Activity ratio measures the performance efficiency of an organization from various angles of its operation. These ratios indicate the efficiency and activity of an enterprise to utilize available funds, particularly short-term funds. The following activity ratios measure the performance efficiency of an organization to utilize its short-term funds. These ratios are used to determine the efficiency, quality and the contribution of Loans and Advances in the total profitability.

The following ratios are viewd under this assets management ratio.

1. Loan and advances (total credit) to total deposit ratio
2. Investment total deposit ratio.
3. Performing assets to total assets

Loan and Advances (Total Credit) to Total Deposit Ratio

This ratio measures the extent to which the banks are successful to mobilize the outsider's funds (total deposit) on loan and advances for the purpose of profit generation. This ratio is calculated as: -

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

Total Investment to Total Deposit Ratio

This ratio measures the mobilization of percentage amount of total deposit on investment. Thus it is calculated by the amount of total investment by total deposit.

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

Performing Assets to Total Assets

Performing assets for the purpose include those assets which have been invested in loans and advances; bill purchased and discounted investment and money at call. Higher ratio indicates the higher utilization of resources in relation to total assets and yields a higher return for the banks. The ratio can be calculated as:-

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

3.5.1.1.3. Profitability Ratio

Profit is the difference between the revenues and the expenditure over a period. Profit is the main elements that make an organization to survive in long run. The profit, in other hand, measures the management ability regarding how well they have utilized their funds to generate surplus. Thus, measuring the profitability ratio is also significant in this study and shall reflect the various aspect of the problem of the study. These ratios have also been used to determine the efficiency of the lending, its quality and contribution in total profitability. Profitability ratio- measures over all performance and effectiveness of the firm. Profitability position of commercial banks can be evaluated through following ratio.

1. Return on total assets (ROA)

2. Return on total deposit (ROD)

3. Return on risky assets i.e. loan and advances

4. Interest earned to total assets

Return on Total Assets

This ratio is calculated to reveal the over all operating efficiency of a firm. It indicatesthe earning power of the banks. It is calculated by dividing the amount of net profit by amount of total assets.

$$\text{Return on Total Assets} = \frac{\text{Net Profit}}{\text{Total Assets}}$$

Return on Total Deposit

This ratio is calculated to find out efficiency forwards its deposit mobilization. Generally, higher ratio indicates proper utilization of total deposits and vice versa . The ratio can be computed as:

$$\text{Return on Total Deposit} = \frac{\text{Net Profit}}{\text{Total Deposit}}$$

Return on Risky Assets

This ratio measures profitability of the banks, which shows the percentage of net profit against risky assets (loan and advances plus bills purchased and discounted). It can be calculated by dividing net profit by risky assets.

$$\text{Return on Risky Assets} = \frac{\text{Total Risky Assets}}{\text{Net Profit}}$$

Interest Earned to Total Assets

This ratio measures the interest earning capacity of the bank through the efficient utilization of out side assets. Higher ratio implies efficient use at assets to earn interest. This ratio is calculated by dividing total interest earned by total assets and can be state as:

$$\text{Interest Earned to Total Assets} = \frac{\text{Total Interest Earned}}{\text{Total Assets}}$$

3.5.1.1.4 Capital Adequacy Ratio

Capital adequacy ratio - shows the bank's adequacy position .It shows the proportion of Shareholder's fund in financing the firm's assets. The following ratios are selected under capital adequacy ratio.

1.Shareholder's funds to total deposit ratio.

2. Shareholder's funds to total assets ratio.

Shareholder's Funds to Total Deposit Ratio

This ratio shows whether the commercial banks are maintaining sufficient amount of capital funds in comparison to the total amount of their total deposits. it is calculated by

dividing total shareholder's fund by total deposits.

$$\text{Shareholder's Funds to Total Deposit Ratio} = \frac{\text{Shareholder's Fund}}{\text{Total Deposit}}$$

Shareholder's Funds to Total Assets Ratio

This ratio measures the relative claims of owners of the bank over the bank assets, which can be expressed as:

$$\text{Shareholder's Funds to Total Assets Ratio} = \frac{\text{Shareholder's Fund}}{\text{Total Assets}}$$

3.5.2 Statistical Analysis

Statistics is a body of methods of obtaining and analyzing data in order to base decision on them. It is a branch of scientific method used in dealing with phenomena that can be described numerically either by counts or by measurements. Thus the word statistics refer to a method of dealing with quantitative information. The methods by which statistical data are analyzed are called statistical methods. Such methods are applicable to a very large number of fields. Economics, Sociology, Anthropology, Business, Agriculture, Psychology, Medicine, Education all lean heavily upon statistics.

It should be noted at the very outset that statistics is usually not studied for its own sake; rather it is widely employed as a tool and a highly valuable one in the analysis of problem in nature, physical and social sciences.

It is necessary to explain few definitions of statistics to understand the characteristics of statistical data.

Webster defined statistics as 'the classified facts represented by the condition of the people in state, especially those facts which can be stated in numbers or in tables of numbers or in any tabular or classified arrangement'.

Yale and Kendall defined statistics as 'By statistics we mean quantitative data affected to a market extend by multiplicity of causes'.

The coefficients of correlation, Trend analysis, calculation of probable error are applied on statistical analysis to achieve the objective of study.

Coefficient of Correlation

"Correlation analysis is the statistical tools generally used to describe the degree to which one variable is related to the another. On the basis theory of correlation one can study the comparative changes occurring in two related phenomena and their cause effect relation can be examined" (Kothari, 1981).

Correlation is defined as the 'relationship" or (association) between (among) the one dependent variable or factor and one (or more than one) independent variable(s) or factor (s)."Correlation analysis deals with the association between two or more variables" (Simpson & Kafka, 1997).

"If two or more quantities vary in sympathy so that movement in one trend to be accompanied by corr"When the relationship is a quantitative nature, the appropriate statistical tool for discovering and measuring the relationship and expressing it in brief formula is known as correlation".

"When the relationship is a quantitative nature, the appropriate statistical tool for discovering and measuring the relationship and expressing it in brief formula is known as correlation".

"Correlation analysis attempts to determine the degree of relationship between variables" (Ya Lun Chou, 1998)

Correlation is an analysis of the co variation between two or more variables"-AM Title (Gupta, 1984).

Karl Pearson's measure, known as Pearsonian correlation coefficient between two variables (series) X and Y, usually denoted by r (X, Y) or r xy or simply r is a numerical measureof linear relationship between them.

Of the several mathematical methods of measuring correlation, the Karl Pearson'smethod popularly known as Personian coefficient of correlation is mostly widely usedin practice. The Personian coefficient of correlation is denoted by the symbol r.

The following correlation are calculated for the objective of study:

1. Coefficient of correlation between total deposit and total investment.
2. Coefficient of correlation between total deposit and total performing assets.

The degree of relationship is measured by using following formula,

Co-efficient of correlation (r) $= \dfrac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{N\sum X^2 - (\sum X)^2}\sqrt{N\sum Y^2 - (\sum Y)^2}}$

Where,

   r=Correlation coefficient

  $\sum x$ =Sum of the variable x

  $\sum y$=Sum of the variable

  $\sum xy$=Sum of products of x and y

  N=Number of pairs of x and y

The Karl Pearson Coefficient of Correlation (r) always fall between -1 to +1. The value of correlation in minus signifies the negative correlation and in plus signifies the positive correlation. As the value of correlation coefficient reaches near to the value of zero, it is said that there is no significant relationship between the variables.

Probable Error (PE) of Correlation Coefficient

The probable error of the correlation coefficient is applicable for the measurement of reliability of the computed value of the correlation coefficient "r". The probable error (PE) is defined by,

  $PE = 0.6745 \times \dfrac{1 - r^2}{\sqrt{n}}$

Where

r = correlation coefficient.

N= number of pairs of observation.

If r<PE, the value of r is not significant.

If r>6PE, the value of r is significant i.e. correlation is significant (Sherstha , 2057).

3.5.3 Trend Analysis

Trend analysis is very useful in terms of both commercial banks and to the shareholders. Through analysis bank can estimate the future investments, opportunities, rate of return, deposit liabilities etc. whether to stick in the present growth rate or to increase or decrease. In terms of shareholders, trend analysis helps to whether to invest on the bank or to leave as per the satisfaction of the growth rate. For depositors it provides degree of safety in the form of financial credit worthiness of the bank in the bank in the future and the borrowers, it assures about the financial capability of the banks to furnish their loans and advance in the future provided that the present trend continues.

Trend analysis implies straight line irrespective of the seasonal and cyclical swings and function. Trend analysis is used to measure the line of best fit or straight line is obtained or not. Trend analysis is also used to compare the overall performance of different selected study period. The term best fir is interpreted in accordance with the principle of least square which consists in minimizing the sum of the squares of the residual or the errors of estimates i.e. the deviations between the given observed value of the variables and their corresponding estimated values as given by the line of best fit. Absolute amount per unit of time can change by increasing or decreasing the trend value.

Trend analysis is also denoted by least squares linear trend analysis. Trend analysis describes the average relationship between two series where the one series relates to time and other series to the value of available. Trend analysis gives the best possible mean values of dependent variable for a given value of independent variable. Under this topic, trend of total deposit, loan and advances, total investment, net profit, cash flow etc will be studied.

The equation of trend analysis can be presented as follows:

$$Y = a + b\chi$$

Where,

Y = the value of depended variable, the estimated value of y for given values of x

Obtained from line of regression of y on x

a = intercept of trend line or mean of y value

b = Slope of trend line or rate of change

x = Value of independent variable, i.e. time.

In order to determine the line completely we obtain the values of 'a' and 'b' by the method of least square (i.e. the line should be drawn through the plotted points such that the sum of squares of deviation of actual Y – values from the computed or estimated Y – values is the least). The estimated values of Y on the line $Y = a + b\chi$ corresponding to χ =$\chi1,\chi2$…….. χn are a + b χ 1 , a + b χ 2, ………., a + b χ and denoted by Yc. The actual values of Yc are Y 1, Y 2 ………. Yn.

We obtain the value of 'a' and 'b' by solving the following equation:

$$a = \frac{\sum \chi^2 \sum Y - \sum \chi \sum \chi Y}{N \sum \chi^2 - \left(\sum \chi\right)^2}$$

CHAPTER - IV
PRESENTATION AND ANALYSIS OF DATA

This chapter deals with the presentation analysis and interpretation of Joint venture banks in Nepal (Nepal Arab Bank Ltd., Himalayan Bank Ltd., Nepal Bangladesh Bank Ltd., Nepal SBI Bank limited ,and Everest Bank Ltd.) in order to fulfill the objectives of this study. The motto of this chapter is to study, evaluate and analysis those major financial performance which are related to capital and assets structure of commercial banks. To obtain best result the data have been analyzed according to the research methodology as mention in third chapter.

4.1 Analysis of Deposits

Commercial banks actively create money in the process of acquiring earning assets. Since additional earning assets results in increased income, banks have an intensive to expand their deposits because banks deposits are also one of the main sources for loans and investments. In a developed country in case of banks, the capital subscribed by the owner tends to play a distantly subordinate role. Banks are highly leveraged institution that depends heavily on attracting deposits as the basis for their assets acquisition. Although there is the considerable variation among banks their deposits liabilities in the recent years have averaged over ten times the amount of their capital accounts so that over 90% of the assets acquired by commercial banks are financed by resources obtained from their creditors (largely depositors).

Deposits represent the liability of the bank. Since deposits are borrowed amount from depositors i.e. from general public, it is the largest portion of liabilities of a bank.The core function of any banking industry is to mobilize he funds from the depositors to the borrowers. This is the main principal of banking industry and this will happenonly if it can effectively channels the saving of the community.

Commercial banks usually accept deposits from the public and institutions. Normally deposits are classified into two types;

1) Interest bearing deposits

2) Non interest bearing deposits

Following chart shows the types of deposit.
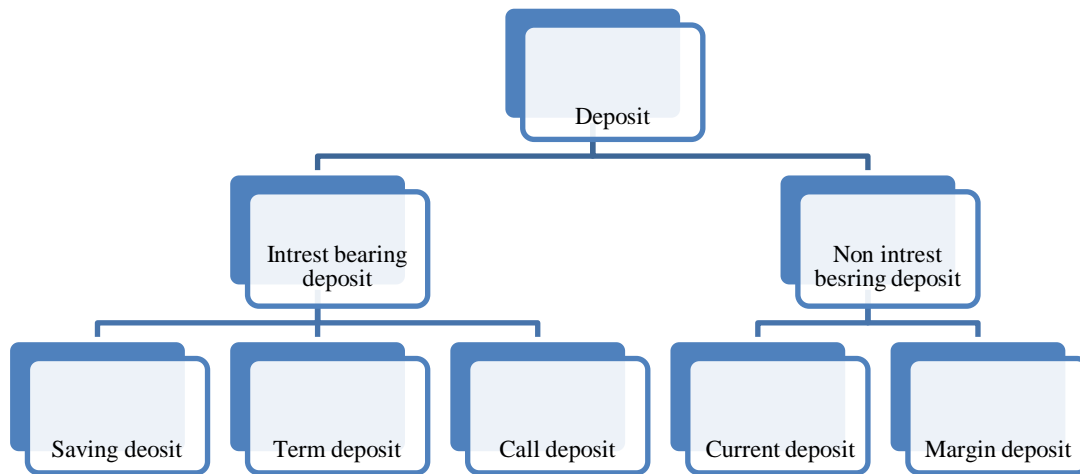
Fiscal Year 2004/05

Table 4.1

Deposit Analysis of Various Joint Ventures Banks for the

Period Ending 15th July 2005 (Ashad31 2062)

(In million)

Deposits\Banks	SBI	NABIL	SCBL	HBL	EBL
Current deposit	17735.44	27991.84	43563.37	50451.60	10250.25
Fixed deposit	40863.58	20785.35	14163.82	61074.30	34039.58
Saving deposit	24588.00	70263.34	130309.29	128524.14	48068.32
Call deposit	2258.97	23413.28	3110.25	2229.61	7043.62
Margin deposit	1005.94	2969.76	2487.95	5860.43	1167.77
Other deposit	95.79	442.49	-	-	407.34
Total deposit	86547.74	145866.08	193634.69	248140.11	100976.9

Figure 4.1

Deposit Analysis of Various Joint Ventures Banks for the

Period Ending 15ᵗʰ July 2005 (Ashad31 2062)

From the above table we can conclude that total deposit of HBL is higher than others, therefore HBL has more funds to make it utilize. The non interest bearing deposits of HBL i.e. current deposit and margin deposit is more than others.

Fiscal Year 2005/06

Table 4.2

Deposit Analysis of Various Joint Venture Banks for the

Period Ending 15ᵗʰ July 2006 (Ashad 31 2063)

(In million)

Deposits\Banks	SBI	NABIL	SCBL	HBL	EBL
Current deposit	14082.97	29105.89	46819.73	502 81.50	11457.94
Fixed deposit	61161.72	34490.94	21363.07	63502.02	42423.51
Saving deposit	28326.39	87707.59	145976.74	145828.55	69292.16
Call deposit	5651.41	38511.59	11356.91	416.12	12932.97
Margin deposit	797.90	3228.99	5094.21	4880.31	1265.15
Other deposit	-	428.96	-		652.68
Total deposit	110020.40	193473.99	230610.32	264908.51	138024.44

Figure 4.2
Deposit Analysis of Various Joint Venture Banks for the
Period Ending 15th July 2006 (Ashad 31 2063)

From the above listed tables, it is noted that the total deposit tends to be more in case of HBL than other banks during study., the lowest total deposit was recorded i.e. Rs 110020.40 million of SBI. The EBL had more interest bearing deposit than non interest bearing deposit i.e. EBL contained more fixed deposit than others.

From the above analysis it is quite clear that both HBL has more funds to make it utilize to earn profit.
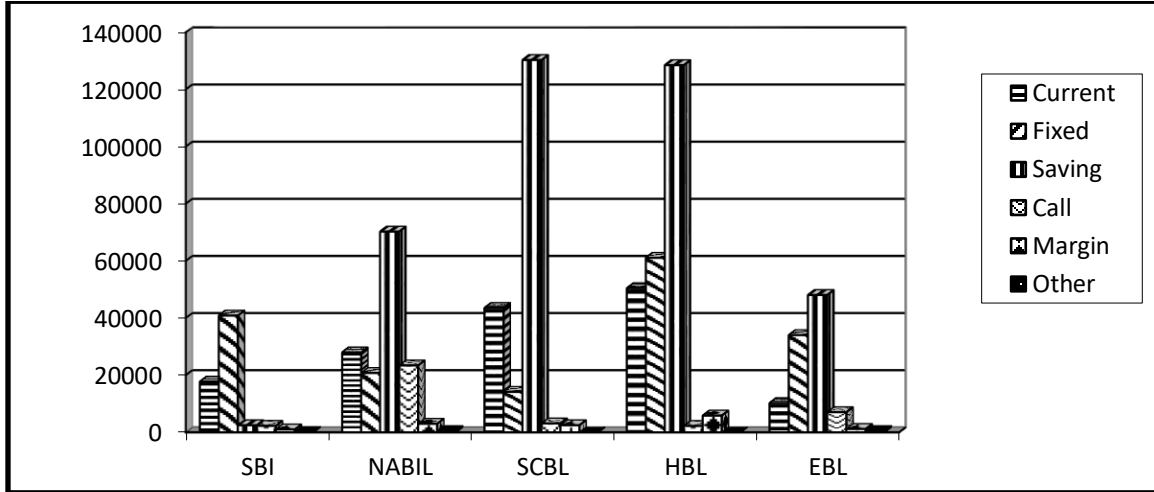
Fiscal Year 2006/07

Table 4.3
Deposit Analysis of Various Joint Venture Banks for the
Period Ending 15th July 2007(Ashad 31 2064)

(In million)

Deposits\Banks	SBI	NABIL	SCBL	HBL	EBL
Current deposit	19304.32	33952.39	47945.34	55895.80	16739.83
Fixed deposit	55174.66	54351.89	31964.89	82011.34	56266.61
Saving deposit	32746.90	101873.54	152443.84	157847.69	90292.55
Call deposit	6247.13	39616.33	9255.10	979.06	15734.96
Margin deposit	979.82	3120.60	4861.01	3750.26	2220.67
Other deposit	-	508.07	-	-	607.89
Total deposit	114452.86	233422.85	246470.20	300484.17	181862.53

Figure 4.3

Deposit Analysis of Various Joint Venture Banks for the

Period Ending 15th July 2007(Ashad 31 2064)
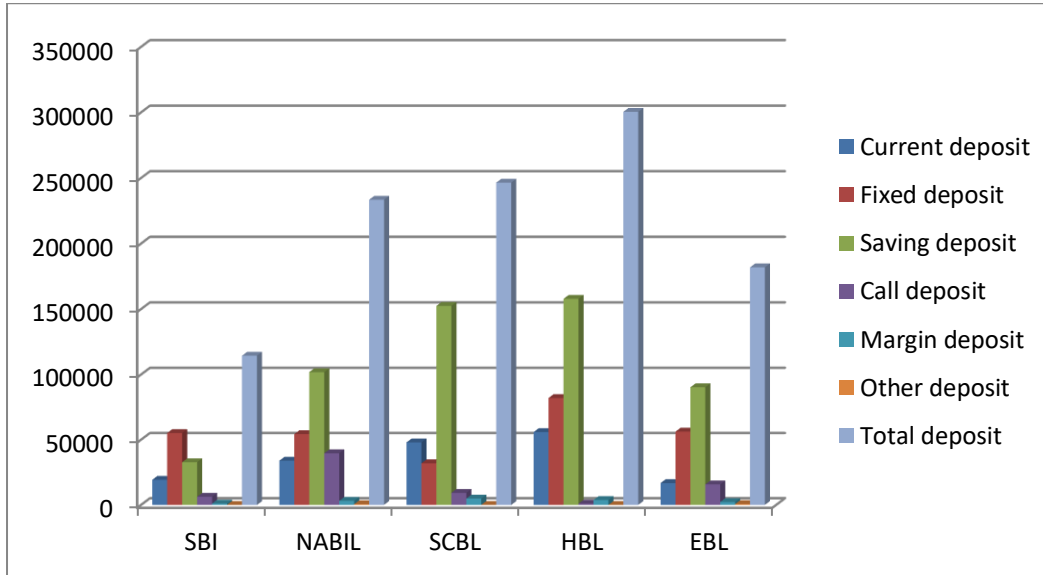
During the FY 2006/07, HBL had the highest Current Deposit at 55895 million as compared to 47945 million, 33952 million,19304 million and 16739 million of SCBL, NABIL,SBI and EBL respectively. Similarly the Saving Deposit of HBL was highest at 157847 million as compared to 152443 million, 101873 million, 90292 million and 32746 of SCBL, NABIL, EBL and SBI respectively.

The Fixed Deposit of HBL was highest at 82011 million as compared to 56266 million, 55174 million,54351 million and 32964 million of EBL, NABIL.SBI and SCBL respectively. Similarly call Deposit of NABIL was highest at 39616 million as compared to 15734 million,9251 million,6247 million and 979 million of EBL, SCBL, SBI and HBL respectively.

The Margin Deposit of SCBLL was higher than that of HBL. Similarly Other Deposit of EBL was highest at 607 million as compared to 508 million of NABIL.

Thus from the above analysis it may be concluded that both HBL , SCBL and NABIL had more deposit than others two.HBL had more non interest bearing deposits i.e.

Current Deposit and Margin Deposit and more interest bearing deposits i.e Saving Deposit and Call Deposit.
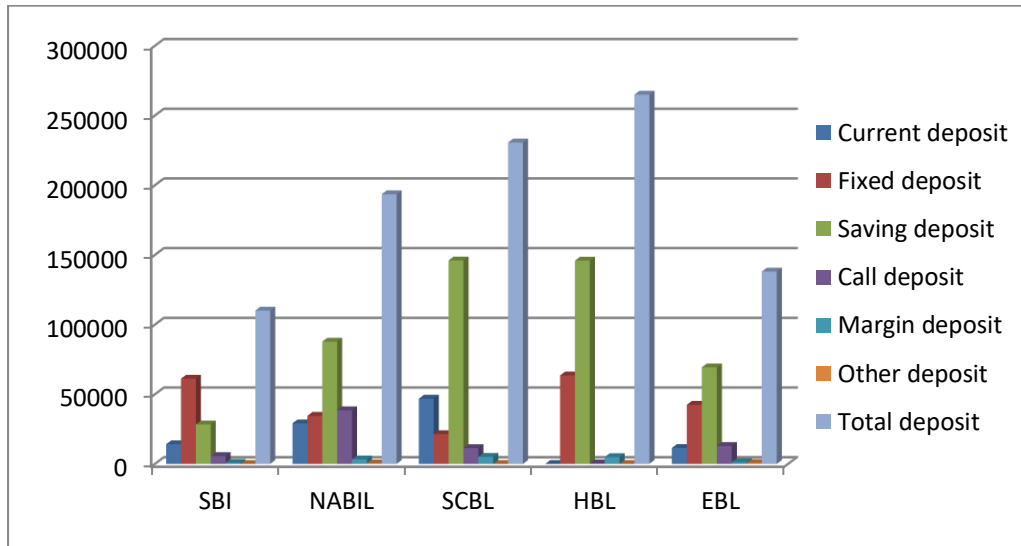
Fiscal Year 2007/08

<div align="center">

Table 4.4

Deposit Analysis of Various Joint Venture Banks for the

Period Ending 15th July 2008 (Ashad 31 2065)

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(In million)

Deposits\Banks	SBI	NABIL	SCBL	HBL	EBL
Current deposit	17381.01	52843.68	61745.60	47842.16	24923.46
Fixed deposit	68548.84	84640.86	33010.13	64238.74	64461.81
Saving deposit	41711.75	121599.66	178561.34	179724.40	118838.57
Call deposit	8287.95	55634.40	19382.45	20170.71	27806.47
Margin deposit	1224.38	3617.82	4740.43	6451.86	2214.39
Other deposit	-	814.04	-	-	1528.27
Total deposit	137153.94	319150.47	297439.98	318427.89	239762.98

<div align="center">

Figure 4.4

Deposit Analysis of Various Joint Venture Banks for the

Period Ending 15th July 2008 (Ashad 31 2065)

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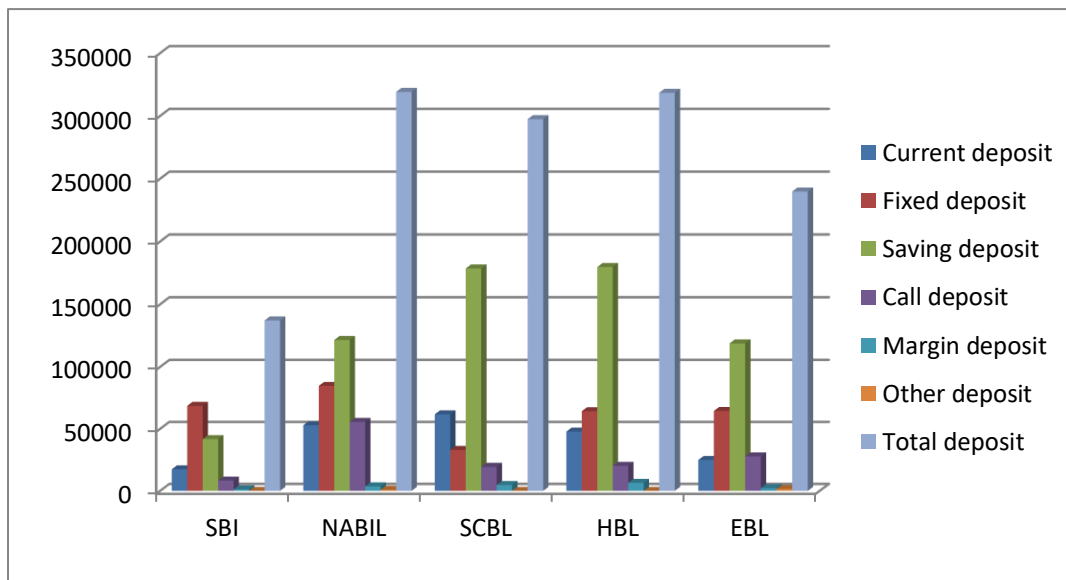
Here Saving, Call and Fixed deposits are termed as interest bearing deposits. During the FY 2007/08 NABIL had the highest interest bearing deposits at 261874 million followed by 2614133 million, 211106 million, 197943 million, and 118548 million of HBL, SCBL and SBI respectively.

Similarly as above, Current and Margin Deposit are termed as a non-interest bearing deposit. During FY 2007/08 NABIL had the highest deposit at 319150million followed by 318427 million, 297439 million, 239762 million and 137153 million of HBL,SCBL, EBL and SBI respectively

Fiscal Year 2008/09

Table 4.5

Deposit Analysis of Various Joint Venture Banks for the

Period Ending 15th July 2009 (Ashad 31 2066)

(In million)

| Deposits\Banks	SBI	NABIL	SCBL	HBL	EBL
Current deposit	28647.33	54805.33	62028.61	32182.24	48599.46
Fixed deposit	174384.04	83107.08	71016.97	63771.32	70499.78
Saving deposit	58222.93	146204.07	191876.36	200610.47	147823.30
Call deposit	16452.64	84382.71	30015.66	43597.66	62940.06
Margin deposit	1865.24	4630.15	3779.59	6651.73	2919.84
Other deposit	-	353.20	-	-	447.00
Total deposit	279572.20	373482.55	358717.21	346813.45	333229.46

Figure 4.5

Deposit Analysis of Various Joint Venture Banks for the

Period Ending 15th July 2009 (Ashad 31 2066)
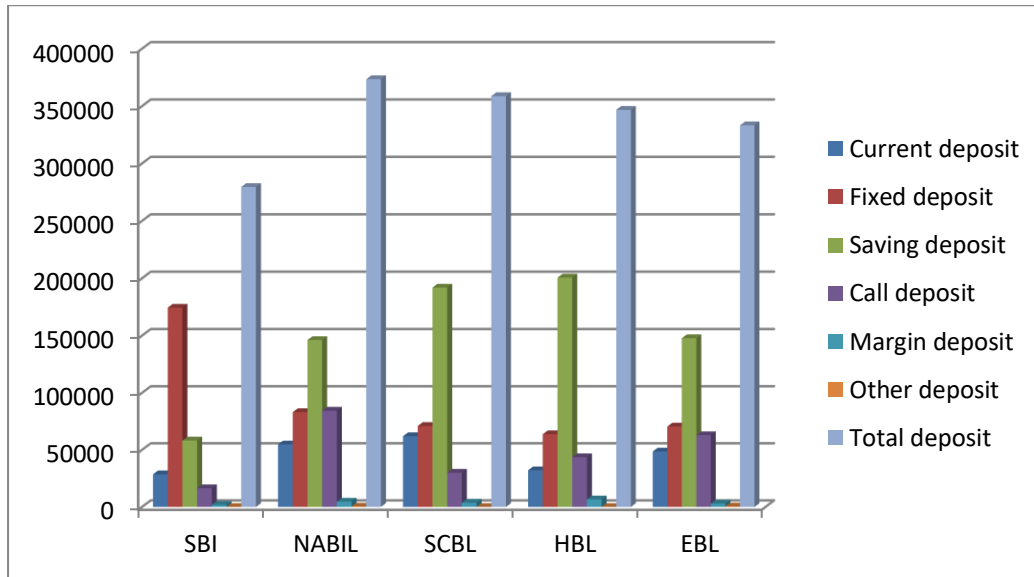
According to above table the total Deposit of NABIL is more than other banks thus it has more funds to utilize for maximization of profit. The total Deposit of SBI seems to be lower as compared to Total Deposit of SCBL HBL and EBL therefore it needs to increase its funds and make it utilize in the market.

4.2 Analysis of Ratios

It is notable that all types of financial ratios are not studied under this chapter. Only those ratios are calculated and analyzed which are very significant to picture the real capital and assets structure of commercial bank.

Ratio analysis is one of the powerful tools of financial analysis. In financial analysis, aratio is a benchmark for evaluating the financial position and performance of a firm. It is simple but meaning technique of measuring operating performance and evaluating managerial performance of a firm. Specifically the objectives of ratio analysis are to examine;

  a. liquidity position
  b. operating efficiency

c. financial leverage

d. Learning power and market value of the firm

We can calculate different ratios to examine each of these aspects: however as to which aspect to examine and which ratio to calculate depends on the concern of analysts. Based on the different operating and financial aspects and needs for their examination ratio are classified in the following four sets.

1. Liquidity ratio
2. Assets management,
3. Utilization (activity) ratio
4. Profitability ratio
5. Capital adequacy ratio

- To examine the liquidity position.
- To examine earning power,
- Efficiency and utilization position.
- To examine earning power.
- To examine the strength of the Capital
- Adequacy of the available capital.

4.2.1 Liquidity Ratio

Liquidity is the ability to meet automated and contingent cash need, arise from deposit withdrawals, liability matures and loan disbursal (new loans and the withdraw down of outstanding lending commitments). A bank should ensure that it doesn't suffer from liquidity crunch and also that it is not too much highly liquid. There should be proper balance between liquidity and lack of liquidity. Therefore in order to protect banks solvency and to honor its short-term obligation or liabilities, adequate liquidity is most. Regarding this NRB has directed all the banks to maintain adequate cash reserve ratio. Short-term liquidity position of bank is measured through the calculation of following relevant liquidity ratios.

1. Current ratio
2. Cash and bank balance to deposit ratio

Current Ratio

Current ratio is computed by dividing current assets by current liabilities.

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

Current assets include cash and those assets which can be converted into cash within the year such as cash in hand, money at call, short term loan and investment. Similarly current liabilities include obligations maturing within a year such as sundry creditors, deposits, borrowings and other liabilities. Current ratio is a board measure of liquidity position of the financial institution. This ratio indicates the capability of the bank to meet its current obligations.

The idle standard of the current ratio is 2:1Thus the conventional rule is based on the assumption that if the current assets are decreased by half, the firm can meet its obligations. It is not any hard and fast assumption that the current ratio must be equal to 2:1 So many firms below this standard are also seen sound and meeting their obligations efficiently. It is the trend over time rather than the absolute value that gives the most valuable information. Particulary for banks , the perspectives is very different.

Assumption

For the calculation of current ratio; cash in hand, money at calll ,short tem loan and investment   is taken current assets and sundry crediters, deposits,borrowing and other liabilities is taken as current liabilities.

The table 4.6 below shows the calculation current ratio of different joint venture banks under study.

Table 4.6

Calculation of Current Ratio of Various Joint Ventures Banks for

the period ending 16th July 2005 to 2009

(in million)

Year/Banks	SBI	NABIL	SCBL	HBL	EBL
2004/05					
Current assets	7703.0	88192.0	17733.0	22336.0	67490.0
Current liabilities	3262.2	42466.0	5870.0	11269.0	29017.0
Ratio	2.37	2.08	3.02	1.99	2.33
2005/06					
Current assets	99762.84	1385750.0	20624.0	23785.0	113988.0
Current liabilities	5842738	666100.0	23873.0	11033.0	47839.0
Ratio	1.71	2.08	0.87	2.16	2.39
2006/07					
Current assets	108545.0	169540.0	22543.0	26999.9	142268.0
Current liabilities	77432.0	92585.0	9468.0	23170.44	73642.0
Ratio	1.41	1.84	2.38	1.17	1.94
2007/08					
Current assets	123768.0	2012210.0	23550.0	29449.0	249460.0
Current liabilities	96511.0	1492360.0	10272.0	24696.0	113548.0
Ratio	1.29	1.35	2.30	1.20	2.20
2008/09					
Current assets	251117.0	173370.0	31444.0	29813.0	324254.0
Current liabilities	210945.0	144690.0	17419.0	27968.0	172879.0
Ratio	1.19	1.20	1.81	1.07	1.88

Above table indicates that current ratios of most of the banks are highly fluctuating. The current ratios of each commercialbanks are more than one except SCBLfor the FY2005/06 but later on SCBL also improves its position. Thus in most of the case current assets of each commercial banks has contained more than its current liabilities. It

indicates that all commercial banks under the study are capable to pay their current obligations. The highest ratio pointed at 3.02 of SCBL during the FY 2004/05.Though the idle standard of the current ratio is 2:1 but   the banks under study can't perform that standard in all study year. The banks contained more current assets than current liabilities these banks are readiness to serve its consumers deposits.

Cash and Bank Balance to Total Deposit Ratio

Cash and bank balance are assets that constitute the bank's first line of defense. Banks have to maintain certain amount of cash in order to ensure enough liquid to face heavy deposit withdrawals. This ratio shows the availability of bank's highly liquid or immediate funds to meet anticipated call on total deposits. This ratio is computed by cash and bank balance divided by total deposits to meet their daily requirements and deposits and vice versa.

Banks have to be prepared for the high amount of withdrawal situation, but some banks had the very less amount of cash and balance in order to provide safety to the depositors but to high amount of cash and bank balance is also disadvantageous because it will lack up the capital since it return back nothing. This also shows the inability of bank to invest in more productive sector like government securities,treasury bills etc.to enhance its profitability.

 Cash and bank balance to total deposit ratio is calculated by using following formula;

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

The table 4.7 below shows the calculation current ratio of different joint venture banks under study.

Table 4.7

Cash and Bank Balance to Total Deposit Ratio of Joint Venture Banks

(In million)

Year/Banks	SBI	NABIL	SCBL	HBL	EBL
2004/05 Total cash& bank balance Total deposit Ratio	7237.45 86547.74 8.36%	5594.73 1458660.8 3.83%	11111.17 1936346.9 5.73%	201447.1 2481401.1 8.11%	104998.9 1009769.0 10.39%
2006/07 Total cash& bank balance Total deposit Ratio	11181.58 1100204 10.16%	63023.8 1934739.9 3.25%	127624.1 2306103.2 5.53%	171732.5 2649085.1 6.48%	155296.7 1380244.4 11.25%
2006/07 Total cash& bank balance Total deposit Ratio	112269 144528.6 9.80%	139982.5 2334228.5 5.99%	202102.1 2464702.0 8.19%	175734.1 3004841.7 5.84%	239142.0 1818625.3 13.14%
2007/08 Total cash& bank balance Total deposit Ratio	134296 371539.4 9.79%	267114.1 3191504.7 8.36%	205024.3 2974399.8 6.89%	144814.3 3184278.9 4.54%	266797.1 2397628.9 11.12%
2008/09 Total cash& bank balance Total deposit Ratio	190390.6 2795722 6.81%	337151.2 3734825.5 9.02%	313716.4 3587172.1 8.74%	304852.7 3468134.5 8.79%	616437.1 3332294.6 18.49%

The range of cash and bank balance of EBL is high among all the banks in fiscal year20008/09.

According to table the ratio tends to decrease of the SBI bank but while considering to ratio of EBL it slightly get increase from 11.12% to 18.49% in the fiscal year 2007/08 to 2008/09with a ratio of 18.49% . The ratios of HBL also get decrease in rest of the year but it slightly gets increase in the fiscal year 2008/09 from 4.54% to 8.79%.

The ratio of NABIL gets decrease in the fiscal year 2005/06 from 3.83% to 3.25% but later on it increase to the9.02% in fiscal year 2008/09.

The ratio of the SCBL bank is fluctuating during the study period but later on it increases to the 8.74% in fiscal year2008/09.

It may be concluded from above analysis that the cash and bank balance position with respect to total deposit has better performance in the case of HBL,SCBL,NABIL and EBL due to readiness to serve its consumer deposit than SBI bank. In contrast, a high ratio of cash and bank balance may be inappropriate which may indicate that the bank has burden more idle money. Thus in case of HBL,SCBL,NABILand EBL, they could invest Their more idle cash balance to more productive sector i.e. in marketable securities, treasury bills etc. for improving their profitability position.

4.2.2 Utilization Ratio (Activity Ratio)

The calculation of this ratio helps in efficient management of assets. Commercial banks must be able to manage its assets very well to earn high profit, to satisfy its consumers and for own existence.

The funds of creditors and owners of the bank, which are reflected on liabilities side of the balance sheet, form the sources of the fund, where as the loans and advances and investments reflected under the assets side of the balance sheet are the user of the funds. These funds are invested by the banks in the various assets to generate profit margin. The better the management of assets is the larger amount of utilization of the available funds become. Assets management ratio or activity ratio measures howefficiently the bank manages the resources at its command.

Following activity ratio calculated to measure the efficiency of assets management of SBI, NABIL,SCBL, HBL, and EBL.

a. Loan and Advances (Total Credit) to Total Deposit Ratio

This ratio measures the extent to which the banks are successful to mobilize the outsider's funds (total deposit) on loan and advances for the purpose of profit generation. Utilization of deposits is the objective of the commercial bank to generate the profit. It is obey possible through the maximum and proper utilization of deposits. A high ratio of loan and advances to total deposit ratio indicate the better mobilization of collected deposits and vice versa but it should be noted that too high ratio may not be better from its liquidity point of view. Deposit mobilization is one of the important functions of the commercial banks.

Assumption:

Total Credit = Bill Purchase & Discount +Loans Advance & Overdraft

Table 4.8

Total Credit to Total Deposit Ratio (%)

(Rs. in Million)

Year/Banks	SBI	NABIL	SCBL	HBL	EBL
2004/05					
Total credit	62138.78	105861.70	81432.08	134511.68	76186.71
Total deposit	86547.74	145866.08	193634.69	248140.11	100976.90
Ratio	71%	72.5%	42.05%	54.2%	75.4%
2006/07					
Total credit	76267.36	129225.43	89354.18	157619.77	98013.07
Total deposit	110020.40	193473.99	230610.32	264908.51	138024.44
Ratio	69.3%	66.7%	38.74%	59.49%	71.01%
2006/07					
Total credit	94604.50	155457.78	105026.37	177937.24	136640.81
Total deposit	114452.86	233422.85	246470.20	300484.17	181862.53
Ratio	82.65%	66.59%	42.61%	59.2%	75.13%
2007/08					
Total credit	121136.98	213650.53	137185.97	201796.13	183390.85
Total deposit	137153.94	319150.47	297439.98	318427.89	239762.89
Ratio	88.3%	66.9%	46.12%	63.37%	76.48%
2008/09					
Total credit	151317.47	275989.33	136797.57	255195.19	238846.73
Total deposit	279572.20	373482.55	358717.21	346813.45	333229.46
Ratio	54.12%	73.89%	38.13%	73.58%	71.67%

Above table exhibits that all the banks follows fluctuation types of nature of total credit to total deposit ratio during the study period. In case of SBI the ratio gets increase till the fiscal year 2007/08 from69.3% to 88.3% but thereafter shifted downward to54.12% in the last fiscal year.

The ratio for NABIL decreased for fiscal year 2005/06 from 72.5%to 66.7% but thereafter increased to 73.89% in the last fiscal year.

The ratio for SCBL is seems to be fluctuating for all study period and shifted down to the lowest figure 38.13% in the last fiscal year.

The ratio in fiscal year2006/07 for HBL bank is slightly decreased form 59.4%to 59.2% but there after it increased to73.58% in last fiscal year.

The ratio in all fiscal years is higher for EBL.Its ratio is also slightly fluctuating. Its ratio decreased to71.01% for fiscal year 2006/07 and increased to 78.48% for fiscal year 2007/08. SBI seems to be successful to maintain highest credit ratio in the fiscal year 2007/08 i.e. 88.3%. The deposit utilization ratio of EBL, NABIL and SBI is also seemed to be satisfactory as compared to other banks in study.

Above analysis reveals that SCBL seems to be slightly weak to mobilize its total deposit as loan and advances hence these banks need to mobilize their deposits in most secure loans.

Investment to Total Deposit Ratio

This ratio is similar to above-mentioned ratio. It measures the mobilization of percentage amount of total deposits on investment. Thus it is calculated by dividing the amount of investment by the amount of total deposits.

The core banking function is to mobilize the funds from the depositors to the borrowers to mobilize the bank's funds in different securities issued by government and other financial or non-financial companies. Investment total deposit ratio measures the extent to watch of the banks are successful to mobilize the outside funds, high ratio is the indicator of high success to mobilize the banking funds as investment and vice versa.

Assumption: For the calculation of total investment both investment and money at callis taken into consideration.

Table 4.9

Total Investment to Total Deposit Ratio (%)

(In million)

Year/Banks	SBI	NABIL	SCBL	HBL	EBL
2004/05					
Total investment	26076.80	42755.28	97025.53	116923.42	21289.31
Total deposit	86547.74	145866.08	193634.69	248140.11	100976.90
Ratio	30.12%	29.31%	50.1%	47.11%	21.08%
2006/07					
Total investment	36107.75	61785.33	128385.56	108890.31	42005.15
Total deposit	110020.40	193473.99	230610.32	264908.51	138024.44
Ratio	32.81%	31.93%	55.67%	41.1%	30.43%
2006/07					
Total investment	26594.52	89453.10	135532.33	118229.85	49843.14
Total deposit	114452.86	233422.85	246470.20	300484.17	181862.53
Ratio	23.23%	38.32%	54.98%	39.34%	27.4%
2007/08					
Total investment	30888.86	99397.71	139028.19	133401.77	50595.57
Total deposit	137153.94	319150.47	297439.98	318427.89	239762.82
Ratio	22.52%	31.14%	46.74%	41.89%	21.1%
2008/09					
Total investment	132861.81	108263.79	202361.21	87106.91	59484.80
Total deposit	279572.20	373482.55	358717.21	346813.45	333229.46
Ratio	47.52%	28.98%	56.41%	25.11%	17.85%

From the above listed table, it is obvious that the ratios of total investment to total deposits in case of all banks under study have fluctuating trend through out the review period.SCBL recorded the highest ratio i.e.56.41% in the fiscal year 2008/09 among all other banks, the lowest ratio was recorded i.e. 17.85% of EBL in the fiscal year2008/09. On the basis of above ratio calculation, it can observe that both SCBL and HBL performed very good ratio than that of other banks. It means SCBL & HBL's capacity to mobilize its deposits on total investment is preferable and performed better position.

Performing Assets to the Total Assets

Performing assets for the purpose include those assets which have been invested in loans and advances; bill purchased and discounted investment and money at call .Higher ratios indicate the higher utilization of resources in relation to the total assets and yield a higher return for the banks.

Whereas non performing assets are very harmful for banks so they should try to reduce their proportion in the assets.

Performing Assets to Total Assets Ratio = $\dfrac{\text{Performing Assets}}{\text{Total Assets}}$

Table 4.10

Prforming Asssets to Total Deposit Ratio (%)

(In million)

Year/Banks	SBI	NABIL	SCBL	HBL	EBL
2004/05					
Performing assets	89446.70	157301.26	201054.52	255845.92	103176.02
Total assets	99630.21	170640.82	217816.79	288713.43	117325.16
Ratio	89.77%	92.18%	92.30%	88.61%	87.94%
2006/07					
Performing assets	116007.00	208359.77	237512.45	276562.88	140687.82
Total assets	130358.39	223299.71	257673.25	305798.08	159592.84
Ratio	88.99%	93.30%	92.17%	90.43%	88.15%
2006/07					
Performing assets	124699.02	250546.11	258170.22	313267.32	186483.95
Total assets	139012.00	272533.93	285966.89	343148.68	214325.74
Ratio	89.70%	91.93%	90.27%	91.29%	87%
2007/08					
Performing assets	155065.96	332571.84	298190.26	34038319	237446.42
Total assets	171874.46	371327.59	333357.88	368576.24	271493.42
Ratio	90.22%	89.56%	89.45%	92.35%	87.45%
2008/09					
Performing assets	284179.28	389782.00	359714.27	354010.03	298331.53
Total assets	309166.81	438673.97	405874.68	400466.86	375017.31
Ratio	91.91%	88.85%	88.62%	88.39%	79.55%

Table 10 depicts that the ratios are fluctuating trend for all the commercial banks during the study period. All the banks perform the satisfactory result that is the ratio is above 70% . The ratio of SBI ,NABIL,SCBL & NABIL is higher than EBL in all the years on study, hence these banks are in better position because of higher utilization of resources in relation to the total assets which yield higher return for the banks.

4.2.3 Profitability Ratio

Profitability ratios are calculated to measure the operating efficiency of banks. The profitability ratios indicate the present condition of the organization and state the position of firm in the market. This group consists of various ratios calculated and interpreted below.

    a. Return on total assets
    b. Return on total deposits
    c. Return on risky assets i.e. loan & advances
    d. Interest earned to total assets

Return on Total Assets

This ratio is calculated to reveal the over all operating efficiency of a firm. It indicates the earning power of the firm (here banks). It is calculated by dividing the amount of net profit by the amount of total assets. The ratio during the study period is presented below.

$$\text{Return on Total Assets} = \frac{\text{Net Profit}}{\text{Total Assets}}$$

The table 4.11 below shows the calculation current ratio of different joint venture banks under study.

Table 4. 11

Return on Total Assets (%)

(In million)

Year/Banks	SBI	NABIL	SCBL	HBL	EBL
2004/05					
Net profit	573.86	5201.14	5362.44	4574.57	1682.14
Total assets	99630.21	170640.82	217816.79	288713.43	117325.16
Ratio	0.53%	3.04%	2.46%	1.58%	1.43%
2006/07					
Net profit	1170.01	6352.62	6587.55	3082.75	2372.90
Total assets	130358.39	223299.71	257673.25	305798.08	159592.84
Ratio	0.89%	2.84%	2.55%	1%	1.48%
2006\07					
Net profit	2549.08	6739.59	6916.68	4918.22	2964.09
Total assets	139012.00	272533.93	285966.89	343148.68	214325.74
Ratio	1.83%	2.47%	2.42%	1.43%	1.38%
2007/08					
Net profit	2477.70	7464.68	8189.21	6358.68	4512.18
Total assets	171874.46	371327.59	333357.88	368576.24	271493.42
Ratio	1.44%	2.01%	2.45%	1.72%	1.66%
2008/09					
Net profit	3163.73	10310.53	10251.14	7528.34	6387.32
Total assets	309166.81	438673.97	405874.68	400466.86	375017.31
Ratio	1.02%	2.35%	2.52%	1.87%	1.70%

From the analysis, we can conclude that the ratio of various commercial banks is fluctuating. This proves that the increase in profit before tax alone is not sufficient for the consistence return on assets ratio; banks must increase their performing assets. During the reviewed period NABIL is able to maintain the highest ROA ratio among all banks with the ratio 3.04% in the fiscal year 2004/05. But the lowest ratio recorded in the fiscal year 2004/05 by SBI with the ratio of 0.59%.

The ratio of NABIL decreased for the four reviewed period but at the last review period it slightly increased. The ratio of SCBL decreased for the fiscal year 2006/07 to 2.42% but later it increased to 2.52%.

All the banks follows the fluctuating trend, this is because of its conservative lending procedure. All banks need to change its portfolio in order to increase return on assets ratio. They must all increase their performing assets in order to generate income and this helps to earn proportionately in order to achieve a healthy return on assets ratio.

Return on Total Deposits

One of the major sources of fund to the banks are from deposits and this fund has to be utilized properly in order to maximum their on deposits. Higher return on deposit signifies better utilization of deposits. The return on deposit ratio is calculated by dividing net profit by the total deposits.

Table 4.12

Return on Total Deposits (%)

(In million)

Year/Banks	SBI	NABIL	SCBL	HBL	EBL
2004/05 Net profit	573.86	5201.14	5362.44	4574.57	1682.14
Total deposit	86547.74	145866.08	93634.69	248140.11	100976.90
Ratio	0.66%	3.56%	2.76%	1.84%	1.66%
2006/07 Net profit	1170.01	6352.62	6587.55	3082.75	2372.90
Total deposit	110020.40	193473.99	230610.32	264908.51	138024.44
Ratio	1.06%	3.28%	2.85%	1.16%	1.71%
2006\07 Net profit	2549.08	6739.59	6916.68	4918.22	2964.09
Total deposit	114452.86	233422.85	246470.20	300484.17	181862.53
Ratio	2.22%	2.88%	2.80%	1.63%	1.62%
2007/08 Net profit	2477.70	7464.68	8189.21	6358.68	4512.18
Total deposit	137253.94	319150.47	297439.98	318427.89	239762.82
Ratio	1.8%	2.33%	2.75%	1.99%	1.88%
2008/09 Net profit	3163.73	10310.53	10251.14	7528.34	6387.32
Total deposit	27957.220	373482.55	358717.21	346813.45	333229.46
Ratio	1.13%	2.76%	2.85%	2.17%	1.91%

During FY 2004/05, the return on total deposit of NABIL was highest at 3.56% followed by 2.76% of SCBL.Similarly during FY 2005/06, the return on total deposit of NABIL was highest at 3.28% followed by 2.85% of SCBL. During FY 2006/07 the return on total deposit of NABIL was highest at 2.88% followed by 2.08% of SCBL . During FY 2007/08, the return on total deposit of SCBL was highest at 2.75% followed by 2.33% of NABIL.Similarly during FY 2008/09, the return on total deposit of SCBL was highest at 2.85% followed by NABIL.

The table listed above shows that the fluctuating nature of ratios over the different fiscal years. In the case of NABIL& SCBL they earned more profit than other banks by appropriate and perfect utilization of total deposits. Among all banks under study, NABIL has able to maintain high ratio i.e. 3.56% by mobilizing the total deposit properly in the productive sectors. The ratio of SBI decreased to minimum at0.66% at FY 2004/05 because of its bad loans and unsuccessful to utilize its funds in productive sectors. The ratio of NABIL is in increasing trend up to 2004/05 but after that year it fell slightly where as ratio of other banks is fluctuating. For the fiscal year 2008/09 all the ratio of banks under study are in slightly increasing trend but they are fluctuating therefore the results is not satisfactory, they need to improve its lending management and utilize the deposits properly in order to increase it's ratio. They should inspire depositors and to mobilize it to credit sector propel.

Return on Risk Assets, i.e. Return on Loan & Advances Ratio

This ratio also measures profitability of a bank, which shows the percentage of net profit against risky assets (i.e. loans and advances plus bill purchased and discounted) It can be computed by dividing net profit by risky assets. Higher the ratio better is the situation because it shows that bank is able to disburse good loans in a higher proportion.

$$\text{Return on Risk Assets} = \frac{\text{Net Profit}}{\text{Total Risk Assets}}$$

Table 4.13

Return on Risk Assets(%)

(In million)

Year/Banks	SBI	NABIL	SCBL	HBL	EBL
2004/05					
Net profit	573.86	5201.14	5362.44	4574.57	1682.14
Total Risk assets	62138.78	105861.70	81432.08	134511.68	76186.71
Ratio	0.92%	4.91%	6.58%	3.4%	2.2%
2006/07					
Net profit	1170.01	6352.02	6587.55	308275	2372.90
Total Risk assets	76263.76	129225.43	89354.18	157619.77	98013.07
Ratio	1.53%	4.91%	7.37%	1.95%	2.42%
2006/07					
Net profit	2549.08	6739.59	6916.68	4918.22	2964.09
Total Risk assets	94604.50	155457.78	105026.37	177937.24	136640.18
Ratio	2.69%	4.33%	6.58%	2.76%	2.16%
2007/08					
Net profit	2477.70	7464.68	8189.21	6358.68	4512.18
Total Risk assets	121136.98	213650.53	137185.97	201796.13	183390.85
Ratio	2.04%	3.49%	5.96%	3.15%	2.46%
2008/09					
Net profit	3163.73	10310.53	10251.14	7528.34	6387.32
Total Risk assets	151317.47	275989.33	136797.57	255195.19	238846.73
Ratio	2.09%	3.73%	7.49%	2.95%	2.67%

From the above analysis we can say that the return on risky assets of SBI, NABIL, SCBL, HBL and EBL are relatively fluctuating. In case of NABIL the ratio tend to slide down from 4.91% to 3.73% during the period of 5 years. In the case of NABIL the ratio tends to constant for the first two years then after it slides down. The ratio of HBL seems to be stable than either banks.Among all banks under the study, SCBL success to maintain high ratio in all period, which means it successful to earn more profit by mobilizing its funds in the productive sector but in the last year under study i.e. during FY 2008/09 the ratio of all banks except SCBL are in decreasing trend therefore it needs to improve their portfolio management. SBI has recorded the lowest ratio 0.92% at FY 2004/05 therefore it need to improve Its credit policy in order to increase its profit.

Finally it is concluded that the position of SCBL is better than other banks.

Interest Earned to Total Assets

This ratio measures the percentage of total interest earned against total outside assets i.e. total 'investment and loan and advances (in bill P&D). Banks main sources of income are from interest earned from loan advances and investment. Hence higher the proportion of risk assets and investment in total assets, higher the interest earned to total assets, Interest earned to total assets ratio is calculated by dividing the amount of total interest income by the total outside assets of the banks, It is shown below.

$$\text{Interest Earned to Total Assets} = \frac{\text{Total Interest Earning}}{\text{Total Risk Assets}}$$

Table 4.14

Interest Earned to Total Assets (%)

(In million)

Year/Banks	SBI	NABIL	SCBL	HBL	EBL
2004/05					
Interest earned	5783.72	10687.46	10586.77	14464.68	7192.97
Total assets	99630.21	170640.82	217816.79	288713.43	11732516
Ratio	5.8%	6.26%	4.86%	5.01%	6.13%
2006/07					
Interest earned	7087.18	13099.98	11896.02	16264.73	9034.11
Total assets	130358.39	223299.71	257673.25	305798.08	159592.84
Ratio	5.43%	5.86%	4.61%	5.31%	5.66%
2006/07					
Interest earned	8311.16	15877.58	14119.81	17755.82	11444.08
Total assets	139012.00	272533.93	285966.89	343148.68	214325.74
Ratio	5.97%	5.82%	4.93%	5.17%	5.33%
2007/08					
Interest earned	9705.12	19786.96	15911.95	19636.47	15486.57
Total assets	171874.46	371327.59	3333578.8	368576.24	271493.42
Ratio	5.64%	5.32%	4.77%	5.32%	5.7%
2008/09					
Interest earned	14604.45	27984.86	18872.21	23421.98	21868.14
Total assets	309166.81	438673.97	405874.68	400466.86	375017.31
Ratio	4.72%	6.37%	4.64%	5.84%	5.83%

From the above table, during FY 2004/05 the interest earned to total assets of NABIL is highest at 6.26% followed by 6.13%, 5.8%.,5.01% and4.86% of NABIL, HBL, and EBL respectively.

During FY 2005/06 the interest earned to total assets of NABIL is highest at 5.86% followed by 5.66%,5.43%,5.31% and 4.86% of EBL,SBI,HBL and SCBL respectively. Similarly during FY 2006/07 the interest earned to total assets of SBI is highest at 5.97% followed by 5.82%, 5.33%,5.17 and 4.13% of NABIL, EBL HBL and SCBL respectively.

During FY 2007/08 the interest earned to total assets of EBL is highest at 5.7% followed by 5.64%, 5.32%,5.32% and 4.77% of SBI,NABIL, HBL,EBL and SCBL respectively.Similarly during FY 2008/09 the interest earned to total assets of NABIL is highest at 6.37% followed by5.84%, 5.83%,4.72 and 4.64% of HBL,EBL,SBI and SCBL respectively.

Thus the analysis shows that the ratios follow the fluctuating trend among all banks under study. The NABIL has highest ratio in three fiscal year except in FY 2006/07&2007/08. The highest ratio under study is record by NABIL at 6.37% during FY 2008/09. During the Fiscal Year 2008/09NABIL,HBL&EBL banks perform increasing trend but SBI and SCBL bank perform decreasing trend therefore this shows these two banks are insufficient in earning interest or utilizing the resources in interest generating sectors.

4.2.4 Capital Adequacy Ratio

Like all the financial units or concerns, commercial banks also have to maintain sufficient amount as capital fund. Banks need to assets the strength of the capital adequacy of banks can be measured by analyzing following ratios.

   a.   Share holder's fund to total deposit ratio
   b.   Share holder's fund to total assets ratio

Shareholder's Fund to Total Deposit Ratio

This ratio shows whether commercial banks are maintaining sufficient amount as capital fund or shareholder's fund in comparison to the amount of their total deposits. It is calculated by dividing total share holder's fund by total deposits.

Table 4.15

Shareholder's Fund to Total Deposits Ratio

(In million)

Year/Banks	SBI	NABIL	SCBL	HBL	EBL
2004/05					
Shareholders fund	6890.13	17660.72	16443.61	20170.64	12475.62
Total deposit	86547.74	145866.08	193634.69	248140.11	100976.90
Ratio	7.96%	12.1%	8.49%	8.12%	12.35%
2006/07					
Shareholders fund	9823.74	20893.24	18472.42	22428.43	13913.39
Total deposit	110020.40	193473.99	230610.32	264908.51	138024.44
Ratio	8.92%	10.79%	8.01%	8.46%	10.07%
2006\07					
Shareholders fund	11632.91	23076.32	22252.84	26513.68	16761.15
Total deposit	114452.86	233422.85	246470.20	300484.17	181862.53
Ratio	10.16%	9.88%	9.02%	8.82%	9.21%
2007/08					
Shareholders fund	14146.45	29987.30	26309.02	32535.16	24060.56
Total deposit	137153.94	319150.47	297439.98	318427.89	239762.82
Ratio	10.34%	9.39%	8.84%	10.12%	10.03%
2008/09					
Shareholders fund	17126.07	37270.82	3190367	38452.11	27038.70
Total deposit	279572.20	373482.55	35871721	346813.45	333229.46
Ratio	6.12%	9.97%	8.89%	10.71%	8.11%

On the basis of above table, we can conclude that during FY 2004/05 EBL has the highest ratio at 12.35% followed by 12.1%, 8.49%,8.12% and 7.96% of NABIL,SCBL, HBL and SBI respectively .Similarly during FY 2005/06 NABIL has the highest ratio at10.79% followed by 10.07% ,8.92%.

The ratio of all the banks under study is in fluctuating trend through out the study period. The lowest ratio recorded in the FY 2008/09 by SBI with the ratio of 6.12%.

Finally except two years study period of SBI bank all the banks have ratio above than 8%.So conclusion can be drawn that NABIL,SCBL,HBL and EBL have performed satisfactory results regarding the shareholder's funds to total deposit. Finally SBI bank need to add more funds for maintaining sufficient amount of shareholder's fundsin comparison to the amount of total deposits.

Shareholder's Fund to Total Assets Ratio

It is very essential for every financial institution to have a balance of required percentage of total assets as shareholder's fund i.e. Capital fund, shareholder's fund to assets ratio measures the relative claims of owners of the bank over the bank's assets. A high ratio generally indicates that out of total assets, shareholders have more controlled onward and command vice versa.

Table 4.16
Shareholder's Fund to Total Assets Ratio(%)

(In million)

Year/Banks	SBI	NABIL	SCBL	HBL	EBL
2004/05					
Shareholders fund	6890.13	17660.72	16443.61	20170.64	12475.62
Total assets	99630.21	170640.82	217816.79	288713.43	117325.16
Ratio	6.91%	10.34%	7.54%	6.98%	10.63%
2006/07					
Shareholders fund	9823.74	20893.24	18472.42	22428.43	13913.39
Total assets	130358.39	223299.71	257673.25	305798.08	159592.84
Ratio	7.53%	9.35%	7.16%	7.33%	8.71%
2006/07					
Shareholders fund	11632.91	23076.32	22252.84	26513.68	16761.15
Total assets	139012.00	272533.93	285966.89	343148.68	214325.47
Ratio	8.36%	8.46%	7.78%	7.72%	7.82%
2007/08					
Shareholders fund	14146.45	29987.30	2630902	32535.16	24060.56
Total assets	171874.46	371327.59	333357.88	368576.24	271493.42
Ratio	8.23%	8.07%	7.89%	8.82%	8.86%
2008/09					
Shareholders fund	17126.07	37270.82	31903.67	38542.11	27038.70
Total assets	309166.81	438673.97	405874.68	400466.86	375017.31
Ratio	5.53%	8.49%	7.86%	9.62%	7.20%

The above table shows that all ratios of banks under study are in fluctuating trend. The ratio of EBL seems to be highest among all the banks during FY 2004/05 at 10.63%. The ratio of EBL follows decreasing trend in the first two fiscal year but in the fiscal year 2007/08 it has been success to increase the ratio rather than its preceding years and again it decreased.

All the ratio of NABIL bank are greater than 8% so this bank performed better result than otherbank.Beside the ratio recorded in FY 2004/05,2005/06 and 2006/07 by EBL, 2007/08and2008/09 by HBL and 2009/07 and 2007/08 by SBI all the ratios are below 8% hence it concludes that the banks need to add more shareholders' funds for maintaining sufficient amount of shareholder's fund.

SBI performed lowest ratio among all banks. On comparing to these banks under shareholder to assets ratio only NABIL bank is in satisfactory level while other needs to add more shareholder funds.

4.3 Trend and Relationship Analysis

Growth rate represents how well the commercial banks are maintaining their economic and financial position. The growth rate of total assets and total liabilities of each bank under study are calculated in order to find out financial performance of banks under study. Here those growth rates are calculated which significantly shows the capital and assets structure of concerned banks. The growth rate can be calculated by using following formula;

$$Dn = Do \ (\ 1 + g)^{n-1}$$

Where,

Dn = Total amount in 2008/09.

Do= Total amount in year 2004/05.

g= growth rate

n= number of year of study.

Table 4.17

Growth Rates of Total Deposits(%)

(In million)

Banks	Fiscal Years					Growth ratio (%)
	2004/05	2005/06	2006/07	2007/08	20008/9	
SBI	86547.74	110020.40	114452.86	137153.94	279572.20	34.06%
NABIL	154866.08	193473.99	233422.85	319150.47	373482.55	26.49%
SCBL	193634.69	230610.32	246470.20	297439.98	358717.21	16.66%
HBL	248140.11	264908.51	300484.17	318427.89	346813.45	8.72%
EBL	100976.90	138024.44	181862.53	239762.89	333229.46	34.78%

Source: Appendix VI

The above table 4.17 shows comerative growth rate of total deposit of five banks.The growth ratio of EBL is higher with 34.79% thanSBI,NABIL,SCBL and HBL whch are 34.06%,26.49%,16.66% and 8.27%.This conclude that EBL performance in collecton of deposit is better year by year in comparision to other bank.

The SCBL and HBL have low growth rate while comparing to the rest three banks under study. It indicates poor performance to collect deposits during the study period. HBL has growth rate of 8.72% which is lowest growth rate while EBL has highest growth rate of 34.79% therefore it need to manage properly on SCBL and HBL to Collect more Deposit for better utilization of funds.

Table 4.18

Growth Rates of Total Performing Assets (%)

(In million)

Banks	Fiscal Years					Growth ratio (%)
	2004/05	2005/06	2006/07	2007/08	2008/09	
SBI	89446.70	116007.11	124699.02	155065.96	284179.28	25.46%
NABIL	157301.26	208359.77	250546.11	332571.84	389782.00	33.50%
SCBL	201054.52	237512.54	258170.22	298190.26	359714.27	15.65%
HBL	255845.92	276562.88	313267.32	340383.19	354010.03	8.45%
EBL	103176.02	140687.82	186483.95	237446.42	298331.53	30.39%

Source: Appendix VI

The above table 4.18 shows the competitive growth rates of totel performing assets.The banks should try to reduce their proportion in the assets. The growth rate of performing assets by NABIL is highest among all banks under study. It indicate that NABIL has success to collect more deposits and able to invest more in profitable sectors. The growth rate of EBLand SBI is also satisfactory on comparing it with growth rate of NABIL but Growth rate of SCBL and HBL seem very lower while comparing it with growth rate of EBL.

Finally it can be concluded that SCBL and HBL have failed to maintain higher growth rate on total deposit and total performing assets. NABIL, EBL and SBI have been success to increase its total deposit and total performing assets at higher rate. Thus all banks should emphasize on improving performance in terms of collecting deposits, increase its rates of loan and advances, bill purchases and total investment.

4.4 Statistical Analysis

Under this chapter, the calculation of coefficient of correlation, calculation of trend analysis, calculation of standard deviation, calculations of probable error are applied on statistical to achieve the objectives of study.

Coefficients of Correlation Analysis

In several mathematical method of measuring correlation the Karl person's method, popularly known as Personian coefficient of correlation is most widely used in practice. The Personian coefficient of correlation is denoted by the symbol r.

Coefficient of Correlation between Total Deposit and Total Investment

The main function of a commercial bank is the collection of deposits and the efficient utilization of the deposits collected. Deposit collection shows a bank's efficiency in performance and reliability and efficient utilization of the same indicates its success and profitability as well as service orientation. Banks have to pay high interest on deposits and also pay dividends to their shareholders. So earning more and more interest through deposit utilization is very crucial task of banks.

In correlation analysis of total deposits and total investments, total deposit is independent variable (x) and total investment is dependent variable (y). The main purpose of computing correlation of coefficient is to justify whether there is any relation between these two variables.

To find out the correlation various calculations are made for the reason (detailed in appendix –1). The following table shows the coefficient of correlation between total deposit and total investment i.e. PEr, 6PEr and coefficient of determination (r^2) of commercial banks during the study period.

<div align="center">

Table 4.19

Coefficient of Correlation Analysis between Total Deposit and Total Investment

</div>

Banks/Evaluation	r	r^2	PEr	6PEr
SBI	0.9965	0.9930	0.00214	0.0128
NABIL	0.8781	0.7710	0.0702	0.4212
SCBL	0.9508	0.9040	0.02943	0.1765
HBL	-0.3313	0.1097	0.27295	1.6377
EBL	0.8715	0.75950	0.07373	0.4423

Source: Appendix I

From the above table it is concluded that that coefficient of correlation between Total deposit and total investment which is denoted by the symbol "r" has a value range from –0.3313 to 0.9965. The value of SBI, NABIL, SCBL and EBL is greater than zero thus these banks have positive relation between its independent variable (total deposit) and dependent variable (total investment) i.e. if the increase (or decrease) in the value of Total deposit results the increase (or decrease) in the value of total investment. The value of only HBL has negative coefficient of correlation (r) –0.3313 which identify both the variables move in opposite direction.

However by the application of coefficient of determination, the value of r^2 range from 0.1097 to 0.9930, which means that 10.97% and 99.3% of the total change in dependent

variable (total investment) is due to the effect of independent variable (total deposits) with respect to HBL and EBL.

Moreover, by considering the probable error the value of r i.e. 0.9930 is greater than six times of PEr i.e. 0.0128, we can say that the value of "r" is significant i.e. there is significant relationship between total deposits and total investment in the case of HBL.
 The coefficient of correlation of NABIL, SCBL, and EBL i.e.0.8781, 0.9508, 0.8715is greater than six times of PEr i.e0.4212, 0.1765, and 0.4423, we can say that the value "r" is significant i.e. there is significant relationship between total deposits and total investment.

The coefficient of correlation of HBLi.e-0.3313 is lower than six times of probable error i.e. 1.6377 which means that value of r is not significant with a relationship between total deposits and total investment.

Finally it can be concluded that SBI, NABIL, SCBL EBL have performed positive correlation with a closer value to 1 and the value of r is also more than six times of probable error which means that these banks had efficiently utilized their deposits on investment. On comparing to these banks under study SBI perform better position because of its higher correlation and determination values than others.

Further HBL needs to improvement in its strategy for the better utilization of its deposits on investment for maximizing the profits.

Table 4. 20

Coefficient of Correlation Analysis between Performing

Assets and Total Deposits

Banks/Evaluation	r	r^2	PEr	6PEr
SBI	0.9969	0.9938	0.0019	0.0114
NABIL	0.9997	0.9994	0.00018	0.00108
SCBL	0.9986	0.9972	0.00085	0.0051
HBL	0.9901	0.9802	0.00607	0.0364
EBL	0.9941	0.9882	0.00361	0.0216

Source: Appendix II)

From the above table it concluded that that coefficient of correlation between Total deposit and total performing assets which is denoted by the symbol "r" has a value range from 0.99011 to 0.9997. The value of SBI, NABIL, SCBL, HBL and EBL is greater than zero thus these banks have positive relation between its independent variable (total deposit) and dependent variable (total performing assets) i.e. if the increase (or decrease) in the value of Total deposit results the increase (or decrease) in the value of total performing assets. However by the application of coefficient of determination, the value of r^2 range from 09802 to 0.9994, which means that98.02% and 99.4% of the total change in dependent variable (total performing assets) is due to the effect of independent variable(total deposits) with respect to EBL and NABIL. Moreover, by considering the probable error the value of r i.e. 0.9997 is greater than six times of PEr i.e. 0.00108, we can say that the value of "r" is significant i.e. there is significant relationship between total deposits and total performing assets in the case of NABIL. The coefficient of correlation of SBI, SCBL, HBLand EBLi.e. 0.9969, 0.9986, 0,9909 and 0.9941 is greater than six times of probable error i.e. 0.0114, 0.0051, 0.0364,and 0.0216 which means that value of risk significant with a relationship between total deposits and total performing assets.

Finally it can be concluded that all banks have performed positive correlation with a closer value to 1 and the value of r is also more than six times of probable error which

means that these banks have efficiently utilized their deposits on performing assets. On comparing to these banks under study NABIL perform better position because of its higher correlation and determination values than others.

Calculation of Trend Values

Under this topic, an effort has been made to calculate, analyze, and interpretation of the trend values of net profit of certain joint venture banks under study i.e.SBI, NABIL, SCBL,HBL,EBL respectively for 5 years from mid July 2005 to 2009. Similarly, forecastst for next 5 years till 2014.

The trend values of 10 years from mid July 2005 to 2014 of commercial banks (detail I) are in appendix tabulated below.

Table 4.21

Trend Values of Net Profit (2005 to 2014)

(in million)

Bank Fiscal year	SBI	NABIL	SCBL	HBL	EBL
2005	689.39	4947.54	5184.79	3468.21	1273.79
2006	1338.13	6080.62	6323.09	4386.56	2428.76
2007	1986.87	7213.71	7461.40	5304.91	3583.72
2008	2635.61	8346.79	8599.71	6223.25	4738.69
2009	3284.36	9478.88	9738.01	7141.60	5893.65
2010	3933.10	10612.96	10876.96	8059.92	7048.61
2011	4581.84	11746.04	12014.62	8978.30	8203.58
2012	5230.58	12879.13	13152.93	9896.64	9358.55
2013	5879.32	14012.21	14291.24	10814.99	10513.51
2014	6528.06	15124.30	15429.54	11733.34	11668.47

Source: Appendix IV

Figure 4.6

Trend Values of Net Profit (2005 to 2014)
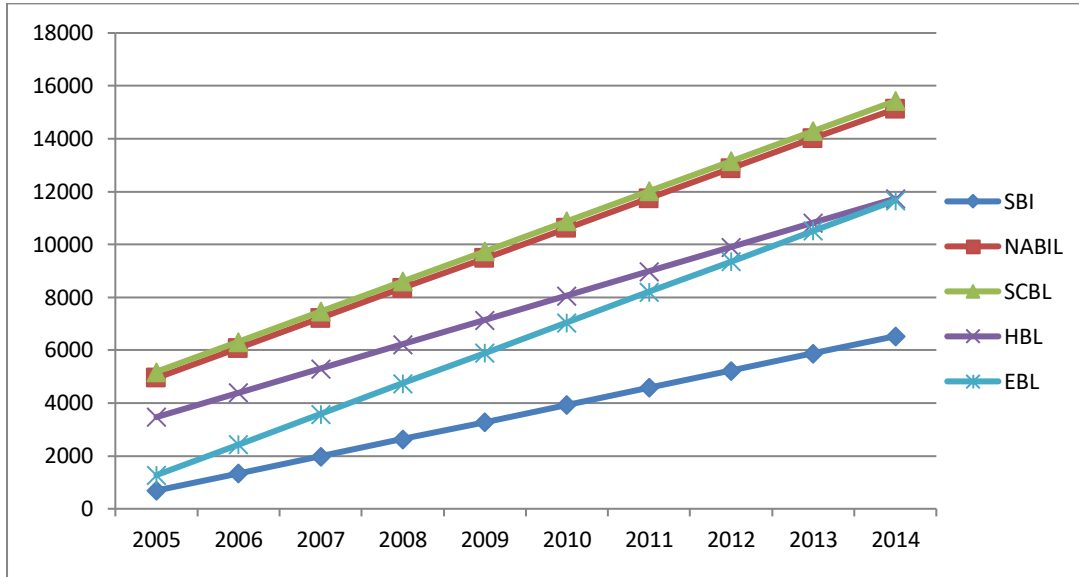
From the above table we can conclude that the Net Profit of EBL has been increasing by 1154.96 million every year followed by 1138.3 million, 1133.08 million, 918.34 million and 648.74 million of SCBL, NABIL, HBL and SBI respectively.

The expected net profit of all joint venture banks under study is in increasing trend but the growth rate of trend of net profit of EBL was highest. Though growth rate of EBL is highest the value of SCBL will be highest at 2014. The trend value recorded in mid July 2014 will be 15429.54 million which is the highest under the study period. The NABIL also follows the profit as the figure of SCBL. During the year 2014 NABIL will have a profit of 15124.3 million which is very close to 15429.54 million of SCBL. According to above trend analysis and from growth rate it can be concluded that EBL seem to be in good position while SCBL, NABIL, HBLand SBI are in satisfactory position.

Table 4.22

Trend Values of Total Deposit (2005 to 2014)

(In Million)

Bank / Fiscal year	SBI	NABIL	SCBL	HBL	EBL
2005	62912.93	136897.20	203075.54	245581.61	85522.53
2006	104231.18	194988.19	243225.01	270668.22	142146.88
2007	145549.42	253079.18	283374.48	295754.82	198771.24
2008	186867.67	311170.18	323523.95	320841.43	255395.60
2009	228185.92	369261.17	363673.42	345928.02	312019.95
2010	269504.16	427352.16	403822.89	371014.63	368644.31
2011	310822.412	485443.15	443972.36	396101.25	425168.67
2012	352140.66	543534.15	484121.83	421187.85	481893.02
2013	393458.90	601625.14	524271.30	446274.46	538517.386
2014	434777.15	659716.13	564420.77	473161.06	595141.74

Source: Appendix V

Figure 4.7

Trend Values of Total Deposit (2005 to 2014)
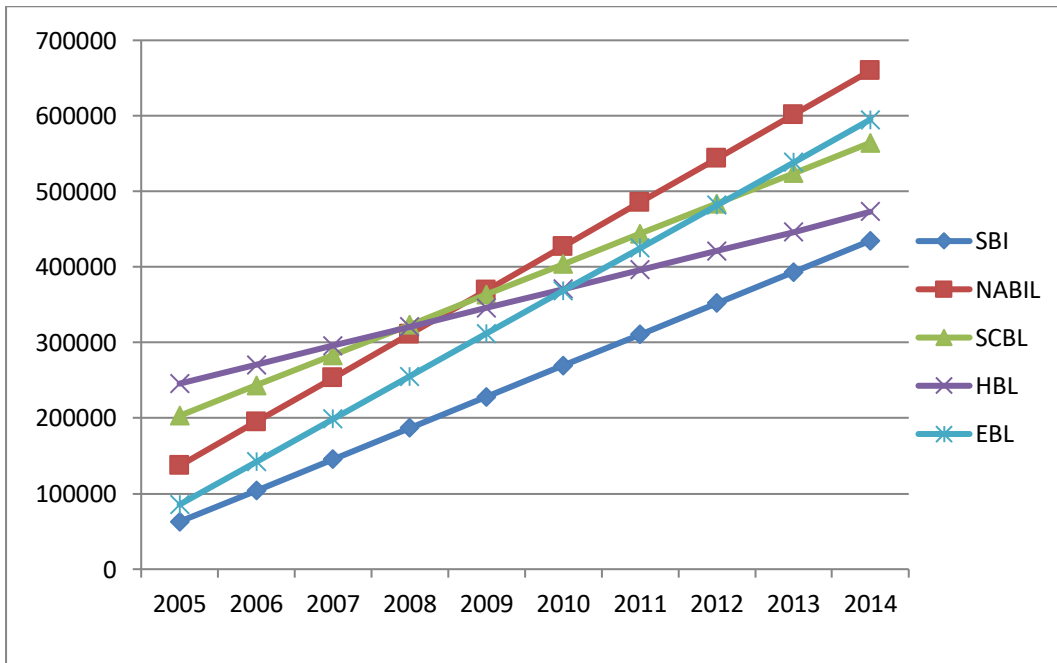
From the above table we can conclude that the total deposit of NABIL has been increasing by 58090.99 million every year followed by 56624.35 million,41318.24

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million,40149.47million and 25086.6million of EBL,SBI,SCBL and HBL respectively.The expected total deposit of all joint venture banks under study is in increasing trend but the growth rate of trend of total deposit of NABIL was highest. The trend value recorded in mid July 2014 will be 659716.13 million which is the highest under the study period.

The EBL also follows the profit as the figure of NABIL. During the year 2014 EBL will have a profit of 595141.74 million which is close to 659716.13 million of NABIL. According to above trend analysis and from growth rate it can be concluded that NABIL and EBLL seem to be in good position while others are in satisfactory position.

Table 4.23

Trend Values of Total Credit (2005 to 2014)

(in million)

Bank Fiscal Year	SBI	NABIL	SCBL	HBL	EBL
2005	56448.21	91100.88	78246.68	128303.32	64476.07
2006	78770.71	133568.91	94102.95	156857.66	105545.85
2007	101093.21	176036.95	109959.23	185441.2	146615.63
2008	123415.71	218504.99	125815.51	213956.34	187685.41
2009	145738.21	260978.02	141671.78	242520.68	228755.19
2010	168060.71	303495.06	157528.06	271075.01	269824.98
2011	190383.71	345981.09	173384.31	299629.35	310894.76
2012	212705.71	388467.13	189240.91	328183.69	351964.54
2013	235028.21	430953.17	205096.89	356738.03	393034.32
2014	257350.71	473439.20	220953.17	385292.37	434104.11

Source: Appendix V

Figure 4.8

Trend Values of Total Credit (2005 to 2014)
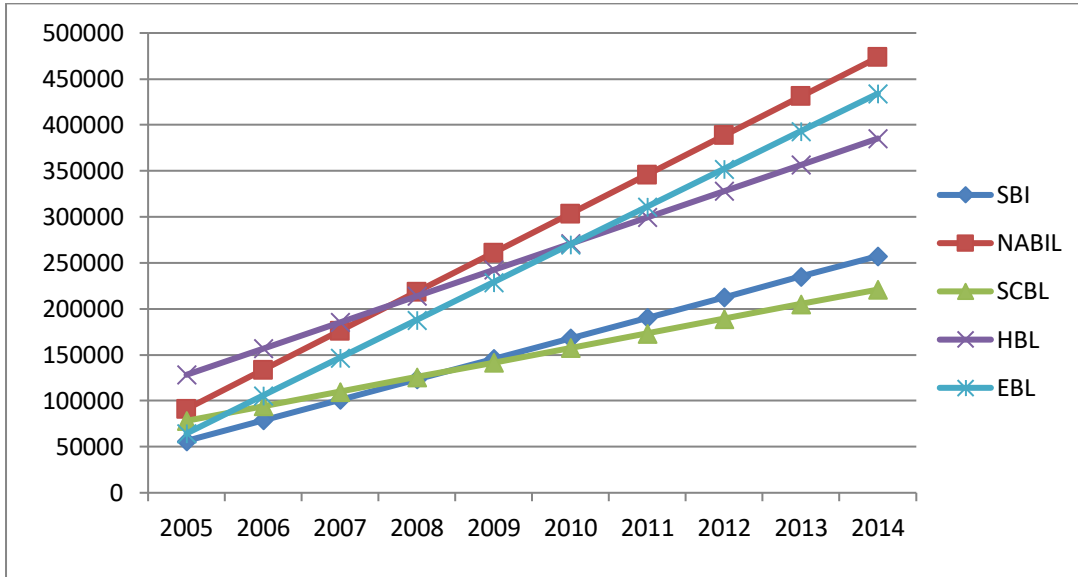
From the above table we can conclude that the total credit of NABIL has been increasing by 42486.036 million every year followed by 41069.78 million, 28554.33 million, 22322.51 million and 15856.27million of EBL, SCBL, SBIand HBL respectively.

The expected Total credit for the fiscal year 2004/05 subject to the current trend, was highest at128303.32 million of HBL followed by91100.88 million,78246..68 million 64476..07 million and56448.21 million of NABIL,SCBL, EBL and SBI but from the fiscal year 2005to 2014 the rend value of total credit is highest of NABIL than others. It is because of its more increasing rate.

From the above analysis we can conclude that NABIL and EBL has a very good growth rate42486.036 million and 41069.78 million annually. NABIL has got the highest growth rate so during the reviewed period expected total credit of NABIL will be highest. The growth rate of SCBL,SBI and EBL is in satisfactory level.

4.5 Major Findings

The major findings of the study are presented below:

Deposit Analysis

In the fiscal year 2004/05 we can conclude that total deposit of HBL is higher than others, therefore HBL has more funds to make it utilize. The non interest bearing deposits of HBL i.e. current deposit and margin deposit is more than others.

In the fiscal year 2005/06 it is quite clear that HBL has more funds to make it utilize to earn profit.

In the fiscal year 2006/2007 it is concluded that HBL has more deposit than others. NABIL had more non interest bearing deposits i.e. Current deposit and Margin Deposit while HBL contained more interest bearing deposits i.e. Saving Deposit and Call Deposit. So it has more funds to make it utilize to earn profit.

During the FY 2007/08 NABIL had the highest interest bearing deposits at 26187421 thousand. Similarly as above, Current and Margin Deposit are termed as a non-interest bearing deposit. During FY 2007/08 NABIL had the highest deposit at31915047 thousand. Thus it has more funds to utilize for maximization of profit.

In the fiscal year 2008/09 the total Deposit of NABIL is more than other banks thus it has more funds to utilize for maximization of profit.

Finally from the deposit analysis it may be concluded that both the NABIL and HBL perform best in collecting the total deposits thus they could get profit by mobilizing their deposits in productive sector.

Financial Analysis (Ratio Analysis)

a. Liquidity Ratio

The current ratios of each commercial bank are more than one except SCBL for the FY2005/06 but later on SCBL also improves its position. Thus in most of the case current

assets of each commercial banks has contained more than its current liabilities. It indicates that all commercial banks under the study are capable to pay their current obligations. The highest ratio pointed at 3.02 of SCBL during the FY 2004/05.Though the idle standard of the current ratio is 2:1 but   the banks under study can't perform that standard in all study year. The banks contained more current assets than current liabilities these banks are readiness to serve its consumers deposits.

It may be concluded from analysis that the cash and bank balance position with respect to total deposit has better performance in the case of HBL, SCBL,NABIL and EBL due to readiness to serve its consumer deposit than SBI bank. In contrast, a high ratio of cash and bank balance may be inappropriate which may indicate that the bank has burden more idle money. Thus in case of HBL,SCBL,NABILand EBL, they could invest Their more idle cash balance to more productive sector i.e. in marketable securities, treasury bills etc. for improving their profitability position.

b. Activity Based Ratio

SBI seems to be successful to maintain highest credit ratio in the fiscal year 2007/08 i.e. 88.3%. The deposit utilization ratio of EBL, NABIL and SBI is also seemed to be satisfactory as compared to other banks in study. Thus analysis reveals that SCBL seems to be slightly weak to mobilize its total deposit as loan and advances hence these banks need to mobilize their deposits in most secure loans.

It is obvious that the ratios of total investment to total deposits in case of all banks under study have fluctuating trend through out the review period. SCBL recorded the highest ratio in the fiscal year 2008/09 among all other banks, the lowest ratio was recorded i.e. 17.85% of EBL in the fiscal year2008/09. On the basis of above ratio calculation, it can observe that both SCBL and HBL performed very good ratio than that of other banks. It means SCBL & HBL's capacity to mobilize its deposits on total investment is preferable and performed better position.

Performing assets to total deposit ratio of all the banks under study the ratios are in fluctuating trend for all the commercial banks during the study period. All the banks

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perform the satisfactory result that is the ratio is above 70%. The ratio of SBI ,NABIL,SCBL & NABIL is higher than EBL in all the years on study, hence these banks are in better position because of higher utilization of resources in relation to the total assets which yield higher return for the banks.

c. Profitability Ratio

During the reviewed period NABIL is able to maintain the highest ROA ratio among all banks with the ratio 3.04% in the fiscal year 2004/2005. But the lowest ratio recorded in the fiscal year by SBI with the ratio of 0.59%.The ratio of NABIL decreased for the four reviewed period but at the last review period it slightly increased.

All the banks follows the fluctuating trend, this is because of its conservative lending procedure. All banks need to change its portfolio in order to increase return on assets ratio. They must all increase their performing assets in order to generate income and this helps to earn proportionately in order to achieve a healthy return on assets ratio.

Among all banks under study, NABIL has been able to maintain high return on total deposit ratio i.e. 3.59 the total deposit properly in the productive sectors. The ratio of SBI decreased to minimum at0.66% at FY 2004/05 because of its bad loans and unsuccessful to utilize its funds in productive sectors. The ratio of NABIL is in increasing trend up to 2004/05 but after that year it fell slightly where as ratio of other banks is fluctuating. For the fiscal year 2008/09 all the ratio of banks under study are in slightly increasing trend but they are fluctuating therefore the results is not satisfactory, they need to improve its lending management and utilize the deposits properly in order to increase it's ratio. They should inspire depositors and to mobilize it to credit sector propel.

From the above analysis we can say that the return on risky assets of SBI, NABIL, SCBL, HBL and EBL are relatively fluctuating. In case of NABIL the ratio tend to slide down from 4.91% to 3.73% during the period of 5 years. In the case of NABIL the ratio tends to constant for the first two years then after it slides down. The ratio of HBL seems to be stable than either banks.

Among all banks under the study, SCBL success to maintain high ratio in all period, which means it successful to earn more profit by mobilizing its funds in the productive sector but in the last year under study i.e. during FY 2008/09 the ratio of all banks except SCBL are in decreasing trend therefore it needs to improve their portfolio management. SBI has recorded the lowest ratio 0.92% at FY 2004/05 therefore it need to improve Its credit policy in order to increase its profit. Finally it is concluded that the position of SCBL is better than other bank.

The analysis shows that the ratios follow the fluctuating trend among all banks under study. The NABIL has highest ratio in three fiscal year except in FY 2006/07&2007/08. The highest ratio under study is record by NABIL at 6.37% during FY 2008/09. During the Fiscal Year 2008/09NABIL, HBL&EBL banks perform increasing trend but SBI and SCBL bank perform decreasing trend therefore this shows these two banks are insufficient in earning interest or utilizing the resources in interest generating sectors.

 Capital Adequacy Ratio
 The ratio of all the banks under study is in fluctuating trend through out the study period. The lowest ratio recorded in the FY 2008/09 by SBI with the ratio of 6.12%.

Finally except two years study period of SBI bank all the banks have ratio above than 8%.So   conclusion can be drawn that NABIL,SCBL,HBL and EBL have performed satisfactory results regarding the shareholder's funds to total deposit. Finally SBI bank needs to add more funds for maintaining sufficient amount of shareholder's funds in comparison to the amount of total deposits.

The ratios of all the banks under study are in fluctuating trend. The ratio of EBL seems to be highest among all the banks during FY 2004/05 at 10.63%and SBI performed lowest ratio among all bank.

Beside the ratio recorded in FY 2004/05,2005/06 and 2006/07 by EBL, all the ratios are below 8% hence it concludes that the banks need to add more shareholders' funds for maintaining sufficient amount of shareholder's fund.

All the ratio of NABIL bank are greater than 8% so this bank performed better result than other bank. On comparing to these banks under shareholder to assets ratio only NABIL bank is in satisfactory level while other needs to add more shareholder funds.

Finally it may conclude that capital adequacy position of NABIL seems tbe better than other banks under study.

3. Statistical Analysis
Growth Model

The total deposit of each banks under study are in increasing trend that's why all the banks have positive growth rate on calculation.

The growth ratio deposit of EBL is higher with 34.79% than This conclude that EBL performance in collection of deposit is better year-by-year in comparison to other bank. The SCBL and HBL have low growth rate while comparing to the rest three banks under study. It indicates poor performance to collect deposits during the study period. HBL has growth rate of 8.72% which is lowest growth rate while EBL has highest growth rate of 34.79% therefore it need to manage properly on SCBL and HBL to Collect more Deposit for better utilization of funds.

The banks should try to reduce their proportion in the assets. The growth rate of performing assets by NABIL is highest among all banks under study. It indicate that NABIL has success to collect more deposits and able to invest more in profitable sectors. The growth rate of EBL and SBI is also satisfactory on comparing it with growth rate of NABIL but Growth rate of SCBL and HBL seem very lower while comparing it with growth rate of EBL.

Finally it can be concluded that SCBL and HBL have failed to maintain higher growth rate on total deposit and total performing assets. NABIL, EBL and SBI have been success to increase its total deposit and total performing assets at higher rate. Thus all banks should emphasize on improving performance in terms of collecting deposits, increase its rates of loan and advances, bill purchases and total investment.

a. Calculation of Coefficient of Correlation

Except HBL the coefficient of correlation of all the banks under study are greater than six times of probable error which means that value of r is significant with a relationship between total deposits and total investment. Finally it can be concluded that except HBL all the bank had performed positive correlation with a closer value to 1 and the value of r is also more than six times of probable error which means that SBI NABIL SCBL and EBL has efficiently utilized their deposits on investment. On comparing to these banks under study SBI preformed better position because of its higher correlation and determination values than others. Further HBL needs to improve in its strategy for better utilization of its deposit on investment for maximizing the profit.

The correlation between total deposit and total performing assets in case of all the banks under study have found that value of "r" is greater than six times of probable error which means that value of r is significant with a relationship between total deposit and total performing assets. Finally it can be concluded that all banks under study have performed positive correlation with a closer value to 1 and the value of r is also more than six times of probable error which means that these banks have efficiently utilized their deposits on performing assets. On comparing to these banks under study NABIL performed better position because of its higher correlation and determination values than others.

b. Trend Analysis

The expected net profit of all joint venture banks under study is in increasing trend but the growth rate of trend of net profit of EBL was highest. Though growth rate of EBL is highest the value of SCBL will be highest at 2014. The trend value recorded in mid July 2014 will be 15429.54 million which is the highest under the study period.

According to above trend analysis and from growth rate it can be concluded that EBL seem to be in good position while SCBL, NABIL, HBLand SBI are in satisfactory position.

The expected total deposit of all joint venture banks under study is in increasing trend but the growth rate of trend of total deposit of NABIL was highest. The trend value

recorded in mid July 2014 will be 659716.13 million which is the highest under the study period.

The EBL also follows the profit as the figure of NABIL. During the year 2014 EBL will have a profit of 595141.74 million which is close to 659716.13 million of NABIL. According to above trend analysis and from growth rate it can be concluded that NABIL and EBL seem to be in good position while others are in satisfactory position.

The expected total credit of all the joint venture banks under study is in increasing trend but the growth rate of total credit of NABIL was highest. The trend value recorded in the mid July 2014 will be 473439.20 which is highest under the study period.

The EBL also follows the credit as the figure of NABIL. During the year 2014 EBL will have a profit of 434104.11million which is close to473439.20 million of NABIL. According to above trend analysis and from growth rate it can be concluded that NABIL and EBL seem to be in good position while others are in satisfactory position.

CHAPTER - V
SUMMARY, CONCLUSION AND REOMMENDATIONS

5.1 Summary

As per Commercial Bank Act 2031 "A commercial bank means bank which deals in exchanging currency, accepting deposits, giving loans and doing commercial transaction". Commercial bank came into existence mainly with the objectives of collecting the idle funds, mobilizing then into productive sector and causing an over all economic development. The commercial banking in Nepal started from 1937 AD (30th Baisakh 1994 BS) with the establishment of Nepal Bank limited.

With an objective to enhance efficiency, healthy competition and quality banking service by introduction foreign investment and technology in banking sector. With the opening of NABIL bank in1984 the door of opening commercial banks was opened to the private sector. At present there are 30 commercial banks, 63 development banks, 52 institute and 35 co-operative banks. They all have got their own rules and regulations and own vision but ultimately they are serving nation to build huge financial resources and mobilizing it in the best possible way.

Liabilities and assets structure management is the primary focus of funds management today. The essence of capital and assets structure management is co-ordination of the inter relation between the sources and uses of funds in the short-term financial planning and decision banking. The assets liabilities management of the commercial banks are not satisfactory to the present requirements. Thus to analyze the components of balance sheet has permanent importance. One of the measuring rod to judge the overall performance of bank is to analyze its balance sheet components i.e. assets and liabilities. In this study it has been tried to describe the structure of assets and liabilities of joint venture banks in Nepal. The specific objectives of this study are to assist the liabilities and assets structure of Joint venture banks, to examine the utilization of assets, to evaluate the trend of deposits and loans of joint venture banks in Nepal, to evaluate the liquidity, profitability, capital structure activity and capital adequacy position of joint venture banks in Nepal.

There are seven joint venture banks operating in Nepal. Because of time and resources constraints, the study is only confined to five of them. Similarly, financial statements of five years (beginning from 2004/05 to 2008/09) are selected as samples for the purpose of same.

They are:
1. Nepal SBI Bank Limited
2. NABIL (Nepal Arab Bank Limited)
3. Standard Chartered Bank Limited
4. Himalayan Bank Limited
5. Everest Bank Limited

Financial Analysis is the process of identifying the financial strengths and weakness of the firm by properly establishing relationships between the items of balance sheet and profit and loss account. Ratio analysis is a powerful tool of financial analysis. A ratio is defined as "the indicated quotient of two mathematical expressions" and "as the relationship between two things". In financial analysis a ratio is used as a benchmark for evaluating the financial. Management is interested in evaluating every aspect of firm's performance. They have to protect the interests of all parties and see that the firm grows profitability. In view of the requirement of various users of ratios we may classify them into following four groups.
1. Liquidity Ratio
2. Capital Adequacy Ratio
3. Activity Ratio
4. Profitability Ratio

Statistics is a body of methods of obtaining and analyzing data in order to base decision on them. It is a branch of scientific method used in dealing with phenomena that can be described numerically either by counts or by measurements. This study is basically based on descriptive research and "Descriptive research is a fact finding operation searching for adequate information. It is a type of survey study, which is generally conducted to assets

the opinions, behaviors or characteristics of a given population and to describe the situation and events occurring at present".

Some statistical and financial tools have been applied to examine the facts and descriptive techniques have been adopted to evaluate the structure of commercial banks. After completion of the basic analysis required for the study, the final and most important task of the researcher is to enlist findings issue and gaps of the study and give suggestions for further improvement. The main objectives of this research are not only point out faults and errors but also to provide sound directions for further improvement.

5.2 Conclusion

Commercial banks have proved as resources for achieving rapid economic development of any country. Being a soul of the economic development, Nepalese commercial banks face several problems related to maintain efficient capital and assets structure management. They are still working under traditional approach. They need to achieve innovative approach of banking, thereby, bringing professionalism in their business. It is better for commercial banks to follow above suggestions. They can certainly have better achievement to the modern innovative and competitive banking scenario.

5.3 Recommendation

Financial picture of SBI, NABIL,SCBL HBL and EBL are assessed above. Some valuable suggestions and recommendations can be put forward on the basis of findings and financial pictures to overcome weaknesses and inefficiency and to improve present financial performance of the same.

From the deposit analysis it may be concluded that both the NABIL and HBL perform best in collecting the total deposits thus they could get profit by mobilizing their deposits in productive sector. The total Deposit of EBL seems to be much lower as compared to Total Deposit of HBL and NABIL therefore it need to increase its funds and make it utilize in the market. Though the total deposit of NABIL is more than EBL its growth rate is lower than EBL which identify that EBL get success to collect deposits.

To overcome this situation, these banks are recommended to;

    1. Simplify present complicated and lengthy depositing process.

    2. Set a more convenient minimum balance requirement to open an account.

    3. Provide incentives for attracting new fixed depositors.

In contrast, a high ratio of cash and bank balance may be inappropriate which may indicate that the bank has burden more idle money. Thus in case of HBL,SCBL.NABIL and EBL, they could invest their more idle cash balance to more productive sector i.e. in marketable securities, treasury bills etc. for improving their profitability position.

Highly fluctuating current ratios of commercial banks under study show that they have not formulated any stable policy to maintain their liquidity position thus these banks are recommended to invest more funds in government securities instead of keeping them idle because investment in government securities i.e. treasury bonds, development bonds and saving certificate are free of risk and highly liquid in nature.

It is find out that SCBL get failed to utilize their funds in loans and advance but it get success to utilize their funds in investment .The largest items of the bank in the assets side is loan and advances. Negligence in administering these assets could be the main cause of equality crisis in the bank and one of the main reasons of bank failure.

To overcome this situation, commercial banks are strongly recommended;

    1. To follow liberal policy.

    2. To develop a special investment promotion unit for seeking new profitable investment opportunities and identifying promising small entrepreneurs lacking any contact and approach.

a.They should be liberal in Granting Mid Term Loans

From the analysis of Profitability ratio it is concluded that the position of NABIL is better than other banks, thus other banks need to invest its funds in more profitable areas to generate more profit than NABIL.

Commercial banks should operate new branches in non-representing urban areas for more deposits collection and more utilization of the funds as well as to increase their transactions and to provide financial services and facilities to more customers.

b. To activate and Encourage Foreign Investor

Among various objectives with which government has permitted to operate joint venture banks in Nepal is to boost foreign investment. Therefore they are commended to activate for increasing foreign investment in Nepal by means of their wide international banking network advanced management techniques.

None of these banks have above 8% capital fund. Hence these banks need to add more funds for maintaining sufficient amount of shareholder's funds in comparison to the amount of total deposits. Finally it may conclude that capital adequacy position of NABIL seems to be better than other banks under study. Thus it is recommended that the NABIL has to maintain present position while other banks need to maintain the proper capital adequacy position.

The interest earned to total assets analysis shows that the ratios follow the fluctuating trend among all banks under study. Therefore banks need to sufficient in earning interest or utilizing the resources in interest generating sectors.

From the correlation analysis it can be concluded that except HBL all the bank had performed positive correlation with a closer value to 1 and the value of r is also more than six times of probable error .Except HBL all the banks had efficiently utilized their deposits on investment. On comparing to these banks under study SBI preformed better position because of its higher correlation and determination values than others. Further HBL needs to improve in its strategy for better utilization of its deposit on investment for maximizing the profit.

Finally it can be concluded that all banks under study have performed positive correlation with a closer value to 1 and the value of r is also more than six times of probable error

which means that these banks have efficiently utilized their deposits on performing assets. On comparing to these banks under study NABIL performed better position because of its higher correlation and determination values than others.

Inspire Small Entrepreneur's Involvement

It is often said that joint venture banks are mainly focused their banking services especially to big clients such as multinational companies, large scale industries, manufactures, NGOs only. As well as these banks are urban based, serve quite a few elite, big customers and are heavily dependent on fee based, off balance sheet activities.

To overcome this situation, all joint venture commercial banks should be accessible to all small, medium and higher level of customers in enjoying depositing, borrowing and other services.

Innovative Approach in Bank Management

Finally in efficient and capable project oriented research department should be developed so that it should be able to study different aspects of management such as credit collection procedure are viability of project appraisal, supervision and entrepreneurship etc. and to provide practical suggestion to develop efficient and sound bank management.

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APPENDICES

APPENDIX - I

Calculation of Correlation between Total Deposit and Total Investment of SBI

(In million)

Year	Total Deposit	Total Investment	XY	X²	Y²
2005	145866.08	4275.52	6326507476.3	21276913295	18280071.27
2006	193473.99	61785.33	11953854320	374232184807	3817427003
2007	233422.85	89453.10	200880397543	54486226902	8001857100
2008	319150.47	99397.71	31722825863	101857022500	9879904753
2009	373482.55	108263.79	40434636362	139489215208	11721048225
	1265395.94	363625.45	105625947800	305503958490	33438517152

Correlation coefficient can be calculated using following formula

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

Substuting the values,

$$= \frac{5 \times 105625947800 - 1265395.94 \times 363625.45}{\sqrt{5 \times 305503958490 - (1265395.94)^2} \sqrt{5 \times 33438517152 - (363625.45)^2}}$$

$$= \frac{528129739000 - 460130168100}{414105.19 \times 187001.565}$$

$$= \frac{67999570900}{77438316530} = 0.9965$$

Calculation of Probable Error (PEr)

$$PEr = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1 - (0.9965)^2}{\sqrt{5}} = 0.00214$$

Calculation of Correlation between Total Deposit and Total Investment of NABIL

(In million)

Year	Total Deposit (X)	Total investment (Y)	XY	X²	Y²
2005	86547.74	26076. 8	2256888106	7490511299	679999498.2
2006	110020.4	36197.75	3972589098	12104488420	1303769610
2007	114452.86	26594.52	3043818874	13099457162	707268494
2008	137153.94	30888.86	4236528851	18811203260	954121672.1
2009	279572.2	132861.81	371444468520	78160615013	17652260556
Total	1727747.2	252529.74	50654293449	129666000000	1297419831

Correlation coefficient can be calculated using following formula

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

Substuting the values,

$$= \frac{5\times 50654293449 - 1727747.2\times 252529.74}{\sqrt{5\times129666000000 - (1727747.2)^2}\,\sqrt{5\times21297419831 - (252529.74)^2}}$$

$$= \frac{253271467200 - 183777796000}{344549.126\times 206678.082} \;=\; 0.9758$$

Calculation of Probable Error (PEr)

$$PEr \;=\; 0.6745\times \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745\times \frac{1-(0.9758)^2}{\sqrt{5}} \;=\; 0.0702$$

Calculation of Correlation between Total Deposit and Total Investment of SCBL

(In million)

Year	Total Deposit(X)	Total investment(X)	XY	X²	Y²
2005	193664.69	97025.53	1878508424	37494393172	9413953472
2006	230610.32	128385.56	29607035075	53181119691	16482852020
2007	246470.20	135532.33	33404680482	60747559490	18369012480
2008	297439.98	139028.19	41352542053	88470541702	19328837615
2009	358717.21	202361.21	72590448663	128678036800	40950059313
Total	1326872.4	702332.82	19574200000	368572000000	104545000000

Correlation coefficient can be calculated using following formula

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

Substuting the values,

$$= \frac{5 \times 19574200000 - 1326872.4 \times 702332.82}{\sqrt{5 \times 368572000000 - (1326872.4)^2}\sqrt{5 \times 104545000000 - (702332.82)^2}}$$

$$= \frac{978710000000 - 931906034500}{1351019.6 \times 171620.54} = 0.9508$$

Calculation of Probable Error (PEr)

$$PEr = 0.6745 \times \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1-(0.9508)^2}{\sqrt{5}} = 0.02943$$

Calculation of Correlation between Total Deposit and Total Investment of HBL

(In million)

Year	Total Deposit(X)	Total investment(Y)	XY	X²	Y²
2005	248140.11	116923.42	2901339030	61573514191	13671086144
2006	264908.51	108890.31	28845969780	79176518670	11857099612
2007	300484.17	118229.85	35526198350	90290736421	13978297430
2008	318427.89	133401.77	42478844140	101396321100	17796032240
2009	346813.45	87106.91	30209847980	120279569100	7587613770
Total	1478774.13	564552.26	166074000000	443717000000	64890129196

Correlation coefficient can be calculated using following formula

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

Substuting the values,

$$= \frac{5 \times 166074000000 - 1478774.13 \times 564552.26}{\sqrt{5 \times 443717000000 - (1478774.13)^2}\sqrt{5 \times 64890129196 - (564552.26)^2}}$$

$$= \frac{830370000000 - 834845779900}{178359.39 \times 75703.41} = -0.3314$$

Calculation of Probable Error (PEr)

$$PEr = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1 - (0.3314)^2}{\sqrt{5}} = 0.27295$$

Calculation of Correlation between Total Deposit and Total Investment of EBL

(In million)

Year	Total Deposit(X)	Total investment(Y)	XY	X²	Y²
2005	100976.90	21289.31	2149728527	10196334334	453234720.3
2006	138024.44	42 005.15	5797737306	19050746040	1764432627
2007	181862.53	49843.14	906459954.4	33073979820	2484338605
2008	239762.89	50595.57	12130940080	57486243420	2559911704
2009	333229.46	59484.8	19822087780	11104187300	3538441431
Total	993856.22	223217.97	48965093243	230849000000	10800359087

Correlation coefficient can be calculated using following formula

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

Substuting the values,

$$= \frac{5 \times 48965093243 - 993856.22 \times 22321797}{\sqrt{5 \times 230849000000 - (993856.22)^2}\sqrt{5 \times 10800359087 - (223217.97)^2}}$$

$$= \frac{244825466200 - 221846567900}{408037.76 \times 64618.663} \quad = \quad 0.8715$$

Calculation of Probable Error (PEr)

$$\text{PEr} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1 - (0.8715)^2}{\sqrt{5}} = 0.07373$$

Calculation of Correlation between Total Deposit and
Total Performing Assets of SBI

(In million)

Year	Total Deposit(X)	Total Performance assets(Y)	XY	X²	Y²
2005	145866.08	157301.26	22944918180	21276913295	24743686400
2006	193473.99	208359.77	40312196060	374232184807	43413793750
2007	233422.85	250546.11	5848460264	54486226902	62773353240
2008	319150.47	332571.84	106140459000	101857022500	110604028800
2009	373482.55	389782.	145576775300	139489215208	15193007500
Total	1265395.94	1338560.98	373458000000	305503958490	39346500000

Correlation coefficient can be calculated using following formula

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

Substuting the values,

$$= \frac{5\times 373458000000 - 1265395.94 \times 1338560.98}{\sqrt{5\times 305503958490 - (1265395.94)^2}\sqrt{5\times 39346500000 - (1338560.98)^2}}$$

$$= \frac{1867290000000 - 1696809630000}{414105.198\times 419022.079} = 0.9997$$

Calculation of Probable Error (PEr)

$$PEr = 0.6745\times \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745\times \frac{1-(0.9997)^2}{\sqrt{5}} = 0.0019$$

Calculation of Correlation between Total Deposit and

Total Performance Assets of NABIL

(In million)

Year	Total Deposit(X)	Total Performance Assets (Y)	XY	X²	Y²
2005	86547.74	89446.7	7741409735	7490511299	8000712141
2006	110020.4	116007.11	12763148650	12104488420	13457649570
2007	114452.86	124699.02	14272159480	13099457162	15549845590
2008	137153.94	155065.96	21267907370	18811203260	24045451950
2009	279572.2	284179.28	79448626500	78160615013	80757863180
Total	1727747.2	769398.04	135493000000	129666000000	141812000000

Correlation coefficient can be calculated using following formula

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

Substuting the values,

$$= \frac{5 \times 135493000000 - 1727747.2 \times 769398.04}{\sqrt{5 \times 129666000000 - (1727747.2)^2}\sqrt{5 \times 141812000000 - (769398.04)^2}}$$

$$= \frac{677465000000 - 559927223100}{344549.126 \times 342179.274} = 0.9969$$

Calculation of Probable Error (PEr)

$$PEr = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1 - (0.9969)^2}{\sqrt{5}} = 0.00018$$

Calculation of correlation between Total Deposit and
Total Performance Assets of SCBL

(In million)

Year	Total Deposit(X)	Total Performance Assets (Y)	XY	X²	Y²
2005	193664.69	201054 .52	38931129650	37494393172	40422920010
2006	230610.32	237512.54	545772842850	53181119691	5641220660
2007	246470.20	258170.22	63631265760	60747559490	66651862490
2008	297439.98	298190.26	88693704970	88470541702	88917431160
2009	358717.21	359714.27	129035699300	128678036800	129394356000
Total	1326872.4	1354641.81	375065000000	368572000000	381799000000

Correlation coefficient can be calculated using following formula

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

Substuting the values,

$$= \frac{5\times 375065000000 - 1326872.4\times 1354641.81}{\sqrt{5\times 368572000000 - (1326872.4)^2}\sqrt{5\times 381799000000 - (1354641.81)^2}}$$

$$= \frac{1875325000000 - 1797436830000}{286826.836\times 271920.148} = 0.9986$$

Calculation of Probable Error (PEr)

$$PEr = 0.6745\times \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745\times \frac{1 - (0.9986)^2}{\sqrt{5}} = 0.00085$$

Calculation of Correlation between Total Deposit and

Total Performing Assets of HBL

(In million)

Year	Total Deposit(X)	Total performance assets(Y)	XY	X²	Y²
2005	248140.11	255845.92	63485634730	61573514191	65457134780
2006	264908.51	276562.88	73263860460	79176518670	76487026590
2007	300484.17	313267.32	94131870640	90290736421	98136413780
2008	318427.89	340383.19	108387501000	101396321100	115860716000
2009	346813.45	354010.03	122775439800	120279569100	125323101300
Total	1478774.13	1540069.34	462044000000	443717000000	481264000000

Correlation coefficient can be calculated using following formula

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

Substuting the values,

$$= \frac{5 \times 462044000000 - 1478774.13 \times 1540069.34}{\sqrt{5 \times 462044000000 - (1478774.13)^2}\sqrt{5 \times 481264000000 - (1540069.34)^2}}$$

$$= \frac{2310220000000 - 2277414698000}{178359.39 \times 185759.059} = 0.99014$$

Calculation of Probable Error (PEr)

$$PEr = 0.6745 \times \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1-(0.99014)^2}{\sqrt{5}} = 0.00607$$

Calculation of Correlation between Total Deposit and
Total Performing Assets of EBL

(In million)

Year	Total Deposit(X)	Total performance assets(Y)	XY	X²	Y²
2005	100976.90	103176.02	10418394650	10196334334	10645291100
2006	138024.44	140687.82	19418357570	19050746040	19793062700
2007	181862.53	186483.95	33914442950	33073979820	34776263610
2008	239762.89	237446.42	56930839880	57486243420	56380802370
2009	333229.46	298331.53	99412857640	11104187300	89001701790
Total	993856.22	966125.74	220009500000	230849000000	210597000000

Correlation coefficient can be calculated using following formula

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

Substuting the values,

$$= \frac{5\times 220009500000 - 993856.22\times\ 966125.74}{\sqrt{5\times 230849000000 - (993856.22)^2}\ \sqrt{5\times 210597000000 -\ (966125.74)^2}}$$

$$= \frac{1100475000000 - 960190076000}{408037.76\times 345812.16} = 0.9939$$

Calculation of Probable Error (PEr)

$$PEr = 0.6745\times \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745\times \frac{1 - (0.9939)^2}{\sqrt{5}} = 00361$$

APPENDIX - III

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Trend Values of Net Profit for the Period Ending 2001 to 2010 of SBI

(In million)

Year	Net profit (Y)	t-x (X)	X^2	XY	y=a+bx
2005	573.86	-2	4	-1147.74	689.396
2006	1170.01	-1	1	-1170.01	1338.137
2007	2549.08	0	0	0	1986.878
2008	2477.7	1	1	2477.7	2635.619
2009	3163.73	2	4	6327.46	3284.36
Total	9934.39		10	6487.41	

The equation of straight line trend is:

$yc = a+bX$ ------------------------(eqn 1)

By solving following equations we can get the value of a and b:-

$\sum Y = na + b\sum X$ --------------------(eqn 2)

$\sum XY = a\sum X + b\sum X^2$ -----------------(eqn 3)

Putting the values of $\sum X$, $\sum X^2$, $\sum XY$ and $\sum Y$ in the eqn no 2 and 3 it will give the values of a and b.

Since. $\sum X = 0$

$\qquad a = \sum Y/n = 9934.39/5 = 1986.878$ million

$b = \sum XY / \sum X^2 = 6487.41/10 = 648.741$ million

Trend values of Net Profit for the period ending 2001 to 2010 of SBI

(In million)

Fiscal year	t-x t-2007	y=a+bx
2010	3	10612.96
2011	4	11746.04
2012	5	12879.13
2013	6	14012.21
2014	7	15124.30

Trend values of Net Profit for the period ending 2001 to 2010 of NABIL

Year	Net profit (Y)	t-x (X)	X^2	XY	y=a+bx
2005	5201.14	-2	4	-104 02.28	4947.544
2006	6352.62	-1	1	-6352.62	6080.l628
2007	6739.59	0	0	0	7213.712
2008	7464.68	1	1	7464.68	8346.796
2009	10310.53	2	4	20621.06	9479.88
Total	36068.56		10	11330.84	

The equation of straight line trend is:

yc= a+bX--------------------------(eqn 1)

By solving following equations we can get the value of a and b:-

$\sum Y =$ na + b$\sum X$---------------------(eqn 2)

$\sum XY =$a$\sum X$+ b$\sum X^2$-----------------(eqn 3)

Putting the values of $\sum X$, $\sum X^2$, $\sum XY$ and $\sum Y$ in the eqn no 2 and 3 it will give the values of a and b.

Since. $\sum X=0$

a =$\sum Y$/ n =36068.56/5 = 7213.712 million

b = $\sum XY$ / $\sum X^2$ = 11330.84/10 =1133.084million

Trend values of Net Profit for the period ending 2010 to 2014 of NABIL

(In million)

Fiscal year	t-2007	y=a+bx
2010	3	10612.96
2011	4	11746.04
2012	5	12879.13
2013	6	14012.21
2014	7	15124.30

Trend values of Net Profit for the period ending 2005 to 2009 of SCBL

(In million)

Year	Net profit Y	t-x X	X^2	XY	y=a+bx
2005	5362.44	-2	4	-10724.88	5184.792
2006	6587.55	-1	1	-6587.55	6323.098
2007	6916.68	0	0	0	7461.404
2008	8189.21	1	1	8189.21	8599.71
2009	10251.14	2	4	20502.28	9738.016
N=5	$\sum$Y =37307.02		10	$\sum$XY= 11383.06	

The equation of straight line trend is:

yc= a+bX-------------------------(eqn 1)

By solving following equations we can get the value of a and b:-

$\sum$Y = na + b$\sum$X--------------------(eqn 2)

$\sum$XY =a$\sum$X+ b$\sum$X^2-----------------(eqn 3)

Putting the values of $\sum$X, $\sum$X^2, $\sum$XY and $\sum$Y in the eqn no 2 and 3 it will give the values of a and b.

Since. $\sum$X=0

a =$\sum$Y/ n =37307.02/5 = 7461.404 million

b =$\sum$XY / $\sum$X^2 = 11383.06/10 =1138.306million

Trend values of Net Profit for the period ending 2005 to 2014 of SCBL

(In million)

Fiscal year	t-2007	y=a+bx
2010	3	10876.96
2011	4	12014.62
2012	5	13152.93
2013	6	14291.24
2014	7	15429.54

Trend values of Net Profit for the period ending 2005 to 2009 of HBL

(In million)

Year	Net profit (Y)	t-x (X)	X^2	XY	y=a+bx
2005	4574.57	-2	4	-9149.14	3468.218
2006	3082.75	-1	1	-3082.75	4386.565
2007	4918.22	0	0	0	5304.912
2008	6358.68	1	1	6358.68	6223.259
2009	7528.34	2	4	15056.68	7141.606
N=5	26524.56		10	9183.47	

The equation of straight line trend is:

yc= a+bX------------------------(eqn 1)

By solving following equations we can get the value of a and b:-

$\sum Y$ = na + b$\sum X$--------------------(eqn 2)

$\sum XY$ =a$\sum X$+ b$\sum X^2$-----------------(eqn 3)

Putting the values of $\sum X$, $\sum X^2$, $\sum XY$ and $\sum Y$ in the eqn no 2 and 3 it will give the values of a and b.

Since. $\sum X$=0

a =$\sum Y$/ n =26524.56/5 = 5304.912 million

b =$\sum XY$ / $\sum X^2$ = 9183.47/10 = 918.347million

Trend values of Net Profit for the period ending 2010 to 2014 of HBL

(In million)

Fiscal year	t-2007	y=a+bx
2010	3	8059.92
2011	4	8978.30
2012	5	9896.64
2013	6	10814.99
2014	7	11733.34

Trend values of Net Profit for the period ending 2005 to 2009 of EBL

(In million)

Year	Net profit (Y)	t-x (X)	X^2	XY	y=a+bx
2005	1682.14	-2	4	-3364.28	1273.798
2006	2372.90	-1	1	-2372.90	2428.762
2007	2964.09	0	0	0	3583.726
2008	4512.18	1	1	4512.18	4738.69
2009	6387.32	2	4	12774.64	5893.654
	17918.63		10	11549.64	

The equation of straight line trend is:

yc= a+bX-------------------------(eqn 1)

By solving following equations we can get the value of a and b:-

$\sum Y =$ na + b$\sum X$--------------------(eqn 2)

$\sum XY =$a$\sum X$+ b$\sum X^2$-----------------(eqn 3)

Putting the values of $\sum X$, $\sum X^2$, $\sum XY$ and $\sum Y$ in the eqn no 2 and 3 it will give the values of a and b.

Since. $\sum X=0$

a =$\sum Y$/ n =17918.63/5   = 3583.726million

b =$\sum XY$ / $\sum X^2$ =11549.64/10   =1154.964million

Trend values of Net Profit for the period ending 2009 to 2014 of EBL

(In million)

Fiscal year	t-2007	y=a+bx
2010	3	7048.61
2011	4	8203.58
2012	5	9358.55
2013	6	10513.51
2014	7	11668.47

APPENDIX-IV

Trend values of Total Deposit for the period ending 2005 to 2009 of SBI

(In million)

Year	Total deposit (Y)	t-x (X)	X^2	XY	y=a+bx
2005	86547.74	-2	4	-173095.48	62912.936
2006	110020.4	-1	1	-110020.40	104231.182
2007	114452.86	0	0	0	145549.428
2008	137153.94	1	1	137153.94	1868678.674
2009	279572.2	2	4	559144.4	228185.92
Total	727747.14		10	413182.46	

The equation of straight line trend is:

yc= a+bX--------------------------(eqn 1)

By solving following equations we can get the value of a and b:-

$\sum Y =$ na + b$\sum X$--------------------(eqn 2)

$\sum XY =$ a$\sum X$ + b$\sum X^2$-----------------(eqn 3)

Putting the values of $\sum X$, $\sum X^2$, $\sum XY$ and $\sum Y$ in the eqn no 2 and 3 it will give the values of a and b.

Since. $\sum X=0$

a =$\sum Y$/ n =727747.14/5 = 145549.428 million

b =$\sum XY$ / $\sum X^2$ =413182.46/10 =41318.246 million

Trend values of Total Deposit for the period ending 2009 to 2014 of SBI

(In million)

Fiscal year	t-x	y=a+bx
2010	3	269504.16
2011	4	310822.412
2012	5	352140.66
2013	6	393458.90
2014	7	434777.15

Trend values of Total Deposit for the period ending 2005 to 2009 of NABIL

(In million)

Year	Total deposit (Y)	t-x (X)	X^2	XY	y=a+bx
2005	145866.08	-2	4	-291732.16	136897.204
2006	193473.99	-1	1	-193473.99	194988.196
2007	233422.85	0	0	0	253079.188
2008	319150.47	1	1	319150.47	311170.18
2009	373482.55	2	4	746965.1	369261.172
Total	1265395.94		10	580909.92	

The equation of straight line trend is:

yc= a+bX------------------------(eqn 1)

By solving following equations we can get the value of a and b:-

$\sum Y = na + b\sum X$--------------------(eqn 2)

$\sum XY = a\sum X + b\sum X^2$-----------------(eqn 3)

Putting the values of $\sum X$, $\sum X^2$, $\sum XY$ and $\sum Y$ in the eqn no 2 and 3 it will give the values of a and b.

Since. $\sum X = 0$

a = $\sum Y / n$ =1265394.94/5 =253079.188 million

b = $\sum XY / \sum X^2$ =580909.92/10 =58090.992million

Trend values of Total Deposit for the period ending 2010 to 2014 of NABIL

(In million)

Fiscal year	t-x	y=a+bx
2010	3	427352.16
2011	4	485443.15
2012	5	543534.15
2013	6	601625.14
2014	7	659716.13

Trend values of Total Deposit for the period ending 2005 to 2009 of SCBL

(In million)

Fiscal year	Total deposit (Y)	t-x (X)	X^2	XY	y=a+bx
2005	193664.69	-2	4	-387269.38	203075.54
2006	230610.32	-1	1	-230610.32	243225.01
2007	246470.20	0	0	0	283374.48
2008	297439.98	1	1	297439.98	323523.95
2009	358717.21	2	4	717434.42	363673.42
Total	1416872.4		10	401494.7	

The equation of straight line trend is:

yc= a+bX-------------------------(eqn 1)

By solving following equations we can get the value of a and b:-

$\sum$Y = na + b$\sum$X--------------------(eqn 2)

$\sum$XY =a$\sum$X+ b$\sum$X^2----------------(eqn 3)

Putting the values of $\sum$X, $\sum$X^2, $\sum$XY and $\sum$Y in the eqn no 2 and 3 it will give the values of a and b.

Since. $\sum$X=0

a =$\sum$Y/ n =1416872.4/5 =283374.48million

b =$\sum$XY / $\sum$X^2 =401494.7/10 =40149.47million

Trend values of for the Total Deposit period ending 2010 to 2014 of SCBL

(In million)

Fiscal year	t-X t-2007	y=a+bx
2010	3	403822.89
2011	4	443972.36
2012	5	484121.83
2013	6	524271.30
2014	7	564420.77

Trend values of for t Total Deposit he period ending 2005 to 2009 of HBL

(In million)

Year	Total deposit (Y)	t-x (X)	X^2	XY	y=a+bx
2005	248140.11	-2	4	-496280.22	245581.614
2006	264908.51	-1	1	-264908.51	270668.22
2007	300484.17	0	0	0	295754.826
2008	318427.89	1	1	318427.89	320841.432
2009	346813.45	2	4	693626.9	345928.038
Total	1478774.13		10	250866.06	

The equation of straight line trend is:

yc= a+bX--------------------------(eqn 1)

By solving following equations we can get the value of a and b:-

$\sum Y = na + b\sum X$--------------------(eqn 2)

$\sum XY = a\sum X + b\sum X^2$-----------------(eqn 3)

Putting the values of $\sum X$, $\sum X^2$, $\sum XY$ and $\sum Y$ in the eqn no 2 and 3 it will give the values of a and b.

Since. $\sum X=0$

a $=\sum Y/ n$ =1478774.13/5 =295754.826million

b $=\sum XY / \sum X^2$ =250866.06/10 =25086.606million

Trend values of for the Total Deposit period ending 2010 to 2014 of HBL

(In million)

Fiscal year	t-2007 (X)	y=a+bx
2010	3	403822.89
2011	4	443972.36
2012	5	484121.83
2013	6	524271.30
2014	7	564420.77

Trend values of for the Total Deposit period ending 2005 to 2009 of EBL

(In million)

Year	Total deposit (Y)	t-2007 (X)	X^2	XY	y=a+bx
2005	100976.90	-2	4	-201953.48	85522.53
2006	138024.44	-1	1	-138024.44	142146.881
2007	181862.53	0	0	0	198771.244
2008	239762.89	1	1	239762.89	255395.601
2009	333229.46	2	4	666458.92	312019.938
Total	993856.22		10	566243.57	

The equation of straight line trend is:

yc= a+bX-------------------------(eqn 1)

By solving following equations we can get the value of a and b:-

$\sum Y =$ na + b$\sum$X--------------------(eqn 2)

$\sum$XY =a$\sum$X+ b$\sum X^2$-----------------(eqn 3)

Putting the values of $\sum$X, $\sum X^2$, $\sum$XY and $\sum$Y in the eqn no 2 and 3 it will give the values of a and b.

Since. $\sum$X=0

a =$\sum$Y/ n =993856.22/5 =198771.244million

b = $\sum$XY / $\sum X^2$=566243.57/10 =56624.357million

Trend values of for the Total Deposit period ending 2010 to 2014 of EBL

(In million)

Fiscal year	t-x	y=a+bx
2010	3	368644.31
2011	4	425168.67
2012	5	481893.02
2013	6	538517.386
2014	7	595141.74

APPENDIX - V

Trend values of Total Credit for the period ending 2005 to 2009 of SBI

(In million)

Year	Total credit (Y)	t-x (X)	X^2	XY	y=a+bx
2005	62138.78	-2	4	-1242789.56	56448.218
2006	76267.36	-1	1	-76267.36	78770.718
2007	94604.50	0	0	0	101093.218
2008	121136.98	1	1	121136.98	123415.718
2009	151317.47	2	4	302634.94	145738.218
Total	505466.09		10	223225	

The equation of straight line trend is:

yc= a+bX-------------------------(eqn 1)

By solving following equations we can get the value of a and b:-

$\sum Y$ = na + b$\sum X$--------------------(eqn 2)

$\sum XY$ =a$\sum X$+ b$\sum X^2$-----------------(eqn 3)

Putting the values of $\sum X$, $\sum X^2$, $\sum XY$ and $\sum Y$ in the eqn no 2 and 3 it will give the values of a and b.

Since. $\sum X$=0

a =$\sum Y$/ n =505466.09/5 =101093.218million

b = $\sum XY$ / $\sum X^2$ =223225/10=22322.5million

Trend values of Total Credit for the period ending 2010 to 2014 of SBI

(In million)

Fiscal year	t-x	y=a+bx
2010	3	168060.71
2011	4	190383.71
2012	5	212705.71
2013	6	235028.21
2014	7	257350.71

Trend values of for the Total Credit period ending 2005 to 2009 of NABIL

(In million)

Year	Total credit (Y)	t-x (X)	X^2	XY	y=a+bx
2005	105861.70	-2	4	-211723.4	91100.882
2006	129225.43	-1	1	-129225.43	133568.918
2007	155457.78	0	0	0	176036.954
2008	213650.53	1	1	213650.53	218504.99
2009	275989.33	2	4	551978.66	260978.026
Total	880184.77		10	424680.36	

The equation of straight line trend is:

yc= a+bX-------------------------(eqn 1)

By solving following equations we can get the value of a and b:-

$\sum Y = na + b\sum X$--------------------(eqn 2)

$\sum XY = a\sum X + b\sum X^2$-----------------(eqn 3)

Putting the values of $\sum X$, $\sum X^2$, $\sum XY$ and $\sum Y$ in the eqn no 2 and 3 it will give the values of a and b.

Since. $\sum X = 0$

$a = \sum Y / n = 880184.77/5 = 176036.954$million

$b = \sum XY / \sum X^2 = 424680.36/10 = 42468.036$million

Trend values of for Total Credit the period ending 2010 to 2014 of NABIL

(In million)

Fiscal year	t-x	y=a+bx
2010	3	303495.06
2011	4	345981.09
2012	5	388467.13
2013	6	430953.17
2014	7	473439.20

Trend values of for the Total Credit period ending 2005 to 2009 of SCBL

(In million)

Year	Total credit (Y)	t-x (X)	X^2	XY	y=a+bx
2005	81432.08	-2	4	-162864.16	78246.68
2006	89354.18	-1	1	-89354.18	94102.957
2007	105026.37	0	0	0	109959.23
2008	137185.97	1	1	137185.97	125815.51
2009	136797.57	2	4	2735975.14	141671.78
	549796.17		10	158562.77	

The equation of straight line trend is:

yc= a+bX--------------------------(eqn 1)

By solving following equations we can get the value of a and b:-

$\sum Y = na + b\sum X$---------------------(eqn 2)

$\sum XY = a\sum X + b\sum X^2$-----------------(eqn 3)

Putting the values of $\sum X$, $\sum X^2$, $\sum XY$ and $\sum Y$ in the eqn no 2 and 3 it will give the values of a and b.

Since. $\sum X = 0$

a = $\sum Y / n$ = 549796.17/5 = 109959.234million

b = $\sum XY / \sum X^2$ = 158562.77/10 = million

Trend values of for the Total Credit period ending 2010 to 2014 of SCBL

(In million)

Fiscal year	t-x	y=a+bx
2010	3	157528.06
2011	4	173384.31
2012	5	189240.91
2013	6	205096.89
2014	7	220953.17

Trend values of for the Total Credit period ending 2005 to 2009 of HBL

(In million)

Year	Total credit (Y)	t-x (X)	X^2	XY	y=a+bx
2005	134511.68	-2	4	-269023.36	128303.324
2006	157619.77	-1	1	-157619.77	156857.664
2007	177937.24	0	0	0	1854412.002
2008	201796.13	1	1	201796.13	212956.34
2009	255195.19	2	4	510390.38	242520.68
Total	927060.01		10	285543.38	

The equation of straight line trend is:

yc= a+bX-------------------------(eqn 1)

By solving following equations we can get the value of a and b:-

$\sum Y =$ na + b$\sum X$---------------------(eqn 2)

$\sum XY =$a$\sum X$+ b$\sum X^2$-----------------(eqn 3)

Putting the values of $\sum X$, $\sum X^2$, $\sum XY$ and $\sum Y$ in the eqn no 2 and 3 it will give the values of a and b.

Since. $\sum X$=0

a =$\sum Y$/ n =9272060.01/5 =1854012.002million

b =$\sum XY$ / $\sum X^2$ =285543.38/10 =28554.338million

Trend values of for the Total Credit period ending 2010 to 2014 of HBL

(In million)

Fiscal year	t-x	y=a+bx
2010	3	271075.01
2011	4	299629.35
2012	5	328183.69
2013	6	356738.03
2014	7	385292.37

Trend values of for the Total Credit period ending 2005 to 2009 of EBL

(In million)

Year	Total credit (Y)	t-x (X)	X^2	XY	y=a+bx
2005	76186.71	-2	4	152373.42	64476.07
2006	980130.07	-1	1	-98013..07	105545.852
2007	136640.81	0	0	0	146615.634
2008	183390.85	1	1	183390.85	187685.416
2009	238846.73	2	4	477693.46	228755.198
Total	733078.17		10	410697.82	

The equation of straight line trend is:

yc= a+bX------------------------(eqn 1)

By solving following equations we can get the value of a and b:-

$\sum Y =$ na + b$\sum X$--------------------(eqn 2)

$\sum XY =$ a$\sum X$+ b$\sum X^2$-----------------(eqn 3)

Putting the values of $\sum X$, $\sum X^2$, $\sum XY$ and $\sum Y$ in the eqn no 2 and 3 it will give the values of a and b.

Since. $\sum X$=0

a =$\sum Y$/ n =733078.17/5 =146615.634million

b = $\sum XY$ / $\sum X^2$ =410697.82/10 =41069.782million

Trend values of Total Credit for the period ending 2010 to 2014 of EBL

(In million)

Fiscal year	t-2007	y=a+bx
2010	3	269824.98
2011	4	310894.76
2012	5	351964.54
2013	6	393034.32
2014	7	434104.11

APPENDIX - VI

$$Dn = Do(1+g)^{n-1}$$

Where,

Dn = Total amount in 2008/09

Do= Total amount in year 2004/05

g= growth rate

n= number of year of study

Calculation of growth ratio of total deposit of SBI

$$Dn = Do(1+g)^{n-1}$$

$$279752 \; 20 = 86547.74(1+g)^4$$

$$(3.2302)^{1/4} = 1+g$$

$$1.306 = 1+g$$

$$g = 34.06\%$$

Calculation of growth ratio of total deposit of NABIL

$$Dn = Do(1+g)^{n-1}$$

$$373482.55 = 145866.08(1+g)^4$$

$$(2.56044)^{1/4} = 1+g$$

$$1.2694 = 1+g$$

$$g = 26.94\%$$

Calculation of growth ratio of total deposit of SCBL

$$Dn = Do(1+g)^{n-1}$$

$$358717.21 = 193634.69(1+g)^4$$

$$(1.8525)^{1/4} = 1+g$$

$$1.1666 = 1+g$$

$$g = 16.66\%$$

Calculation of Growth Ratio of Total Deposit of HBL

$$D_n = D_o(1+g)^{n-1}$$

$$346813.45 = 248140.11\ (1+g)^4$$

$$(1.3976)^{1/4} = 1+g$$

$$1.0872 = 1+g$$

$$g = 8.72\%$$

Calculation of growth ratio of total deposit of EBL

$$D_n = D_o(1+g)^{n-1}$$

$$333229.46 = 100976.9(1+g)^4$$

$$(3.300)^{1/4} = 1+g$$

$$1.306 = 1+g$$

$$g = 34.78\%$$

Calculation of growth ratio of total performing assets of SBI

$$D_n = D_o(1+g)^{n-1}$$

$$284179.28 = 89446.7(1+g)^4$$

$$(3.1770)^{1/4} = 1+g$$

$$1.3350 = 1+g$$

$$g = 33.5\%$$

Calculation of growth ratio of total performing assrets of NABIL

$$D_n = D_o(1+g)^{n-1}$$

$$389782 = 157301.26(1+g)^4$$

$$(2.4779)^{1/4} = 1+g$$

$$1.2546 = 1+g$$

$$g = 25.46\%$$

Calculation of growth ratio of total performing assets of SCBL

$Dn = Do(1+g)^{n-1}$

$359714.27 = 201054.52(1+g)^4$

$(1.7891)^{1/4} = 1+g$

$1.1565 = 1+g$

$g = 15.65\%$

Calculation of growth ratio of total performing assets of HBL

$Dn = Do(1+g)^{n-1}$

$354010.03 = 255845.92(1+g)^4$

$(1.3836)^{1/4} = 1+g$

$1.0845 = 1+g$

$g = 8.45\%$

Calculation of growth ratio of total performing assets of EBL

$Dn = Do(1+g)^{n-1}$

$298331.53 = 103176.02(1+g)^4$

$(2.8914)^{1/4} = 1+g$

$1.3039 = 1+g$

$g = 30.39\%$