

CHAPTER - 1

INTRODUCTION

1.1 General Background

The banking sector is one of the indicators of economic activities which implicate the overall health of business and industries of the country directly or indirectly. The Financial Statement developed by banks is one of the tools and key source that can help draw the crucial information towards financial sectors. Theoretically, the financial ratios are derived from the financial statement including Balance Sheet, Income and Expenditure Statement, Cash Flow and some distinct disclosures provided by institutions themselves. The careful study of different ratios from the financial statement can postulate the status of banking performance, their operating efficiency and other financial matters to great extent.

In this study, the effort is made to overview the financial information from available data through publications of banking sector namely Standard Chartered Bank, NABIL Bank and Everest Bank under assumption that these banks are performing with relatively consistent strategy to their objective and have less influence of price escalation throughout the period of study. Five year period from 2005-2010 AD are chosen which may represent the medium term picture toward economic status just after the insurgency period from 1995 to 2005 in Nepal.

The task is complicated because strategy of banking sector and economic factors of the country were not consistent over the period and before. Nepal's economic growth rate is inordinately low confined to 3.5 percent with inflation hovering around 10.6 percent. The macroeconomic indicators exhibit that Nepal's merchandise exports to India and overseas rapidly declined over the years resulting in a huge trade deficit. The share of trade with India alone is as high as 67 percent, which is evident of increasing dependency with India. The economy witnessed a negative balance of payments situation and the magnitude of gross international

reserves downsized at the level to sustain imports of merchandise goods and services only for about 7.3 months (NRB, July 2011). It can be anticipated that business houses and industries must have been ruined during the insurgency period. The outflow of manpower for foreign employment accelerated tremendously. The country could not provide the basic requirement of power supply, water, raw material, fuel and security to industries. The environment and infrastructure for economic activity in real sense just ceased and only foreign aid and remittance become the key source of financing (Dahal, M.K., 2011).

In this scenario, it is a difficult job to conclude anything just through analysis of financial ratios of banking sector. However, under assumption that the banks under consideration are relatively strong and holding topmost position throughout the period have true representation for the economic development of the country on the whole.

1.2 Statement of Problem

Nepal is developing country. Most part of Nepalese economy is based on agriculture. Poverty has been a main problem in our country. Various financial institutions have been established in Nepal to assist economic development.

Public enterprises have not been able to fulfill the objectives of government of Nepal. Most public enterprises are running in loss despite of getting large amount of subsidies. Establishment of private joint venture banks have been continued in response to the economic liberalization policies of government. Actually Nepalese JVBs are investing their deposits in safe sector. These banks are reluctant to invest in long-term project as well as rural areas. Most of the private banks are concentrated in urban areas to avert the risk. Due to as much as it expected. Thus, private commercial bank's earning comes from short-term loans, remittance, treasury bills, discount and commission rather than investment.

Ratio Analysis is the strong tools to analyze the financial status of the institutions, which helps to common stockholders, investors, creditor, and management of the banks.

The study attempts to evaluate the financial ratios and other indication in the context of the commercial banks through study of three banks. Especially, it deals with following issues.

- * Which of their financial ratios are in optimal level?
- * Do depositors, investors, shareholders satisfy with efficiency of the banks?
- * What kind of trend exists in liquidity, profitability and other ratios?
- * How efficiently do the banks use their capital?
- * Do financial ratios indicate any strengths and weakness of the banks?

1.3 Objectives of the study

The basic objective of the study is to analyze the financial status and effectiveness of commercial banks from 2005 to 2010. The following objectives have been set for the research purpose.

- a. To examine the financial performance of commercial banks.
- b. To analysis the operating efficiency of commercial banks.
- c. To evaluate the earning capacity and profitability of commercial banks.

1.4 Significance of the study

The study of the analysis of financial plays vital role in the management decision. The aggregate of financial performance of three banks under study would provide the overall image of commercial banks in the whole for the period from 2005 to 2010. How the political scenario of the country could affect economic activity through commercial bank would be the indicator for future similar scenario of the country so that planning level can be diagnosed. The future financial impact can be anticipated well before such situation.

This study will be useful references to the policy making bodies which are concerned with banking. Academicians, teachers, students and practitioners in the field of accounting and finance would be benefited by this study.

1.5 Limitation of the Study

The study is fully confined to the financial report of the concerned banks. So it may pose the following limitations:

- i This study only covers the 5 years figures.
- ii Study is fully based on the annual report available from 3 banks.
- iii The data used are of secondary nature.
- iv Only the financial aspects are analyzed. Other performances of the banks are fully ignored.
- v Accounting ratios are based on financial statements of the banks which are subject to the limitations of such statements.

1.6 Scheme of the study

The working plan has been divided into 5 chapters as follows:

- Chapter 1 includes the introduction and general background statement of problem objectives of the study and limitations of the study.
- Chapter 2 includes review of pilot studies and textual concepts with regard to financial performance.
- Chapter 3 deals with research design, population and sample sources and types of data, data generating procedures data processing and analytical tools.
- Chapter 4 analyses and interprets the data using different financial tools and statistical tools.
- Chapter 5 is the conclusion and suggestive chapter. It includes summary of the study, conclusion is the main findings and recommendations for further improvement

CHAPTER - 2

REVIEW OF LITERATURE

This chapter is basically concerned with review of literature relevant to the financial statement of commercial banks especially the contents of profit and loss accounts and balance sheet. The chapter is divided into two facets: review of textual concepts and review of previous related researchers.

The first part tries to define some specified terms and provides the conceptual background to the commercial banks.

Every study is very much on past-knowledge study and experiences. The past knowledge of the previous studies should not be ignored as it provides foundation to the present study second phase of the chapter has been devoted for the review of source past research articles and thesis relating to financial performance of the commercial banks.

2.1 Theoretical Review

2.1.1 Financial Analysis

Financial analysis is one of the process of identifying the financial strengths and weakness of the firms by properly establishing relationship between the components of balance sheet and profit and loss account and other operating data (Pandey, 1992)

Financial statement analysis involves a comparison of a firm's performance with that of other firm's in the same line of business which is often identified by the firm's industry classification. (Berley and Brigham, 1996)

With respect to the identified from the analysis, pertinent care would be made to distinguish between cause and symptom of problem. (Hampten, 1998)

Thus much information can be obtained about the aspects of business through financial analysis and proper steps can be taken for the weak areas.

2.1.2 Significance of Financial Performance Analysis

The analysis and interpretation of financial statements is an important accounting activity. The significance of analysis lies on the objectives of financial analysis of firm. There are different parties interested in it. Financial strengths and weakness and credit worthiness are interpreted on the basis of analysis that leads to manage an enterprise to take crucial decisions regarding operating control system and bargaining strategy for funds from external sources. The parties that are benefited by the results of analysis can be enumerated as

- Financial executives
- Economics
- Top Management
- Labour unions
- Creditors
- Shareholders
- Others

Financial Executive

The first party interested in the financial statement analysis is financial department such analysis provides a deep insight into the financial condition of the enterprise and a view of the past performances which helps in future decision making to the financial manager

Top Management

Top management is responsible to see the overall activities and to know the financial condition of the enterprise. It should assets that the resources of the firm are used most effectively and efficiently.

Creditors

Financial analysis is very useful to creditors they want to know the financial condition of the firm before providing the loan. The financial performance indicates the financial position and it helps to judge the soundness and worthiness of the firm.

Shareholders

They are the real owners of the firm. So, they are most concerned about the firm's performance.

Economists

They analyze the financial statement to know the prevailing business and economic condition which ultimately determine the economic condition of the country.

Labour unions

Well motivated labours are the good sources of productivity. It is essential to provide good facility to labours to make them motivated. So, the union assets whatever the company is in situation or not to make facilities available.

Others

The information provided by the analysis and interpretation of various financial statements are important and useful to those groups who are interested in the working of the business and their union, government consumers and general public.

2.1.3 Objective of Financial Analysis

Objectives are set as per the requirement. The objectives are basically set for major three types of analysis.

- a. To measure the financial position and financial performance of the firm.
- b. To select the pieces of information that is relevant to a particular problem.
- c. To fit these pieces into a coherent picture of the problem in relation to the firm aims and financial resources.

Besides these three are other objectives of financial analysis which can be stated as:

- To estimates the earning capacity of the firm.
- To determine the long term liquidity of funds as well as solvency.
- To determines the debt capacity of the firm.
- To decides about future prospectus of the firm.
- To suggests alternative solution of the problem.

The objectives may depend on the analysis as well as the quality of the data available.

2.1.4 Sources of Judging Financial Performance

The firm communicates financial information to users through financial statement and reporting. They are the means to present financial situation or position to owner creditors and general public. As these statements are used by investors and financial analysis to examine the firms' performance resources allocation decisions.

Basically, there are two financial statements prepared for the purpose of external reporting to owners, investors and creditors which are main source of judging financial position they are.

a. Balance Sheet

The balance sheet is a document that reports the financial position of a company as of specific point of time. (Wilcox and Mignle 1994)

It is one of the significant financial statements for analysis of financial performance. More specifically the balance sheet contains information about the resources and owners interest in the business t the particular point of time. Thus, it is used to prepare in the end of financial year and reveals the firms financial position on a specific data. (Op. city)

In the language of accounting the balance sheet communicates information about assets, liabilities and owners equity for a business fir as on a specific data. It provides a snap shot of financial position of the firm at the close of the firm accounting period.

According to Mr. Khan and Jain, "The balance sheet provides information about the financial position is the particular point of the say as on Dec 31. It can be prepared as a snap shop of the financial status of company. (Khan and Jain., 1993)

Likewise balance sheet is a screen picture of financial position of a going business at a certain moment. It is also known as a statement of financial condition position statement or statement of resources and liabilities or statement of worth etc.

In this way, it can be sad that B/S is a summary statement and comparative recode of the progress and down fall of the business. It shoes the cleat picture of the firm financial position as well as the assets and liabilities of business. Therefore B/S is the major source to know about the company's strengths and weakness.

b. Income Statement

The second major source of financial information is income statement. It is also know as profit and loss a/c. It may be defined as any systematic assay of revenues expenses and other deductions and net income of a business for a stated period. Furthermore, income statement is an abstract portrayal of the dynamic life of the business presenting a longitudinal picture of gains and losses of the fortunes and misfortunes.

In the words of Khan and Jain, "Income statement is of great importance and interest to end users of financial statement because it enables them to ascertain whether the business operations have been profitable or not during the specific period of time."

In addition, it shows whether an enterprise has earned profit or losses within the particular period. So it is a statement of the profit earned or loss incurred. This statement is extremely useful to analyze to evaluate financial positions as well as probability of the business operation.

Hence, an income statement is classified record of gain and loss to the business for a period of time. It is prepared from the various balances of time. It is prepared from the various balances of subsidiary nominal account given in the shape of trial balance. (Sharma, 1998)

2.1.5 Tools of Financial Analysis

Financial analysis using business or financial ratios and norms provides a means of assessing a firm's strengths and weaknesses. Using data from the balance sheet and income statement, various ratios can be calculated, which can then be compared directly to those of competing firms of varying sizes. Comparing the firm's operating results with those of specific competitors or the industry as a whole helps in identifying relative strength and weaknesses. In addition, comparing changes in a firm's ratios over time can highlight improvements in performance or problem areas needing attention.

Ratio analysis has been accepted the most dominant financial tool to analyze and interpret the financial statements. The relationship between two figures, expressed mathematically, is known as financial ratio. It is the systematic use of ratio to interpret the financial statement so that the strength and weakness of the firm as well as its historical performance and current financial condition can be determined. Thus, ratio is defined as "the indicated quotient of two mathematical expressions, and the relationship between two or more things." (Webster's New Collegiate Dictionary, 1975, P 958) "Financial ratio helps us to find the symptoms of problem. The cause of any problem may be determined only after locating the symptoms. Operational and

financial problem of a corporation can be ascertained by examining the behavior of these ratio." (Pradhan, 1986)

Ratio analysis is such a powerful tool of financial analysis that economic and financial position of a business unit can be fully x-rayed through it. Just a blood pressure, pulse and temperature are the measures of the health of an individual, so does ratio analysis measures the economic and financial position of a firm. It can be fully x-rayed through ratio analysis. Ratio analysis can also help to check whether a business is doing better this year than last year; and it can tell if the business is doing better or worse than other business doing and selling the same things.

Ratio analysis has various uses such as: it is useful in financial position analysis which helps the banks and other financial institutions in lending and making investment decision; for forecasting purpose and making future plans; for locating weak spots in business and also in comparison of performance with the contemporary firm. In spite of its uses, there are some limitations, which restrict its uses. If data are incorrect, it presents false result; there is no common standard of comparison; it is only one method of analysis and does not present the complete picture of financial performance of any firm. But despite that, its significance is much accepted in analysing the financial performance of any firm. Thus, conclusively, it can be said that ratio helps the analyst to make quantitative judgment about the firm's financial position and performance.

There are various financial ratios that can be used in financial analysis and out of them some selected ratios have been used for the study.

- i. Profitability Ratio: The financial soundness of a firm is indicated by the profitability ratio. "Profitability ratios are indicators of degree of managerial success in achieving firm's overall goals", (Scoll, David, Banking Institute in Development Markets Vo.. 1, 1992). A company should earn profit to survive and grow a long period of time. It shows the overall efficiency of a business concern.
- ii. Activity Ratio: It is concerned with measuring the efficiency in asset management. It is also known as a turnover or efficiency ratio. It measures how

efficiently the firm employs the assets. The greater rate of turnover is reflected by how quickly and assets are converted into sales through firm's operation.

- iii. Leverage Ratio: The long-term solvency of the firm can be ascertained using leverage ratio. This ratio highlights the long term financial health, debt serving capacity and strength and weakness of the firm. These ratios indicate mix of funds provided by owners and lenders. There should be an appropriate mix of debt and owner's equity in financing firm's assets.
- iv. Liquidity Ratio: It measures the ability of the firm to meet its current obligations as and when they fall due for payment. "In adequate liquidity can lead to unexpected cash short falls that must be covered at inordinate costs, thus reducing profitability. In other hand, excessive liquidity can lead to low assets yields and contribute to poor performance." (Scoll, David, Banking Institute in Development Markets Vol. 1, 1992)

Other than ratio analysis some statistical tools can also throw light about position of any firm. Statistics may be defined as the collections, presentation, analysis and interpretation of the numerical data. Data from the financial statements can be collected, organized, presented, then analysis and interpreted to present the result about certain parts of the firm. Statistics help in formulating policies regarding the business with valid forecast about the future with the help of tendencies based on past records. Likewise, in this report, statistical tools like arithmetic mean, standard deviation, coefficient of variance are also used.

2.2 History, Development and Function of Banking Sector

2.2.1 Origin of Bank Word

In Thanson's Dictionary of Banking it is started that the word bank is said to be derived from the Italian word "Banco" a bench, the early bankers the Jews in Lom Bozdy transacted their business at benches in the market place. When a banker failed, his "Bance" way broken up by the people, whence on word bankrupt. One of the earliest Italian banks, the bank of Venice, was originated for the management of a public loan, or 'Monte; as it called (Bhandari, 2003)

In the opinion of French writer Revil Pout the use of bank and bank notes were started in Babylon in 600 BC. And the "Bank of Venie" of Italy was established in the middle ages. The use of it in India was started in far ancient age. The manusmriti too has explained the banking system of ancient age. Banking custom and tradition begun before 8th century in Nepal. Bank is financial institution which collects money deposited and advance loans to the needy people. The bank plays a vital role in the development of country. It facilitates the growth of trade and industry and other sector of the national economy.

2.2.2 Origin of Banks

The history of banking development we can't target the bank of Casa De San Giorgio in Genoa was established in 1148, Bank of Venice was established in 1157 and bank of Genoa was established in 1148. In 1401, the Bank of Barcelona was established in Barcelona. In fact, modern bank started to take rapid speed informing and functioning fro 17th century. During this period, Bank of Milan, bank of Florence and Bank of St George were established in Germany and the Bank of England was established in England. In the content to Nepal for the first time the Nepal. Bank limited was established I 1994 B.S (1938 A.D) and the established in 2013 B.S (1957). (Bhandari, 2003)

In conclusion, we can say that banking is not static but a dynamic concept. It is product of centuries and the development which has taken place is the product of a method of trial and error and experiences which were made and the results that followed relating to the acceptance e of money and valuable as deposits.

2.2.3 Origin and Development of Commercial Bank

2.2.3.1 Origin of Commercial Bank

It is said that the World Bank is derived from the Italian word 'Banko' which means that place where people come together for different transaction. The ancient Rome of the 15th Century we can find some history about the practice of various banking functions like money changing, transfer of funds, issue of loans etc, which

are similar to those changing, transfer of funds, issue of loans etc, which are similar to those of modern banking system. The modern banking started from the 1401 in Barcelona of the Spain. In 1600 the bank of Amsterdam (Holland), Bank of Hamburg (Germany) and Bank of England (U.K.) were established.

2.2.3.2 Development of Commercial Banks in Nepal

The modern banking business is not old in context to Nepal. But it is supposed that in ancient time too there was a lending business. During those days people use to borrow money from money lenders paying some interest. In this regard Prof. L.C. Ojha said. "But it is impossible to give correct chronological history in view of the fact that no authentic historical records are available in respect to banking." But it is impossible to give correct chronological histories in view of the fact no authentic historical records are available in respect to banking. " It can be inferred from the history of Nepal regarding the rebuilding of Kathmandu in 723 A.D. by Gunakama Dev, the King of Kathmandu and that of Shankhdar's action of introducing Nepal Sambat some fifty seven years there after to make lending has been prevalent long before that" (Ojha 1965)

During the period of Rana Prime Minister Ranodip Singh a government institution called 'Tejarath' was established. The Tejarath served the public by supplying easy credit at 5% interest on the security of gold and silver ornaments. Tejarath could not fulfill the credit needs of the whole society. It was for a government official only. So, the general people had to depend on money-lenders. The money lenders exploited the rural people in different way. On the other hand, there was need to trade and industry development programs. To make free the rural people from the grips of lenders and to develop trade and industry in the country the need for the commercial bank was realized in the country.

Nepal's banking history had begun with the establishment of Nepal Bank Ltd. in 1973. At the time this bank has authorized capital of Rs.10 million and paid up capital of Rs.842 thousand. Nepal Bank Ltd. was the first commercial bank with 51% government ownership. The following are the commercial banks under establishment until 2011.

- | | |
|--|---|
| i. Nepal Bank Limited | xvi. Laxmi Bank Limited |
| ii. Rastriya Banijya Bank | xvii. Siddhartha Bank limited |
| iii. Nabil Bank limited | xviii. Global Bank limited |
| iv. Nepal Investment Bank Limited | xix. Citizen Bank International limited |
| v. Standard Chartered Bank Nepal Limited | xx. Prime Bank limited |
| vi. Himalayan Bank Limited | xxi. Sunrise Bank limited |
| vii. Nepal SBI Bank limited. | xxii. Bank of Asia Nepal Ltd. |
| viii. Nepal Bangladesh Bank Limited | xxiii. Development Credit Bank Ltd. |
| ix. Everest Bank Limited | xxiv. NMB Bank Ltd. |
| x. Bank of Kathmandu Limited | xxv. KIST Bank Ltd. |
| xi. Nepal credit and commerce (Bank of Ceylon limited) | xxvi. Janata Bank Ltd. |
| xii. Lumbini Bank limited | xxvii. Mega Bank Nepal Ltd. |
| xiii. Nepal Industrial and Commercial Bank Limited | xxviii. Comerz and Trust Bank Ltd. |
| xiv. Machhapuchhre Bank Limited | xxix. Civil Bank Ltd. |
| xv. Kumari Bank Limited | xxx. Century Bank Ltd. |

Source: Nepal Rastra Bank Website

2.2.3.3 Role of Commercial Banks in Nepal

Commercial Banks are one of the most important institutions in the economy. The main objective of commercial bank is to mobilize idle resource for productive use after collecting them from scattered resources. Its role in the economic development is so immense; it brings about greater mobility of resources to meet the emerging necessity of the economy. The essence of the commercial banks is financial intermediate between the ultimate savers and borrowers. In other words a bank's main function is to act as middle man between the surplus and deficit units in the economy and as a bank like any other firm in business to make profit for its shareholders.

The lack of capital formation and their proper mobilization is the main problem in all most all underdeveloped countries Nepal cannot live untouched. Commercial banks play vital role to mobilize and make the capital. So, the role of commercial bank is the very important to develop the country.

2.2.3.4 Function of Commercial Banks in Nepal

There are many functions of commercial banks. They are presented in the point wise basis as follows

a. Accepting Deposits

The main and oldest function of the commercial bank is to accept deposits. A bank accepts deposit in three forms namely saving current and fixed deposit.

i. Current Deposit

The account in which any amount can be deposited and withdrawn at any time is known as current account. The current deposit is also known as demand deposit. Generally, the bank does not pay any interest on such deposits.

ii. Saving Deposits

It is the deposit collected from small deposits and low income depositors. The bank usually pays a certain percentage of interest to the depositors.

iii. Fixed Deposit

Fixed deposit is the one which is required to keep a fixed amount with bank for a specific period. The bank pays a higher interest on such deposits.

b. Advancing Loans

The second major function of the commercial bank is to provide and advance the loans from the money which received by the way of deposits. The loans are granted by bank in form of overdrafts direct loans, cash credit and discounting bills of exchange.

c. Agency Services

A bank performs number of services on behalf of its customers. A bank undertakes the payments of subscriptions, insurance premium rent and collection of cheques, bills, balancing pensions and dividends. The bank charges a small amount of commission for those services. The commercial bank also acts as trustee, executor and administrator.

d. Credit Creation

Credit creation is very important function of the commercial bank. They accept deposit and advance loans. When the banks advance loans, it opens accounts to draw the money by cheque according to borrowers needs. Thus, the loan amount remained with the lending banks in the form of deposit by granting loans, the bank creates credit on deposit.

e. Opens Letter of Credit (L.C.)

It opens L.C. for the import and exports of goods. L.C. is the act of providing guarantee to the foreign businessman on behalf of local businessman.

f. Other Functions

It manages to keep gold silver and valuable items, safely, collects and publishes the financial information, purchases and sells Bills of exchange, provides overdraft facility on the agreement and it also offers security brokerage services, provides financial advising etc.

2.2.3.5 Role of Joint Venture Banks in Nepal

After government introduced 'financial sector reforms in 1980, Nepal allowed the entry of foreign banks as Joint Ventures with up to maximum of 50%, equity participation. ' A meaningful step towards financial liberalization was under taken the FY 1987/88, with the objectives of expediting the process of economic development under structural adjustment program and major reforms including liberalization of interest rate, strengthening of banking operation and a shift from direct to indirect monetary control instruments.

The role of the Joint Venture banks performing financial activities in Nepal can be classified as follows:

Healthy Competition

The induction of Joint Venture banks also brings the benefit of healthy competition of which the main beneficiaries are the bank customers and the economy. And the competition would force the domestic banks, Nepal Bank Ltd. and Rastriya Banijya Bank, to improve their services and efficiency. The increase in competition also force the existing banks to improved their qualities of services by simplifying procedures providing training and motivation to their own staff to respond to new challenges. A positive by product of the increased competition is that it could also encourage local banks to respond by opening branches abroad.

New Banking Techniques

Modern banking services are being provided to Nepalese financial system by new Joint Venture Banks. New banking techniques such as Tele-Banking, Computerizations, Hypothecation etc. are the important contribution of Joint Venture Banks to the gradually changing Commercial Banking Scenario.

Foreign Investment

Foreign investment is one of the important aspects of the economic development. When looking at the possibility of investment in Nepal multinational companies are unfamiliar to the local rules and regulations and practices. In this context the joint venture banks help the multinational companies to build up their confidence for investment by providing necessary information and financial support. This will ultimately benefit to Nepalese economy.

2.2.5 Conceptual Review of Commercial/Joint Venture Banks

A bank is a business organization that receives and holds deposited of funds from others makes loans extends credit and transfer funds by written under other of deposits" commercial bank act 1974 of Nepal has defined as "a commercial bank is one which exchanges money deposits money accepts deposits, frantic loans and performs commercial banking functions and which is not a bank meant for cooperative, agriculture industries or for such specific purpose." (Commercial Bank Act, 1974)

A joint venture is the joining of forces between two or more enterprises for the purpose of carrying out specific operation. (Gupta, 1984)

2.3 Banks under Study

2.3.1 Standard Chartered Bank Nepal Limited

Standard Chartered Bank Nepal Limited has been in operation in Nepal since 1987 when it was initially registered as a joint-venture operation. Today the Bank is an integral part of Standard Chartered Group having an ownership of 75% in the company with 25% shares owned by the Nepalese public. The Bank enjoys the status of the largest international bank currently operating in Nepal.

Standard Chartered has a history of over 150 years in banking and operates in many of the world's fastest-growing markets with an extensive global network of over 1750 branches (including subsidiaries, associates and joint ventures) in over 70 countries in the Asia Pacific Region, South Asia, the Middle East, Africa, the United Kingdom and the Americas. As one of the world's most international banks, Standard Chartered employs almost 75,000 people, representing over 115 nationalities, worldwide. This diversity lies at the heart of the Bank's values and supports the Bank's growth as the world increasingly becomes one market.

Standard Chartered Bank Nepal Limited offers a full range of banking products and services in Consumer banking, Wholesale and SME Banking catering to a wide range of customers encompassing individuals, mid-market local corporates, multinationals, large public sector companies, government corporations, airlines, hotels as well as the DO segment comprising of embassies, aid agencies, NGOs and INGOs.

The Bank has been the pioneer in introducing 'customer focused' products and services in the country and aspires to continue to be a leader in introducing new products in delivering superior services. It is the first Bank in Nepal that has implemented the Anti-Money Laundering policy and applied the 'Know Your Customer' procedure on all the customer accounts.

Corporate Social Responsibility is an integral part of Standard Chartered's ambition to become the world's best international bank and is the mainstay of the Bank's values. The Bank believes in delivering shareholder value in a socially, ethically and environmentally responsible manner. Standard Chartered throughout its long history has played an active role in supporting those communities in which its customers and staff live. It concentrates on projects that assist children, particularly in the areas of health and education. Environmental projects are also occasionally considered. It supports non-governmental organisations involving charitable community activities. The Group launched two major initiatives in 2003 under its 'Believing in Life' campaign- 'Living with HIV/AIDS' and 'Seeing is Believing'.

2.3.2 Nabil Bank Limited

Nabil Bank Limited, the first foreign joint venture bank of Nepal, started operations in July 1984. Nabil was incorporated with the objective of extending international standard modern banking services to various sectors of the society. Pursuing its objective, Nabil provides a full range of commercial banking services through its 47 points of representation across the kingdom and over 170 reputed correspondent banks across the globe. Nabil, as a pioneer in introducing many innovative products and marketing concepts in the domestic banking sector, represents a milestone in the banking history of Nepal as it started an era of modern banking with customer satisfaction measured as a focal objective while doing business.

2.3.3 Everest Bank Limited

Everest Bank Limited (EBL) started its operations in 1994 with a view and objective of extending professionalized and efficient banking services to various segments of the society. The bank is providing customer-friendly services through its Branch Network. All the branches of the bank are connected through Anywhere Branch Banking System (ABBS), which enables customers for operational transactions from any branches. With an aim to help Nepalese citizens working abroad, the bank has entered into arrangements with banks and finance companies in different countries, which enable quick remittance of funds by the Nepalese citizens in countries like UAE, Kuwait, Bahrain, Qatar, Saudi Arabia, Malaysia, Singapore and U K. Bank has set up its representative offices at New Delhi (India) to support Nepalese citizen remitting money and advising banking related services.

Punjab National Bank (PNB), our joint venture partner (holding 20% equity in the bank) is the largest nationalized bank in India. With its presence virtually in all the important centers at India, Punjab National Bank offers a wide variety of banking services which include corporate and personal banking, industrial finance, agricultural finance, financing of trade and international banking. Among the clients of the Bank are Indian conglomerates, medium and small industrial units, exporters, non-resident

Indians and multinational companies. The large presence and vast resource base have helped the Bank to build strong links with trade and industry.

2.4 Review of Related Studies

2.4.1 Review of Journal

According to Poudel, N.P. (2053 BS), balance sheet, profit and loss a/c and the accompanying notes are the most useful aspects of the banks. It needs to understand the major characteristics of banks balance sheet and profit and loss a/c. The banks balance sheet is composed of financial claims as liabilities in the form of deposits and as assets in the form of loans. Fixed assets account form as small portion of the total assets> Financial innovations which are generally contingent I nature are considered as off balance sheet item.

Interest received on loans and advances and investment and paid on deposited liabilities are the major components of profit and loss account. The users of the financial statement of bank need relevant, reliable and comparable information which assist them in evaluating the financial position and performance of the bank and which is useful to them in making economic decisions.

According to Mr Poudel, the principle objectives of analyzing and solvency most of users of the financial statements are to identify liquidity profitability and solvency. Most of users of the financial statements are interest in assessing the banks overall performance which are affected by the following factors.

- The structure of balance sheet and profit and loss accounts.
- Operating efficiency and internal management system.
- Managerial decision taken by top management regarding interest rate exchange rate lending policies etc.

The other factors to be considered, in analyzing the financial statement of bank is to assess the capital adequacy ratio and liquidity position. In the line of

adequacy of bank is assessed on the basis of risk weighted assets. It indicated a banks strength and solvency.

Liquidity is measured by the speed with which banks assets can be converted into cash to meet deposited with drawls and other current obligations. It is also important in view f survival and growth of a bank.

Himalayan SIB Rana, in his interview to business age says that in short term they have Threats. All the banks are operating efficiently and earning a lot of money and paying handsome dividends to the shareholders. Hence, the price of their shares has gone up. In near future it depends on peace and security situation in the country. If the situation does not improve in the next two or three years, then only the top layer bank will service while the other banks and the finance companies will find it very hard.

2.4.2 Review of Thesis

A thesis by Reenu Maharjan (2008 AD), thesis entitled, “Financial Performance of Everest Bank Ltd and Himalayan Bank Ltd” which focused on commercial bank for the fiscal year from 2002/03 to 2006/07 and some financial tools with statistical tools used to conclude that overall comparative study indicates the sound health concerned banks and have found to explore towards modern technologies like ATM and credit cards. The research suggests that liquidity position of HBL to be maintained. In context of capital adequacy and profitability, EBL is a bit ahead than HBL. The operating income so far to EBL is very efficient in comparison to HBL and M/s Maharjan suggest that HBL to invest towards loans and advances too.

Mr. Shree Ram Ghimire (1999 AD) in the thesis entitled, "A Study of financial performance of finance companies in Nepal" concluded that Nepalese finance companies face several problems related to fund mobilization and investment. They work with traditional approach. Finance companies have to revitalize their role require encouraging environment to be innovative and diversity their business to other depending only on time bound. Fixed deposit that cannot always with long term

lending maturity structure. Financial companies continue to have a gradual diversification of their functions by shifting a considerable portion of their assets. In this way he give force to reallocation the funds and diversity such funds innovative and higher profitable area.

Jha Resta (1998 AD) in his thesis has examined the comparative financial strengths and weaknesses of NABIL, NGBL and HBL by analyzing different financial ratios, dividend policies and was also studied the operational aspects of these banks.

Jha R. (1999 AD) with the thesis in a topic of "A comparative analysis of financial performance of the HBL, NABIL, NIBL and NGBL" has examined the comparative strength and weakness of four competitive JVBs. he has studied the operational aspects of these JVB taking into account the products they offer. According to his study, NIBL had better result in case of the profitability except return on net worth. Similarly it had better liquidity, credit deposit and capital adequacy position as compared to HBL, NABIL and NGBL. NGBL holds highest rank regarding performing assets ratio and other indict ors like D/P ratio, EPS and BVPS. All the selected JVBs are extremely levered, though NIBL and NABIL had relatively lower ratios. Trend analysis showed, NABIL'S growth in terms of PBT, loans and advances and total deposits has been increasing rapidly that of remaining three selected JVBs.

Shrestha Anil, (March 2012) in his thesis titled "A study on capital adequacy and loan loss provision of Nepalese banks (with special reference to NIBL, NABIL, SCBNL, and EBL), has focused toward capital adequacy ratio (CAR) and loan loss provision followed by some commercial banks and compared it with NRB directives. He comes to the conclusion that the banks under consideration are maintaining core capital around 60% and bearing more risk by investing over high risk investments. He expresses that the banks have managed the loan loss provision as per NRB requirements. However, it is not sufficient and suggests managing more for loan loss provision. He has suggested for Credit Rating Agency (CRA) to be established for banks to assess the potential customers and potential defaulters in order to make correct decision to cure banking health.

2.5 Research Gap

Commercial Bank invests its deposit in different profitable sector according to the directives and circulars of the Nepal Rastra Bank and guidelines and policy of their own bank. Financial analysis statement has to prepare according to direction of NRB. Nepal Rastra Bank's policy and guidelines are changing according time. So, the up to dated study over the change of time frame is major concern for the researcher and concerned organization as well as industry as a whole. This study on financial performance of Standard Chartered Bank, Nabil Bank Ltd. and Everest Bank Ltd. covers the data of 5 years including latest data to analyze and identify the financial position of commercial banks.

No research has been undertaken regarding the comparative analysis of financial performance among Standard Chartered Bank, Nabil Bank Ltd. and Everest Bank Ltd. consequently for this recent past. Some researcher has done the comparative studies of other joint venture bank. But within this bank, study is not found. Financial analysis is the major function of every commercial bank for evaluating the financial performance. Therefore it is the major concern of stakeholders to know the financial situation of the banks.

SCB, Nabil and EBL are the leading joint venture commercial banks of the country having the huge market and its investment activities and these banks has significant impact on developing the economy of the country. Every year the financial performance is changing according to the environment of the country. Hence, this study fulfills the prevailing research gap about the in depth analysis of the financial performance which is the major concern of the shareholders and stakeholders.

CHAPTER - 3

RESEARCH METHODOLOGY

The major objectives of this research are to evaluate financial performance of commercial banks through comparative study of i.e. SCB, Nabil and EBL in the micro level and to highlight the effects of the financial decision of these banks in the economy. This chapter will outline the methods, followed in the process of analyzing the financial performance of three joint venture banks.

The following are the details of research methodology used in the analysis

3.1 Research Design

Research design is a plan structure and strategy of the investigations conceived to obtain answers to the problems and to control variance. The research will be both analytical and descriptive. The research design in this study basically follows the comparative evaluation of financial performance of three banks: (SCB, Nabil and EBL). Since the study will incorporate mostly secondary data the research design will be less descriptive and more prescriptive.

3.2 Sources of Data

This study is basically done on the basis of secondary data however the data from primary sources have also been used in the study as far as possible. The analysis and presentation of data are mainly based on annual report of selected banks. Similarly various data and information are collected through journals, periodicals, news papers, bulletins, magazines and published and unpublished reports from various sources.

3.3 Population and Sample

The population of this study constitutes the registered 30 commercial banks. Among them three joint venture banks Standard Chartered Bank Nepal Ltd., NABIL Bank Ltd. and Everest Bank Ltd are selected as sample size of those joint represent 10% of the total population.

3.4 Data Collection Procedures

This study is based on secondary data. Secondary data have been taken from published documents and annual reports of Standard Chartered Bank Nepal Ltd., NABIL Bank Ltd. and Everest Bank Ltd from fiscal year 2005/06 to 2009/10 and other bulletins, unpublished thesis and dissertations.

3.5 Method of Analysis

In order to ascertain actual financial position of any firm various analytical tools can be used. Using various financial and statistical, analytical tools the data are analyzed. Such analytical tools are presented in order as below.

3.5.1 Financial Tools

Out of various financial tools, ratio analysis is the most common and powerful tool of financial analysis. So ratio analysis is used to analyze the financial performance of selected banks in this study.

3.5.1.1 Ratio Analysis

An arithmetical relationship between two figures is known as ratio. It is computed by dividing one item of relationship with the other. Ratio simply means one number expressed in terms of another. Ratio analysis is a technique of analysis and interpretation of financial statement. To evaluate the performances of an organization by creating the ratios from the figure of different accounts consisting in balance sheet

and income statement is known as ratio analysis. The qualitative judgment regarding financial performance of a firm can be done with the help of ratio analysis.

The ratio analysis involves comparison for a useful interpretation of the financial statement. A single ratio itself does not indicate favorable or unfavorable condition. It should compare with some standards. For this study ratios are categorized into the following major headings.

3.5.1.1.1 Financial Policy Measure

a. Liquidity Ratio

One of the first concerns of most financial analyst is liquidity: will the bank be able to meet its short-term maturing obligations. Thus, it indicated the bank's ability to pay its current liability i.e., day-to-day financial obligation. It is measurement of speed with which a bank's assets can be covered into cash to meet deposit withdrawal and other current obligations. The following ratios are calculated under the liquidity ratios.

i. Current Ratio

A current ratio (CR) is the quantitative relationship between current assets (CA) and current liabilities (CL). So, the ratio is calculated by dividing CA by CL

$$\therefore CR = \frac{CA}{CL}$$

CA includes those assets and cash which can be converted into cash in the short term i.e. within a year. These include cash and bank balance, investment in government securities, loans and advances, debtors, prepaid expenses, bills for collection, interest receivable, marketable securities etc.

Current liabilities include those obligations which mature within a year. These include creditors, bank overdrafts, bills payables, outstanding, expenses, current saving and short term deposit, fixed deposits maturing in a year borrowing etc.

ii Cash and Bank Balance to Current Deposit Ratio

This ratio is designed to measure the banks ability to meet the immediate obligations. This ratio is calculated by dividing current deposit to cash and bank balance. Cash and bank balance comprises cash in hand, foreign cash in hand, cheques and other cash items, balance with domestic bank and balance held in foreign banks. Current deposit consist deposits excluding saving and fixed.

Symbolically,

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

iii Cash and Bank Balance to Current and Saving Deposit Ratio

This ratio is computed by dividing cash and bank balance by current and saving deposits. This ratio shows the ability of banks immediate funds to cover their current and saving deposits. Higher ratio shows higher liquidity position and ability to cover the deposits and vice versa.

$$\text{Cash and Bank Balance to Current and Saving Deposit Ratio} = \frac{\text{Cash \& Bank Balance}}{\text{Current \& Saving Deposit}}$$

iv Fixed Deposit to Total Deposit Ratio

This ratio is computed by dividing fixed deposit by total deposit. The ratio shows what percentage of total deposit has been collected in form of fixed deposit. High ratio indicates better opportunity available to the bank to invest in sufficient profit generating long-term loans.

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

b. Leverage Ratio

Leverage ratio shows the proportion of debt capital and equity capital. It shows the long-term solvency of the firm. The use of finance is referred by financial leverage. “When a firm borrows money, it promises to make series of fixed payments, which create financial leverage.” (Brealy & Myers, 1991)

This ratio is the key ratio to measure the strength and weaknesses of the capital structure of the company. It indicates the relative contribution of the owners’ equity and the outsider’s fund that is debt under this ratio, the following ratios are used.

i. Debt Equity Ratio

This ratio is used to measure the creditors claim against the owners’ claims. The total debt obligation is measured as ratio of the total shareholders equity. It also indicates the composition of debt and equity in the capital structure.

$$\text{Debt Equity Ratio} = \frac{\text{TotalDebt}}{\text{ShareholdersEquity(NetWorth)}}$$

ii. Debt Asset Ratio

Debt asset ratio is designed to see the contribution of outsiders fund in financing the assets. In other words, what portion of the total assets is financed for the debts by total assets.

$$\text{Debt Asset Ratio} = \frac{\text{TotalDebt}}{\text{TotalAsset}}$$

3.5.1.1.2 Operating Efficiency Measure

a. Assets Management Ratio (Activity Ratio)

An asset management ratio indicates how efficiently the selected banks have arranged and invested their limited sources at its commend. The following ratios are used under this ratio.

i. Loan and Advance to Total Deposit Ratio

Loan and Advances are the major resources of investment to generate income in the commercial banks. Deposits are used to grant loans and advances. Therefore, the bank should manage its deposits efficiently. Loan and advances consist of loans, advances, cash credit, overdrafts and foreign bills purchased and discounted. This ratio is calculated to determine the utilization of deposits for profit generating purpose on the loans and advances. This ratio is calculated by using following formula.

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

ii Loan and Advance to Fixed Deposit Ratio

Fixed deposits are the long-term interest bearing obligations and loans and advances is the major sources of investment to generate the income by the commercial banks. This ratio is calculated to determine the utilization of fixed deposits in profit generating purpose on loans and advances. This ratio can be calculated as

$$\text{Loan and Advance to Fixed Deposit Ratio} = \frac{\text{LoanandAdvance}}{\text{FixedDeposit}}$$

iii Loan and Advance to Saving Deposit Ratio

Saving deposit is the short-term interest bearing liabilities and loans and advances are the major sources of investment to generate income in the commercial bank. The ratio is employed for the purpose of measuring utilization of saving deposit in generating revenue by giving loans and advances to the client, the ratio is calculated as,

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

iii. Loan and Advances to Total Assets Ratio

Loan and advances is the major component in the total assets. Total assets indicate the ability of bank to analyze its deposits in the form of loan and advances to earn high return. Total assets includes current assets, loans for development banks and other fixed assets but excludes off balance sheet items like letter of credit, letter of guarantee etc.

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

b. Credit Ratio

This ratio is used to measure the credit creation capacity of the banks. In other words this ratio indicates how far the bank are able to create credit from the deposit liabilities. Deposit collected from the people is the major financial sources of the banks. A bank invests the collected deposits to the various incomes generating sectors. Under this ratio the following ratios are analyzed.

i. Total Investment to Total Deposit Ratio

This ratio is designed to see the investment efficiency with regard to total deposit accepted by commercial banks. Investment includes both short-term investment and

long-term investment i.e. investment on government securities and investment on shares, debenture etc.

This ratio can be found out using the following formula.

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

ii. Investment on government Securities to Total Deposit Ratio

This ratio is designed to see the investment on government securities made by commercial banks, vice versa the total deposits accepted. It is computed by finding the investment on government securities by total deposits.

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

iii. Cash and Bank Balance to Total Deposit Ratio

The proportion of the bank idle money with total funds collected is indicated by this ratio. High ratio means high idle money, which shows the inefficiency of management, as well as increase cost of capital.

Cash and Balance are the idle money kept for day-to-day payment. These are liquid current assets, which include loan and foreign currency on hand, cheque for clearing and other cash item, balance with NRB, other local banks and with foreign banks. The total deposits consist of current, saving and fixed deposit amount. Total deposits to cash and bank balance determine this ratio.

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

3.5.1.1.3 Performance Measure

a. Profitability Ratio

Profit earning is the main objective of each business concern. Profitability ratios are used to indicate and measure the efficiency of operation of a firm in terms of profit. Profitability is the main base for liquidity as well as solvency. Creditors, banks and financial institution are interested in profitability ratios since they indicate liquidity or capacity of the business to meet interest obligations. Owners are interested in profitability for they indicate the growth of and also the rates of return on their investments; the following ratios are used in such type of analysis:

i. Return on Equity (ROE)

The ratio calculated the percentage return, the shareholders fund has earned. Net worth or shareholders equity refers to the owners claim on the assets of the bank. The ROE measures the earned on the owner's investment. This ratio indicates how well the banks have used the resources of the owners. It is calculated by dividing net profit after tax by net worth i.e., shareholders equity

$$ROE = \frac{\text{Earning after tax (EAT) / Net Profit}}{\text{Shareholders' equity}}$$

ii. Return on Total Assets (ROA)

It measures a firm's net income in relation to the total assets. This ratio is a useful measurement of the profitability of all financial resources invested in the banks assets. The ROA or profit to assets ratio is calculated by dividing the amount as net profit by the amount of total assets.

$$ROA = \frac{\text{Earning after tax (EAT) / Net Profit}}{\text{Total Asset}}$$

iii. Interest Earned to Total Assets Ratio

This ratio shows how much interest has been generated by mobilizing the assets of the banks. Interest occupies significant place of income for the banks. Generally, banks earned interest through the provision of loans and advances, overdrafts and investment in securities. Higher the ratio indicated higher efficiency in the mobilization of resources and ability of interest earning and vice versa. Following formula is used to calculate the ratio.

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

b. Valuation Measure

i. Earning Per Share (EPS)

This ratio tells us what profit has been earned by the common shareholders for every share. EPS refers to the income available to the common shareholders on per share basis. The EPS is calculated by following formula.

$$\text{Earning Per Share (EPS)} = \frac{\text{Net Income after Tax}}{\text{Number of Common Stocks Outstanding}}$$

ii. Dividend Per Share (DPS)

Dividend per share is calculated to know proportion of the earning distributed to the shareholders per share. DPS is calculated with the help of following formula,

$$\text{Dividend Per Share (DPS)} = \frac{\text{Earning paid to Shareholders}}{\text{Number of Common Stocks Outstanding}}$$

iii. Dividend Payout Ratio

This ratio represents the percentage of the profit distributed as dividend and the percentage retained as revenue and surplus for the growth of the bank. It is determined by dividing dividend per share by earning per share as expressed below,

$$\text{Dividend Payout Ratio} = \frac{\text{DividendPerShare(DPS)}}{\text{EarningPerShare(EPS)}}$$

iv. Price Earning Ratio (P/E Ratio)

P/E ratio is widely used to evaluate the bank's performance as expected by investors. It represents the investors' expectation about growth in the banks earning. In another words it measures how the market is responding towards the earning performance of the concerned institution. High ratio indicated greater expectation of the market towards the achievement of bank. It is obtained by dividing market value per share by earning per share.

$$\text{P/E Ratio} = \frac{\text{MarketValuePerShare(MVPS)}}{\text{EarningPerShare(EPS)}}$$

3.5.2 Statistical Tools

The word statistics refers either to quantitative information or to a method of dealing with quantitative information. (Gupta S.P., "Elementary Statistical Methods, S Chand & Sons, 1833.)

The relationship between different variable related to the study would be drawn out using statistical tools. The following can be used.

3.5.2.1 Arithmetic mean \bar{X}

It is also known as the average value. AN arithmetic mean of a given set of observations is their sum divided by the no of observations. In general, of X_1 ,

X_2, \dots, X_n , are the given n observations, their arithmetic mean can be derived as:

$$\bar{X} = \frac{X_1 + X_2 + \dots + X_n}{N} = \frac{\sum x}{N}$$

Where,

N = No of observations

\bar{X} = arithmetic mean

The AM is a single value of selected series which represent them in average out of the out of various measures of the central tendency, AM is one of the useful tool to find out the average value of the given data.

3.5.2.2 Standard Deviation (SD)

Standard deviation is absolute measure of dispersion of the data from the arithmetic mean. Standard deviation is usually denoted by small sigma (σ). It is defined as positive square root of the arithmetic mean of the square of the deviation taken from their arithmetic mean.

$$\text{Standard Deviation } (\sigma) = \sqrt{\frac{1}{n} \sum (X - \bar{X})^2}$$

$$\text{Alternatively, } \sigma = \sqrt{\frac{\sum X^2}{N} - \left(\frac{\sum X}{N}\right)^2}$$

3.5.2.3 The Coefficient of Variation (CV)

The CV is the relative measure of dispersion, comparable across distribution which is defined as the ratio of standard deviation to the mean expressed in percentage.

$$CV = \frac{\sigma}{\bar{X}} \cdot 100$$

Where,

$$\sigma = \sqrt{\frac{\sum X^2}{N} - \left(\frac{\sum X}{N}\right)^2}$$

It is also a useful to compare the variation in data groups with different mean.

3.5.2.4 Correlation Analysis

Correlation analysis is the analysis, which reflects that the variables of the two different data are related or we can say that correlation is the analysis of relation between more than one variable. In other words, correlation is a statistical tool measures the relationship between/among variables, it shows the degree and direction of such relationship. In this analysis we examine the data are mutually dependent or not. When the relation is of quantitative nature, the appropriate statistical tools for discovering and measuring the relationship and expressing it in a belief formula is known as correlation.

The relation between the data may be either positive or negative. It can be determined by different ways such as graphical representation, formula method etc. When both variables are moving upwards or downwards in the same proportion, it is said to be the condition is said to be negative correlation. The main purpose of this study is to find out the correlation between selected ratios with each other. The correlation coefficient is denoted by the symbol 'r'. To calculate correlation between variables, we use the following formula.

$$r = \frac{N\sum xy - \sum x\sum y}{\sqrt{N\sum x^2 - (\sum x)^2} \sqrt{N\sum y^2 - (\sum y)^2}}$$

Where,

r = coefficient of correlation between variable *x* and *y*.

$N = \text{Number of pairs in observation}$

$\sum xy = \text{Sum of the product of the variables } x \text{ and } y$

$\sum x = \text{Sum of variable } x$

$\sum y = \text{Sum of variable } y$

$\sum x^2 = \text{Sum of square of variable } x$

$\sum y^2 = \text{Sum of square of variable } y$

The value of the coefficient of correlation as obtained by the above formula shall always lie between +1 and -1. Where $r = +1$, means there is perfect positive correlation between the variables. Where $r = -1$, means there is perfect negative correlation between the variables. Where $r = 0$, it means there is no relationship between the two variables. However in practice such values of r as $+1, -1$ and 0 are rare.

3.5.2.5 Coefficient of Determination

The square of the correlation coefficient is called the coefficient of determination. It is used to interpret the value of the correlation coefficient. The main significance of the coefficient of determination is to represent the proportion of total variations in the dependent variable, which is explained by the variations in the independent variables.

It is calculated as

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

3.5.2.6 Probable Error

Probable error is an old measure of ascertaining the reliability of the value of coefficient of correlation. It is used to test whether the calculated value of sample correlation coefficient is significant or not and also it is used to determine the limits within which the population correlation coefficient may be expected to lie. The probable error may lead to fallacious conclusions particularly when the number of observations is small.

It is calculated as follows

$$PE(r) = 0.6745 \times SE(r)$$

where,

$$SE = \text{Standard Error} = \frac{(1 - r^2)}{\sqrt{n}}$$

$$\text{Limits of population correlation coefficient} = r \pm PE(r)$$

3.5.2.7 Time Series/Trend Analysis

Trend analysis is an analysis of financial ratio over time used to determine the importance of deterioration of its financial situation. (Gupta 1995)

Trend analysis informs about the expected future return future achievement of the bank, future credit worthiness of the bank, and financial capacity of the bank and may other information which would be helpful to concerned parties of the bank such as share holders, Professional bankers, depositors and borrowers. In this study, the method least square is selected as statistical tool for the analysis of selected banks. The formula of least square method for the straight line is represented by the equation.

$$y = a + bx$$

where,

y = trend value

a = y intercept or the computer trend figure of the y variables when $x=0$

b = slope of the trend line of the amount of change in y variables that is associated with change in 1 unit in x variable.

x = variables that represent time, i.e. time variable.

The value of the constants a and b can be determined by solving the following two normal equations.

$$\sum y = Na + b \sum x \dots\dots\dots(i)$$

$$\sum xy = a \sum x + b \sum x^2 \dots\dots\dots(ii)$$

Where N = total number of years.

But for simplification, if the time variable is measured as deviation from its mean, i.e. mid point is taken as the origin the negative values in the first half of the series balance out the positive values in the second half so that $\sum = 0$, the value of constant a and b can easily determined by using following formula.

$$a = \frac{\sum x}{n}$$

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

After reviewing the relevant literatures and highlighting the research methodology now the analysis part of the research is going to be undertaken.

CHAPTER - 4

PRESENTATION AND ANALYSIS OF DATA

This chapter includes the presentation, analysis and interpretation of data as per the research methodology dealt in the third chapter. The data have been analyzed by using different financial and statistical tools. The result thus obtained has been interpreted keeping in mind the conventional standard with respect to ratio analysis, directives of NRB and other factors as per the nature of the tools. Financial performance of the sample banks has especially been analyzed in cross - sectional manner. In brief, the data collected have been analyzed and interpreted through the following financial and statistical tools.

- * Ratio Analysis
- * Correlation Analysis

4.1 Ratio Analysis

Ratio analysis has been adopted to evaluate the performance, operation efficiency and financial health of the sample banks. In order to analyze and interpret the collected data the following measures have been used under ratio analysis.

4.1.1 Liquidity Ratio

The liquidity of a business firm is measured by its ability to satisfy its short term obligations as they come due. Liquidity refers to the solvency of the firm's overall financial position. The following ratios are used to measure the liquidity position of SCB, Nabil and EBL with the help of financial data of past five years of the banks.

- a. Current Ratio
- b. Cash and Bank Balance to Current Deposit Ratio
- c. Cash and Bank Balance to Current & Saving Deposit Ratio

d. Fixed Deposit to Total Deposit Ratio

The following bar diagram shows the current ratio of SCB, Nabil and EBL

Figure 4.1

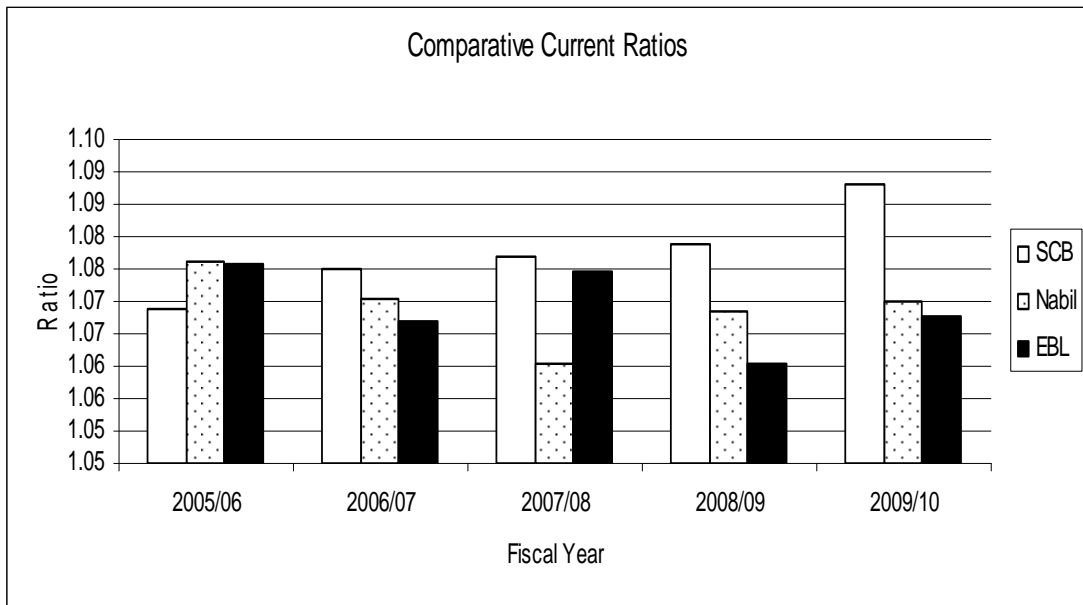


Table 4.1
Current Ratio Table

Year	SCB	NABIL	EBL	Average
2005/06	1.07	1.08	1.08	1.07
2006/07	1.08	1.07	1.07	1.07
2007/08	1.08	1.06	1.07	1.07
2008/09	1.08	1.07	1.06	1.07
2009/10	1.09	1.07	1.07	1.08
Mean	1.08	1.07	1.07	1.07
SD	0.01	0.01	0.01	

Above Figure 4.1 related with Table 4.1 has shown that the average ratio maintained by SCB, Nabil and EBL is 1.07 whereas in individual case, SCB has maintained above average in consecutive fiscal years. The other two banks have well fluctuated ratios throughout the period.

Figure 4.2

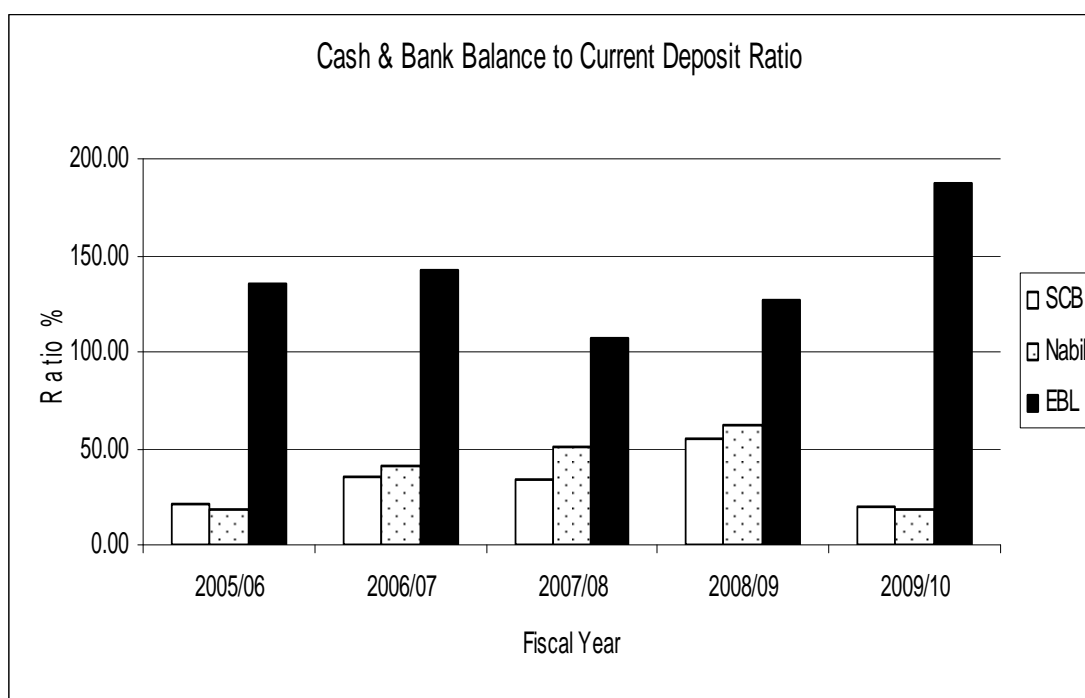


Table 4.2
Cash and Bank Balance to Current Deposit Ratio (%)

Year	SCB	NABIL	EBL	Average
2005/06	20.67	18.56	135.54	58.26
2006/07	35.14	41.23	142.86	73.07
2007/08	33.20	50.55	107.05	63.60
2008/09	54.54	61.54	126.84	80.97
2009/10	19.76	17.71	187.35	74.94
Mean	32.66	37.92	139.93	70.17
SD	14.10	19.44	29.70	

Above Figure 4.2 is the representation of data from Table 4.2 and shows the comparative position of Cash and Bank Balance to Current Deposit for SCB, Nabil and EBL. From the figure it is clearly seen that liquidity position of EBL is distinctly the highest among three. EBL has maintained the double of its liquidity position i.e., more than 100% each of the fiscal year of the entire period. The other two banks SCB and Nabil have maintained their liquidity position to approximately 35% with lower degree of variation.

Figure 4.3

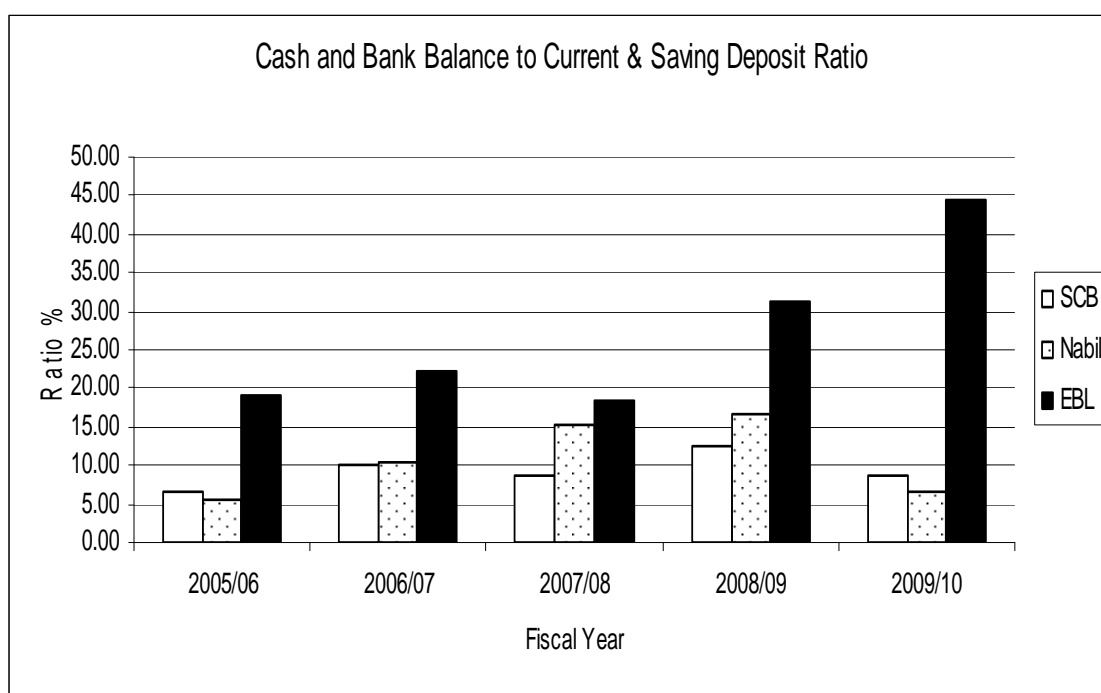
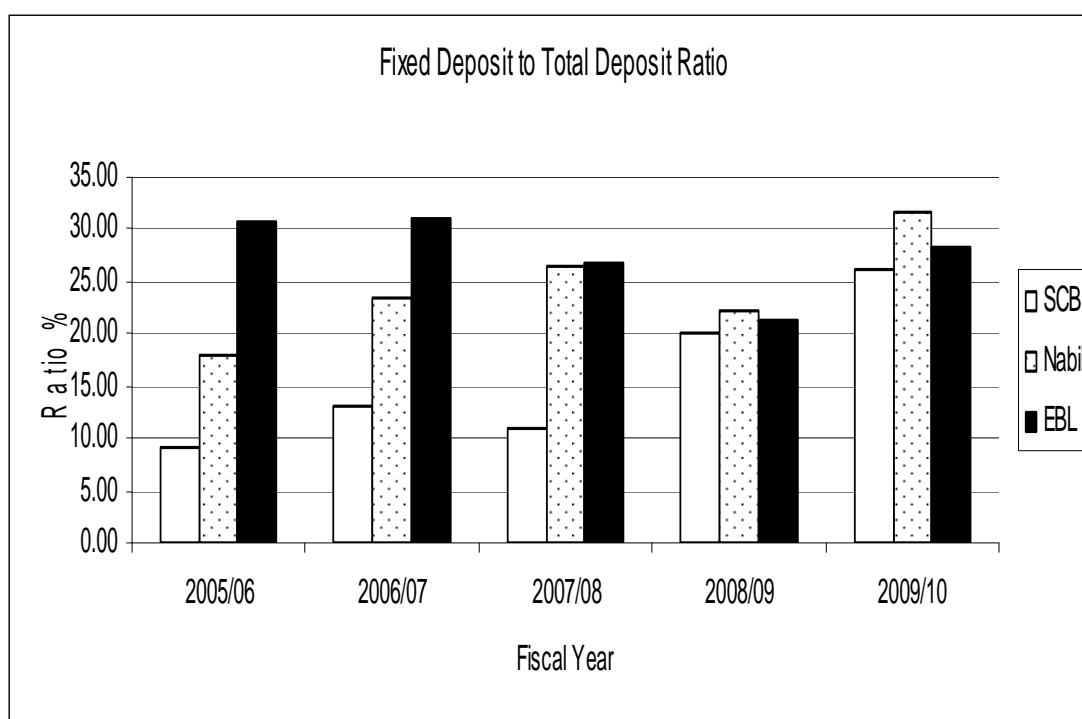


Figure 4.3 is the outcome of data from Table 4.3, which shows the Cash and Bank Balance position towards Saving Deposit. In this figure, EBL has again distinctly maintained its liquidity position in comparison to SCB and Nabil. The two banks SCB and Nabil have maintained their liquidity position around 10% whereas EBL has 27% in average for five year period. The highly liquid position for EBL can be seen in fiscal year 2009/10.

Table 4.3
Cash and Bank Balance to Current & Saving Deposit Ratio (%)

Year	SCB	NABIL	EBL	Average
2005/06	6.62	5.40	19.23	10.42
2006/07	10.09	10.31	22.34	14.24
2007/08	8.53	15.31	18.56	14.13
2008/09	12.60	16.78	31.38	20.25
2009/10	8.69	6.46	44.59	19.91
Mean	9.31	10.85	27.22	15.79
SD	2.22	5.11	10.98	

Figure 4.4



The above figure is the plot of data from Table 4.4. The graph shows the ratios are consistent for Nabil and EBL in later half of the period whereas SCB started with low,

maintained its position in neck to neck with other two banks. This ratio implies the investment opportunity the banks have with high interest rate.

Table 4.4
Fixed Deposit to Total Deposit Ratio (%)

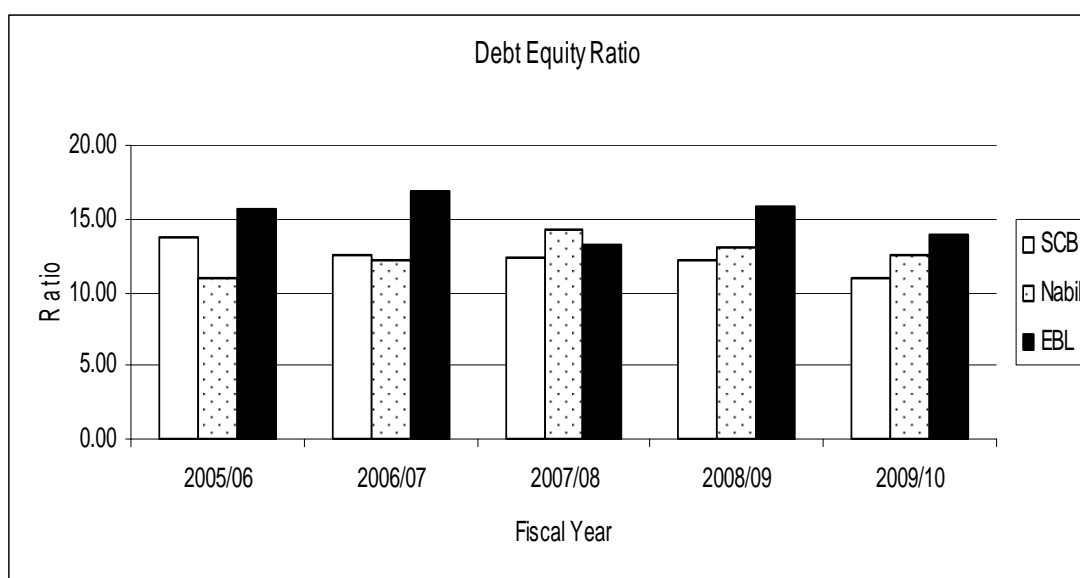
Year	SCB	NABIL	EBL	Average
2005/06	9.26	17.83	30.74	19.28
2006/07	12.97	23.28	30.94	22.40
2007/08	11.10	26.52	26.89	21.50
2008/09	20.09	22.25	21.16	21.17
2009/10	26.08	31.70	28.27	28.68
Mean	15.90	24.32	27.60	22.60
SD	7.01	5.17	3.98	

4.1.2 Leverage Ratio

This ratio is the key ratio to measure the strength and weaknesses of the capital structure of the company. It indicates the relative contribution of the owners' equity and the outsider's fund that is debt under this ratio, the following ratios are used.

- a. Debt Equity Ratio
- b. Debt Asset Ratio

Figure 4.5



The Table 4.5 is the computation for Debt to Equity ratio for SCB, Nabil and EBL for the period from 2005/06 to 2009/10. Here the almost consistent ratios have been found to be maintained by all the three banks. However, SCB and Nabil have similar average ratio of 12 times and EBL imposed for 15 times the shareholders equity. It can be observed that EBL has put lesser influence of shareholder than other two banks at a quick glance of figure value.

Table 4.5
Debt Equity Ratio

Year	SCB	NABIL	EBL	Average
2005/06	13.69	10.91	15.58	13.39
2006/07	12.51	12.25	16.84	13.87
2007/08	12.37	14.24	13.13	13.25
2008/09	12.13	13.01	15.75	13.63
2009/10	10.93	12.60	14.00	12.51
Mean	12.33	12.60	15.06	13.33
SD	0.98	1.21	1.48	

The second study in leverage analysis is made through study of Debt to Asset ratio. It is worked out in Table 4.6 and presented the same in bar diagram in Figure 4.6. The Table value of average ratio is near about 92.5% for all the three banks. The consistency is clearly observed in this ratio analysis and all the banks have made approach to maintain above 90% in entire period under study.

Figure 4.6

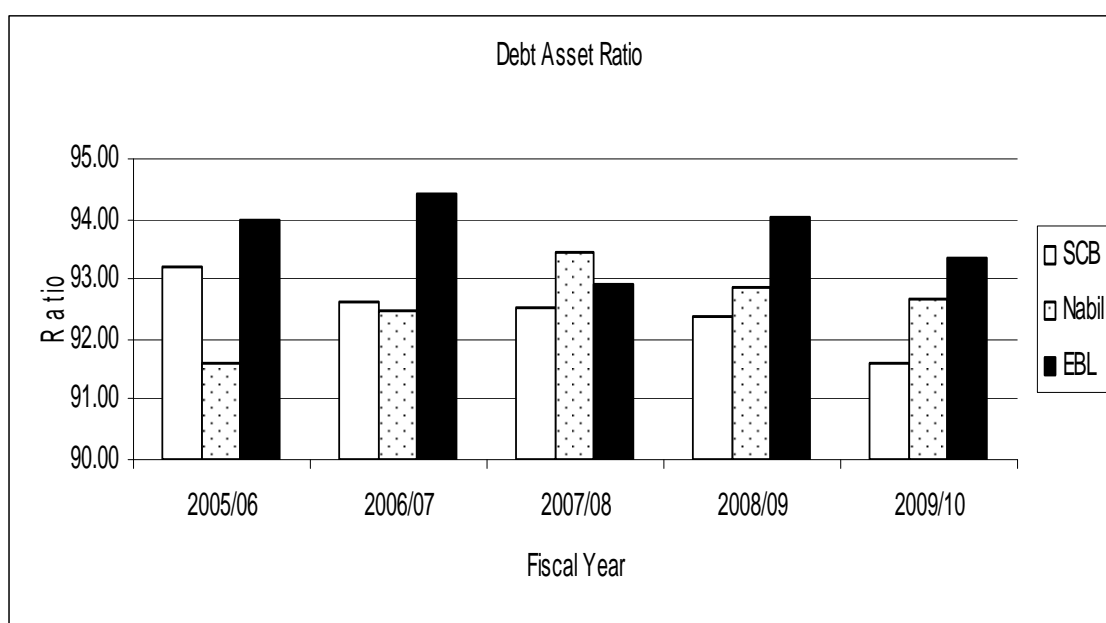


Table 4.6
Debt Asset Ratio (%)

Year	SCB	NABIL	EBL	Average
2005/06	93.19	91.60	93.97	92.92
2006/07	92.60	92.45	94.39	93.15
2007/08	92.52	93.44	92.92	92.96
2008/09	92.38	92.86	94.03	93.09
2009/10	91.62	92.65	93.33	92.53
Mean	92.46	92.60	93.73	92.93
SD	0.56	0.67	0.59	

4.1.3 Assets Management Ratio (Activity Ratio)

An asset management ratio indicates how efficiently the selected banks have arranged and invested their limited sources at its commend. The following ratios are used under this ratio.

- i. Loan and Advance to Total Deposit Ratio

- ii Loan and Advance to Fixed Deposit Ratio
- iii Loan and Advance to Saving Deposit Ratio
- iv. Loan and Advances to Total Assets Ratio

Figure 4.7

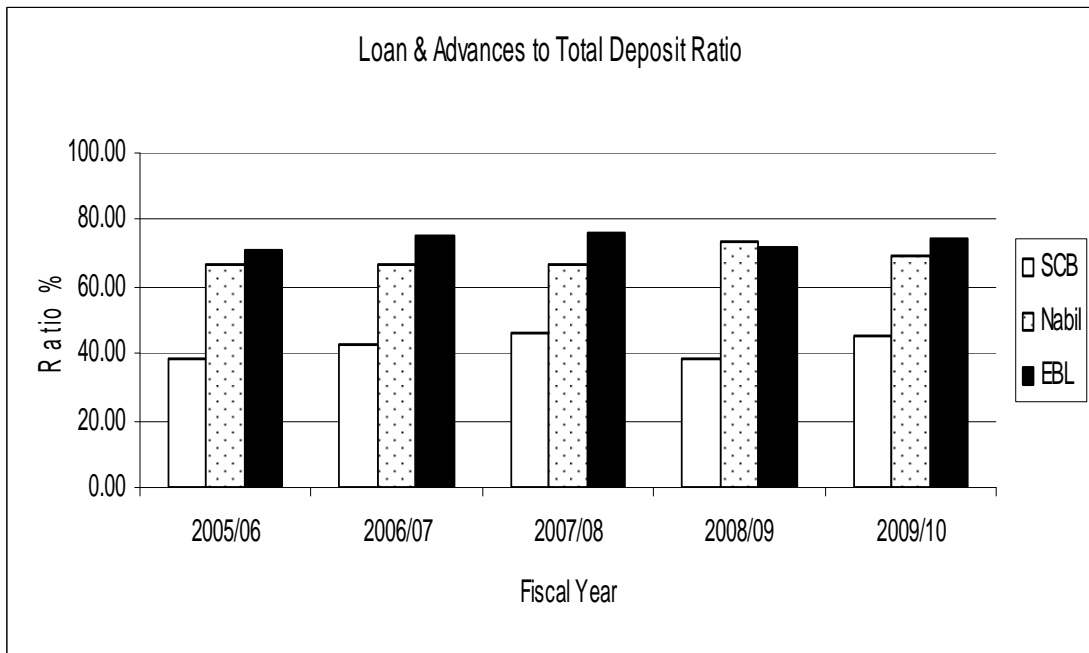


Table 4.7
Loan & Advances to Total Deposit Ratio (%)

Year	SCB	NABIL	EBL	Average
2005/06	38.75	66.79	71.01	58.85
2006/07	42.61	66.60	75.13	61.45
2007/08	46.12	66.94	76.49	63.18
2008/09	38.70	73.87	71.68	61.42
2009/10	45.35	69.53	74.61	63.17
Mean	42.31	68.75	73.78	61.61
SD	3.52	3.11	2.34	

Figure 4.7 is the plot of data from Table 4.7 which gives the ratio of Loan and Advance to Total Deposit. From the diagram it can be seen that Nabil and EBL have

consistently providing loan and advances throughout the period with average of 70% of total deposit. But SCB remained to 42% in providing loan and advance throughout the period. The position of SCB is strict in operating activities in this five year period. In spite, Nabil and EBL are found to be dynamic in mobilizing its deposit and even in increasing trend.

Figure 4.8

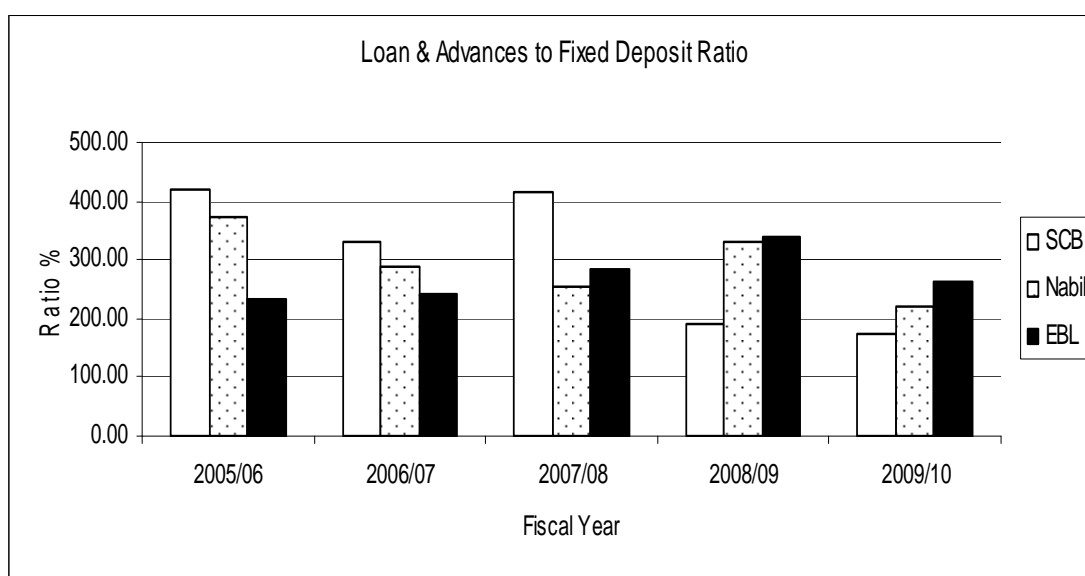


Table 4.8
Loan & Advances to Fixed Deposit Ratio (%)

Year	SCB	NABIL	EBL	Average
2005/06	418.26	374.66	231.03	341.32
2006/07	328.57	286.02	242.85	285.81
2007/08	415.59	252.42	284.50	317.50
2008/09	192.63	331.98	338.79	287.80
2009/10	173.92	219.35	263.94	219.07
Mean	305.79	292.89	272.22	290.30
SD	117.71	61.86	42.46	

While Figure 4.8 representing the data of loan and advance against fixed deposit implies that SCB is investing with its fixed deposit by mobilizing it to provide loan and advance in initial phase. However, it is again strict in later half of the period

by almost half from 400% to 200%. Other two banks have overall similar position. Both the banks continued to flow its money to more than twice of fixed deposit.

Figure 4.9

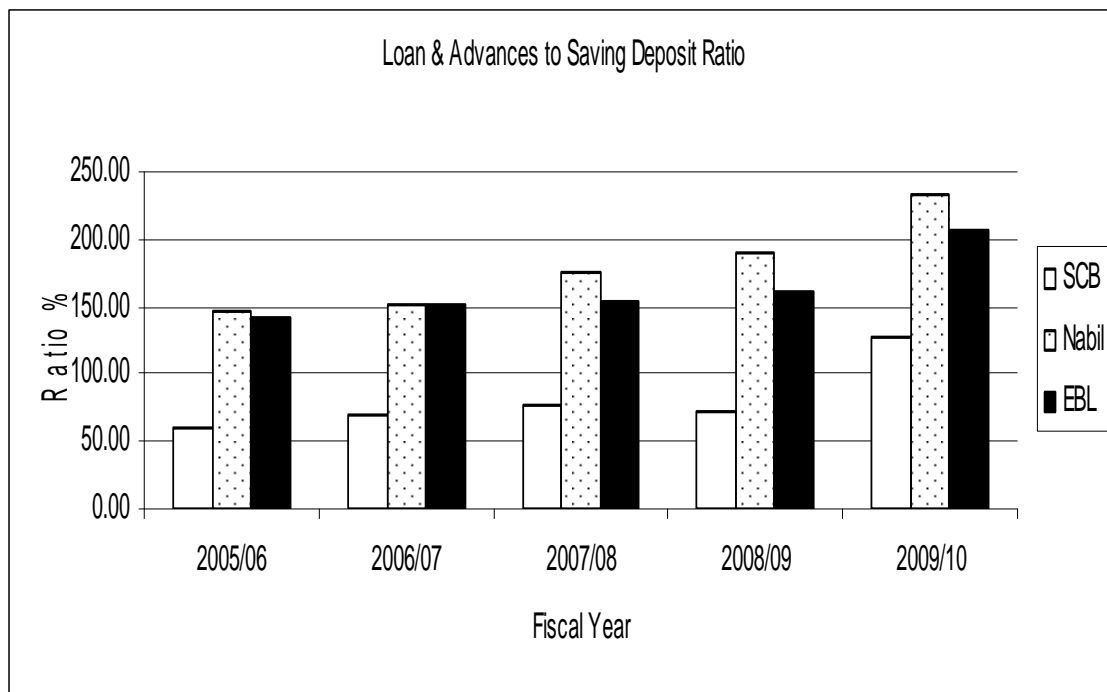
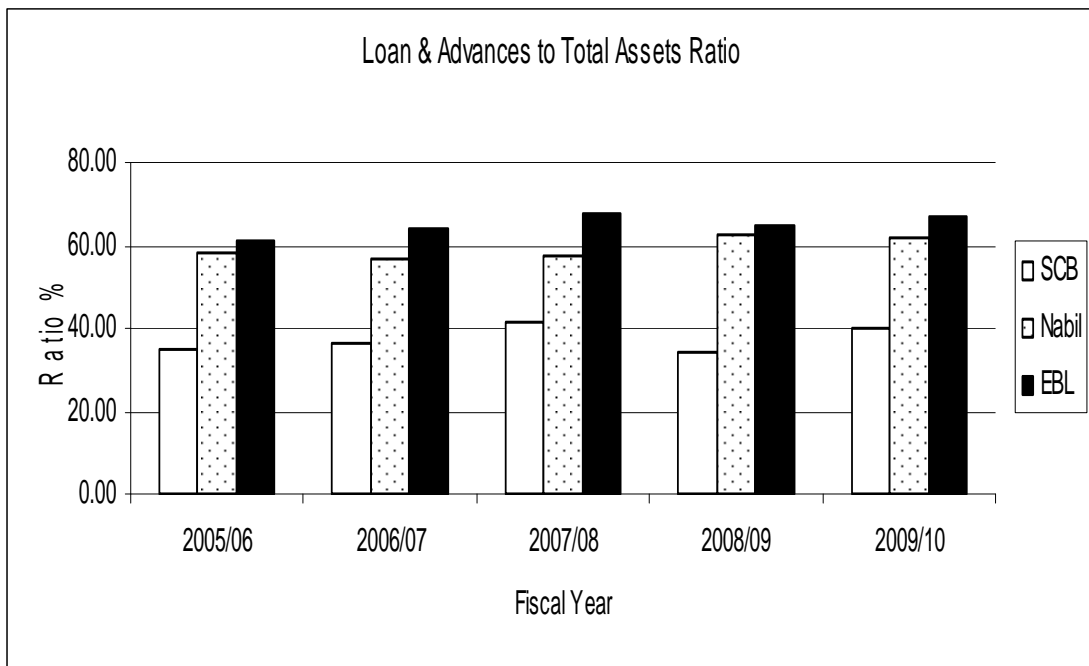


Table 4.9
Loan & Advances to Saving Deposit Ratio (%)

Year	SCB	NABIL	EBL	Average
2005/06	61.21	147.34	141.45	116.67
2006/07	68.90	152.60	151.33	124.28
2007/08	76.83	175.70	154.32	135.62
2008/09	71.45	188.71	161.58	140.58
2009/10	128.37	234.11	206.26	189.58
Mean	81.35	179.69	162.99	141.34
SD	26.88	34.78	25.25	

Figure 4.9 comprises the plot of Loan and Advances to Saving Deposit Ratio from Table 4.9. The graph indicates the ratios are very close in initial three years for Nabil and EBL, and varied for later two years. On the other hand, the ratio is very less almost half for SCB in comparison to Nabil and EBL. Lesser portion of Saving Deposit has been utilized by SCB whereas Saving Deposits are highly utilized by remaining two banks.

Figure 4.10



The Figure 4.10 is the plot of ratio of loan and advance to total asset which represents the data from Table 4.10. The figure clearly shows that Nabil and EBL have consistent ratios for entire period with slightly high of EBL. But the ratio for SCB is very less in comparison to Nabil and EBL. The ratio indicates the mobilization of total asset to generate operating income. In this regard, EBL leads the three banks under consideration. The average ratio of EBL, 64.8 > 59.44 of Nabil and again 59.44 > 37.28 of SCB.

Table 4.10
Loan & Advances to Total Assets Ratio (%)

Year	SCB	NABIL	EBL	Average
2005/06	34.68	57.87	61.41	51.32
2006/07	36.73	57.04	63.75	52.51
2007/08	41.15	57.54	67.55	55.41
2008/09	34.14	62.89	64.70	53.91
2009/10	39.68	61.88	66.59	56.05
Mean	37.28	59.44	64.80	53.84
SD	3.07	2.73	2.41	

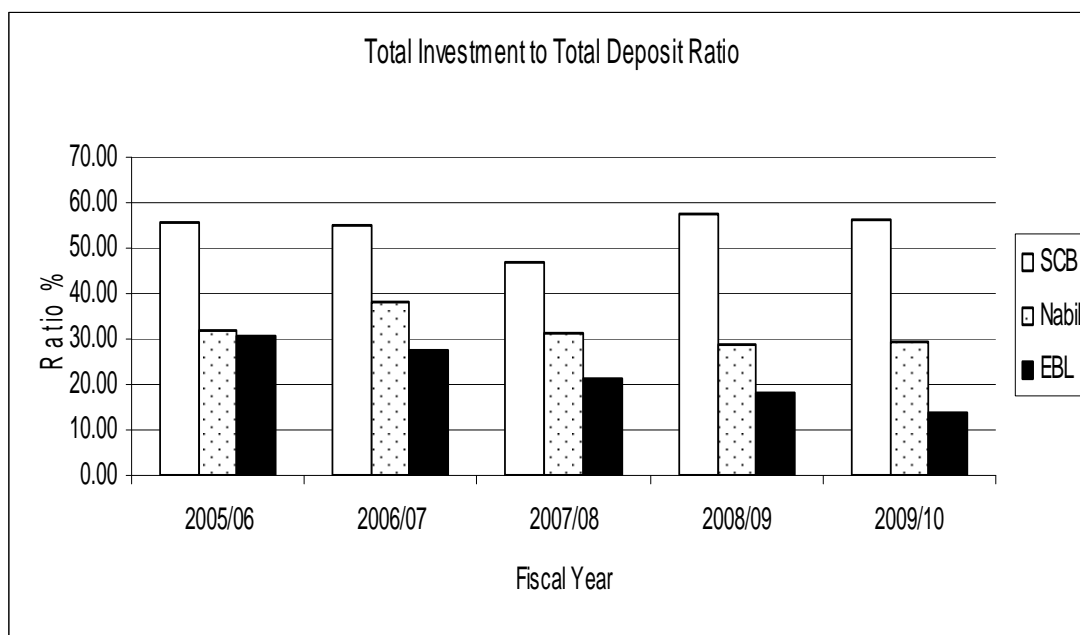
4.1.4 Credit Ratio

This ratio is used to measure the credit creation capacity of the banks. In other words this ratio indicates how far the banks are able to create credit from the deposit liabilities. Deposit collected from the people is the major financial sources of the banks. A bank invests the collected deposits to the various incomes generating sectors. Under this ratio the following ratios are analyzed.

- a. Total Investment to Total Deposit Ratio
- b. Investment on government Securities to Total Deposit Ratio
- c. Cash and Bank Balance to Total Deposit Ratio

The gross investment of the three banks indicates that SCB is totally different from Nabil and EBL. Previous diagrams and tables also distinctly provide information about SCB to be different than two in almost all respect. The nature of investment with available fund has differed contrastingly for SCB whereas the two banks Nabil and EBL seem to follow the similar strategy in almost all attempts.

Figure 4.11



The comparative study of Credit Ratio has been studied through three approaches mentioned above. The Table 4.11 demonstrates the ratios for total investment to total deposit for SCB, Nabil and EBL. It is presented in bar diagram in Figure 4.11 too. SCB is clearly seen to invest more than 50% of its total deposit in entire period except in 2007/08. Next the position of Nabil comes to 2nd with average of 32% followed by EBL with 22% only.

Table 4.11
Total Investment to Total Deposit Ratio (%)

Year	SCB	NABIL	EBL	Average
2005/06	55.67	31.93	30.43	39.35
2006/07	54.99	38.32	27.41	40.24
2007/08	46.74	31.14	21.10	33.00
2008/09	57.24	28.99	17.85	34.69
2009/10	56.41	29.46	13.56	33.14
Mean	54.21	31.97	22.07	36.08
SD	4.26	3.75	6.88	

The second attempt to study the credit creation is made through study of investment on government securities to total deposit ratio. Figure 4.12 representing data from Table 4.12, illustrates that the value fluctuates to and fro for Nabil bank while observed for entire period with average value of 14.82. The diagram shows the decreasing trend of total investment from fiscal year 2005/06 to 2009/10 for other two banks i.e., SCB and EBL.

Figure 4.12

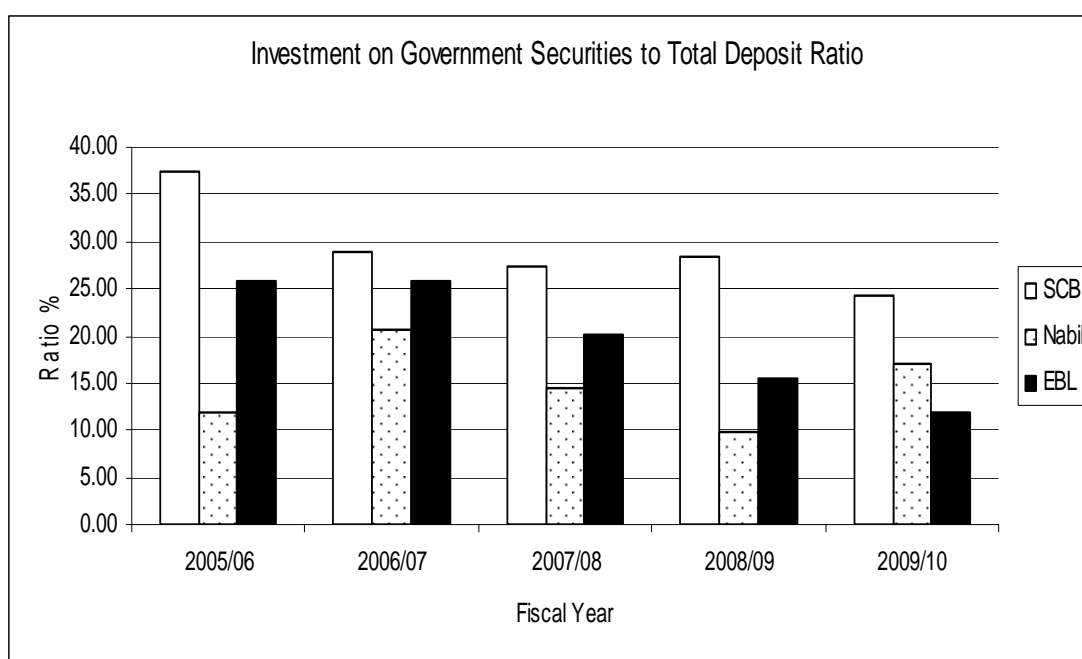


Table 4.12
Investment on Government Securities to Total Deposit Ratio (%)

Year	SCB	NABIL	EBL	Average
2005/06	37.45	11.90	25.71	25.02
2006/07	28.84	20.60	25.87	25.10
2007/08	27.36	14.56	20.11	20.68
2008/09	28.28	9.92	15.44	17.88
2009/10	24.25	17.11	11.79	17.72
Mean	29.24	14.82	19.78	21.28
SD	4.92	4.22	6.22	

The table values indicate a large variation for almost all banks and SCB leads with average value of 29.24 followed by Nabil and EBL with 14.82 and 19.78 respectively. Here the strategy of three banks seems differ in the whole. The nature of investment and opportunity seen by banks differ in individual basis. This is postulated by figures seen from the Table 4.12

The third attempt to study credit ratio is made in Table 4.13 and consecutive bar diagram is shown in Figure 4.13 by comparing cash and bank balance to total deposit ratio.

Figure 4.13

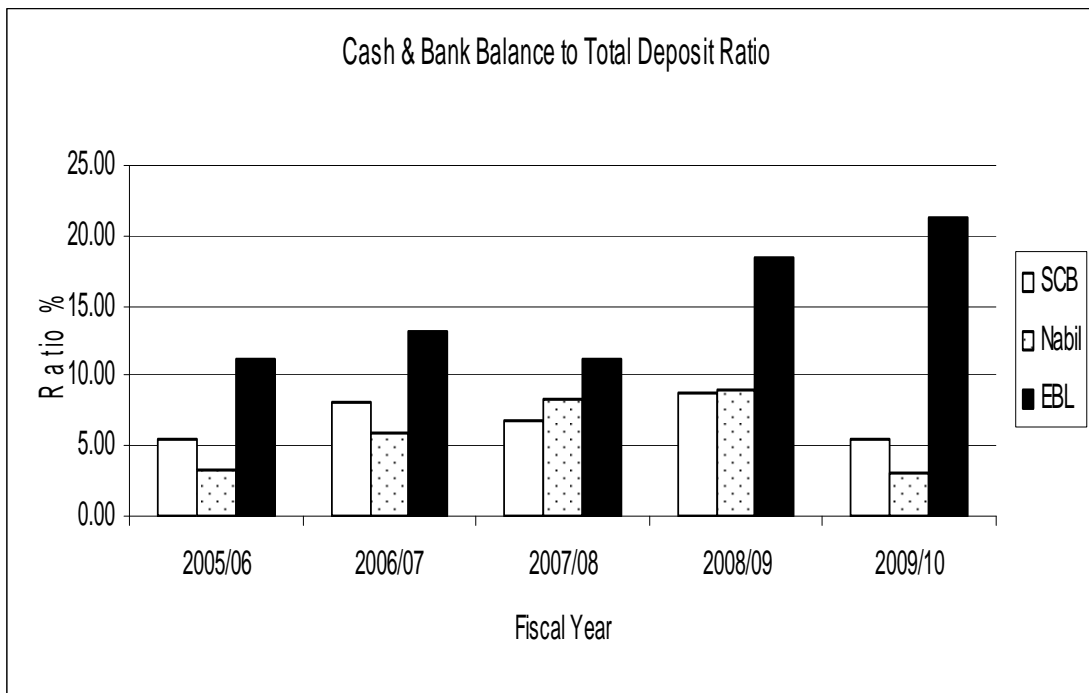


Table 4.13
Cash & Bank Balance to Total Deposit Ratio (%)

Year	SCB	NABIL	EBL	Average
2005/06	5.53	3.26	11.25	6.68
2006/07	8.20	6.00	13.15	9.12
2007/08	6.89	8.37	11.13	8.80
2008/09	8.87	9.03	18.50	12.13
2009/10	5.48	3.02	21.17	9.89
Mean	7.00	5.93	15.04	9.32
SD	1.53	2.79	4.55	

The liquidity position seems weaker for SCB and Nabil bank while compared to EBL. The average cash and bank balance of EBL against its total deposit observed to be 15% which is almost the double of SCB and Nabil. It never fell below 11% in almost the entire period for EBL.

4.1.5 Profitability Ratio

Profit is the difference between revenue and expenses over a period of time. A company should earn profit to survive and to grow over a long period. Profit is the engine that drives the business concern. Profit is an index of economic progress. Profit is the test of efficiency and a measure of control to the management. Profit ability shows the overall efficiency of the business concern. Profit is the objective of all the policies framed and decisions taken by the management under the ratios the following ratios are analysed.

- a. Return on Equity (ROE)
- b. Return of Total Assets (ROA)
- c. Interest Earned to Total Assets Ratio

The Figure 4.14 below is the plot of data from Table 4.14 which shows the return on equity for SCB, Nabil and EBL. In this analysis the position of SCB and Nabil are ahead of EBL in utilizing shareholders fund.

Figure 4.14

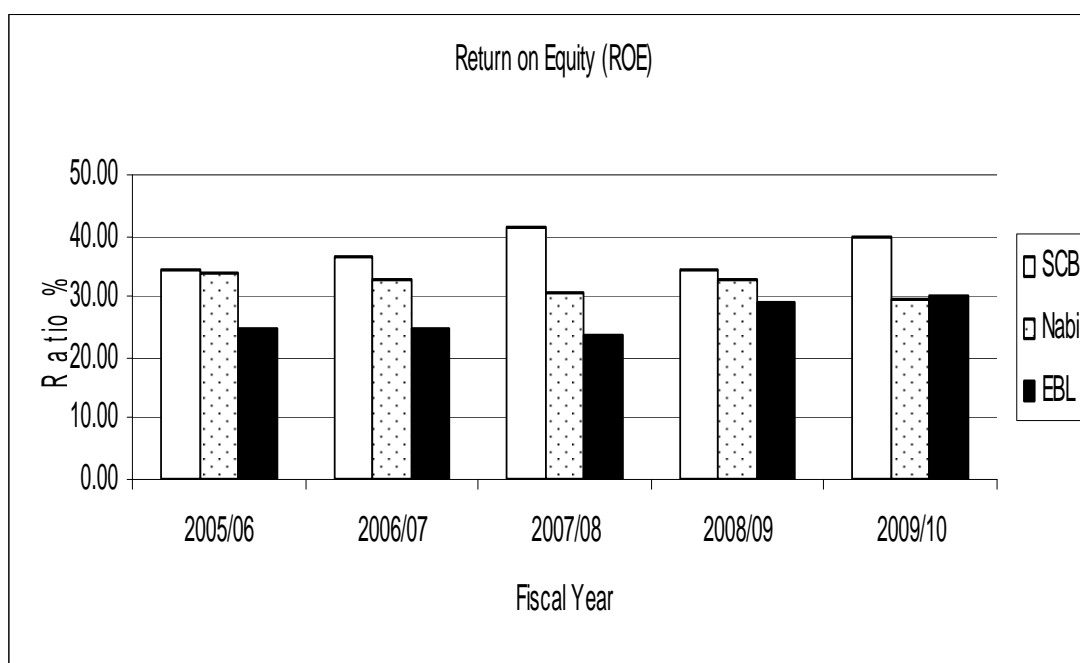
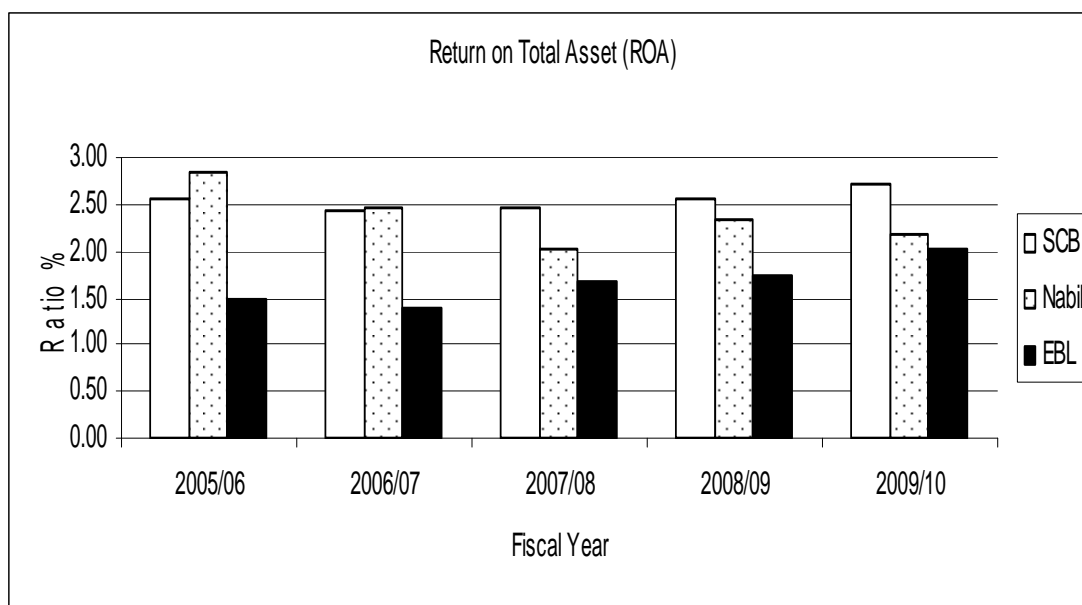


Table 4.14
Return on Equity (ROE) %

Year	SCB	NABIL	EBL	Average
2005/06	37.55	33.88	24.65	32.03
2006/07	32.68	32.76	24.67	30.04
2007/08	32.85	30.63	23.49	28.99
2008/09	33.58	32.94	28.99	31.84
2009/10	32.22	29.70	30.15	30.69
Mean	33.78	31.98	26.39	30.72
SD	2.17	1.74	2.97	
CV	6.41	5.45	11.26	

The second attempt of comparing profitability ratio is study of return on total asset. The Figure 4.15 represents the data from Table 4.15 to define return on total asset. The return over total asset seems charming for SCB followed by Nabil Bank whereas EBL is remained below status of three banks.

Figure 4.15



The coefficient of variation as computed in Table 4.15 shows the variation is the highest for EBL and very much consistent for SCB. The profitability of Nabil is also fluctuating similar to EBL. SD of 0.11 in comparison to Nabil and EBL indicates

Table 4.15
Return on Total Asset (ROA) %

Year	SCB	NABIL	EBL	Average
2005/06	2.56	2.84	1.49	2.30
2006/07	2.42	2.47	1.38	2.09
2007/08	2.46	2.01	1.66	2.04
2008/09	2.56	2.35	1.73	2.21
2009/10	2.70	2.18	2.01	2.30
Mean	2.54	2.37	1.65	2.19
SD	0.11	0.32	0.24	
CV	4.31	13.33	14.62	

The third attempt to study the profitability is Interest Earned to Total Assets Ratio. The Figure 4.16 shows the bar diagram for interest earned to total asset depicted from data in Table 4.16. It is again the Nabil bank and EBL have similar trend of earning through its asset mobilization whereas SCB in this case is again back to other banks in consideration.

Figure 4.16

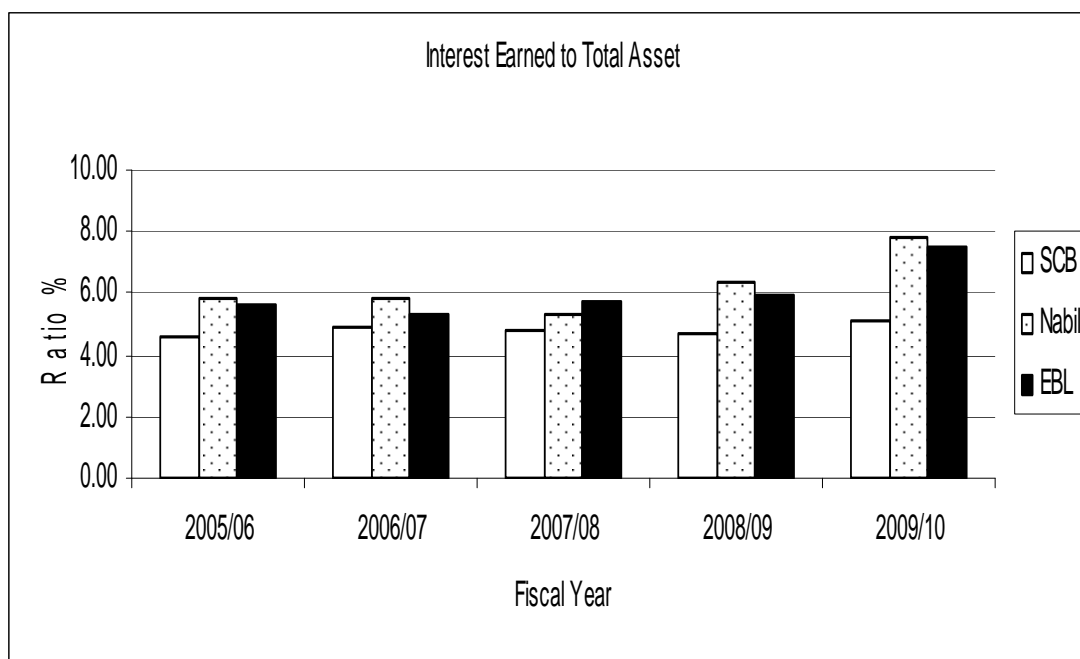


Table 4.16
Interest Earned to Total Asset (%)

Year	SCB	NABIL	EBL	Average
2005/06	4.62	5.87	5.66	5.38
2006/07	4.94	5.83	5.34	5.37
2007/08	4.77	5.33	5.70	5.27
2008/09	4.71	6.38	5.92	5.67
2009/10	5.08	7.76	7.50	6.78
Mean	4.82	6.23	6.03	5.69
SD	0.18	0.93	0.85	
CV	3.82	14.96	14.09	

The table value shows that the two banks Nabil and EBL have earned more with average range of 6.23 followed by 6.03 distinctly ahead of SCB with 4.82. However, the variation of earning is very high i.e., above 14% from average. It is relatively very consistent for SCB with variation of earning with just 3.82%.

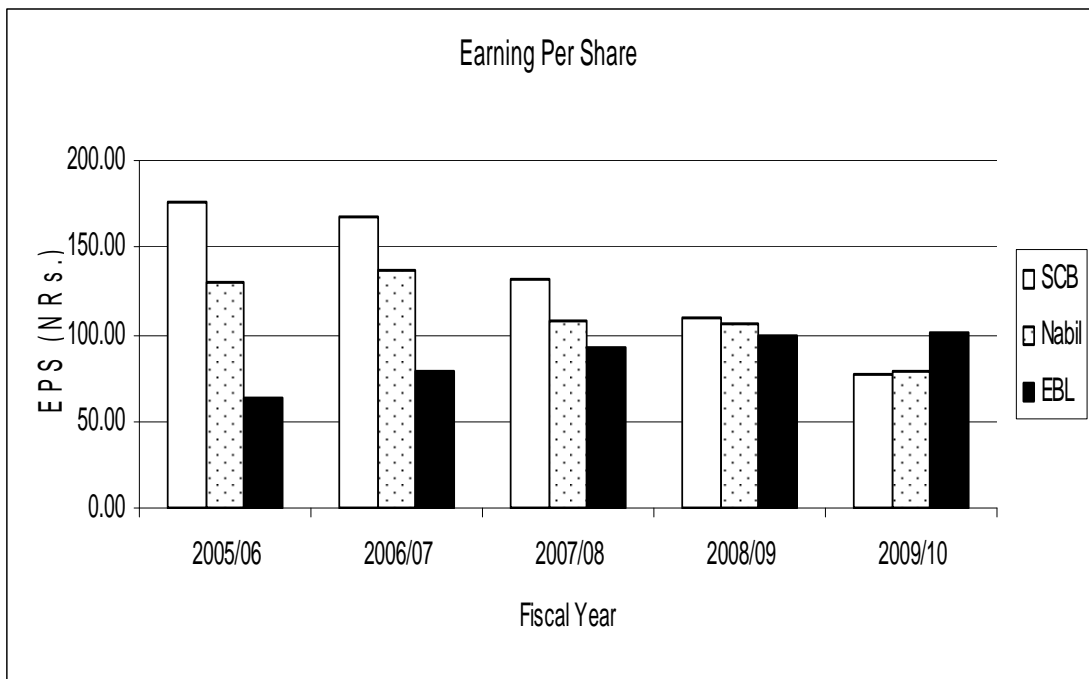
4.1.6 Other Ratios

The other ratios such as earning per share, dividend per share, price earning ratios are also studied to check the health of commercial banks in external environment. The goodwill of banks is also searched through their performance for common shareholders. The modern concept in economic activity is the value maximization and net worth of banks is observed to diagnose how banks are performing for societal value too. So, the following ratios are also studied for the banks under consideration.

- a. Earning Per Share (EPS)
- b. Dividend Per Share (DPS)
- c. Dividend Payout Ratio
- d. Price Earning Ratio (P/E Ratio)

The earning per share is the highest for SCB and Nabil for initial half of the five year period but EBL leaded the two in 2009/10. The trend of earning per share is clearly seen decreasing consecutively from 2005/06 to 2009/10 for both the SCB and Nabil bank. In contrast, the EPS found to be increasing gradually for EBL.

Figure 4.17



The table value for average EPS among three banks is the least for EBL with NRs. 86.63. However, the incremental change over the period indicates EBL is striking the two leading banks in years to come.

Table 4.17
Earning Per Share (Rs.)

Year	SCB	NABIL	EBL	Average
2005/06	175.84	129.21	62.78	122.61
2006/07	167.37	137.08	78.42	127.62
2007/08	131.92	108.31	91.82	110.68
2008/09	109.99	106.76	99.99	105.58
2009/10	77.65	78.61	100.16	85.47
Mean	132.55	111.99	86.63	110.39
SD	40.65	22.81	16.01	

Cash dividend paid by banks is another measure looked upon to analyze the strength of banks status.

Gradual decrease of dividend payment is seen from 2005/06 to 2009/10 for SCB and Nabil in studied period. It is clearly implicated in Figure 4.18. Though the amount paid by EBL is lesser in comparison to two leading banks, it has maintained a gradual increment over the period.

Figure 4.18

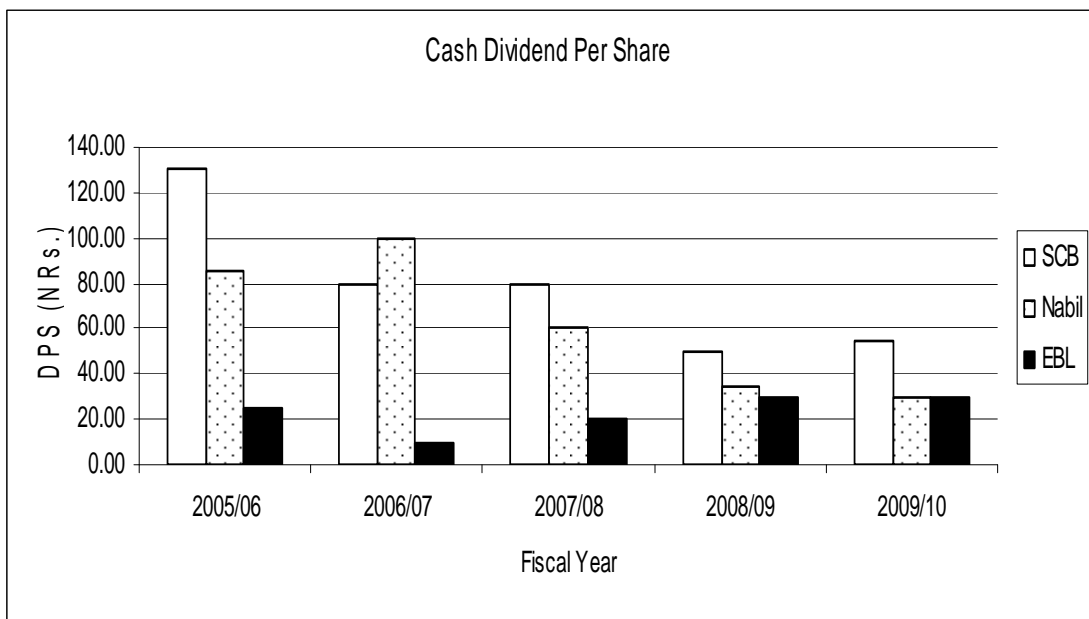


Table 4.18 worked out for cash dividend indicates the average DPS of NRs. 79 for SCB which is followed by Nabil with NRs.62 and EBL by NRs. 23.

Table 4.18
Cash Dividend Per Share (Rs.)

Year	SCB	NABIL	EBL	Average
2005/06	130.00	85.00	25.00	80.00
2006/07	80.00	100.00	10.00	63.33
2007/08	80.00	60.00	20.00	53.33
2008/09	50.00	35.00	30.00	38.33
2009/10	55.00	30.00	30.00	38.33
Mean	79.00	62.00	23.00	54.67
SD	31.70	30.54	8.37	

The general look of DPS is not complete if payout ratio is not considered. So it is studied here through workout made in Table 4.19. The table value is presented in bar diagram through Figure 4.19. A varying degree of ratio observed for three banks throughout the period.

Table values for SCB, Nabil and EBL illustrates a higher degree of ratio for former two banks with average ratio of greater than 50%. Whereas EBL has retained higher portion of its earning as to maintain capital. EBL has distributed in the ratio of average of 27% of its earning to shareholders.

Figure 4.19

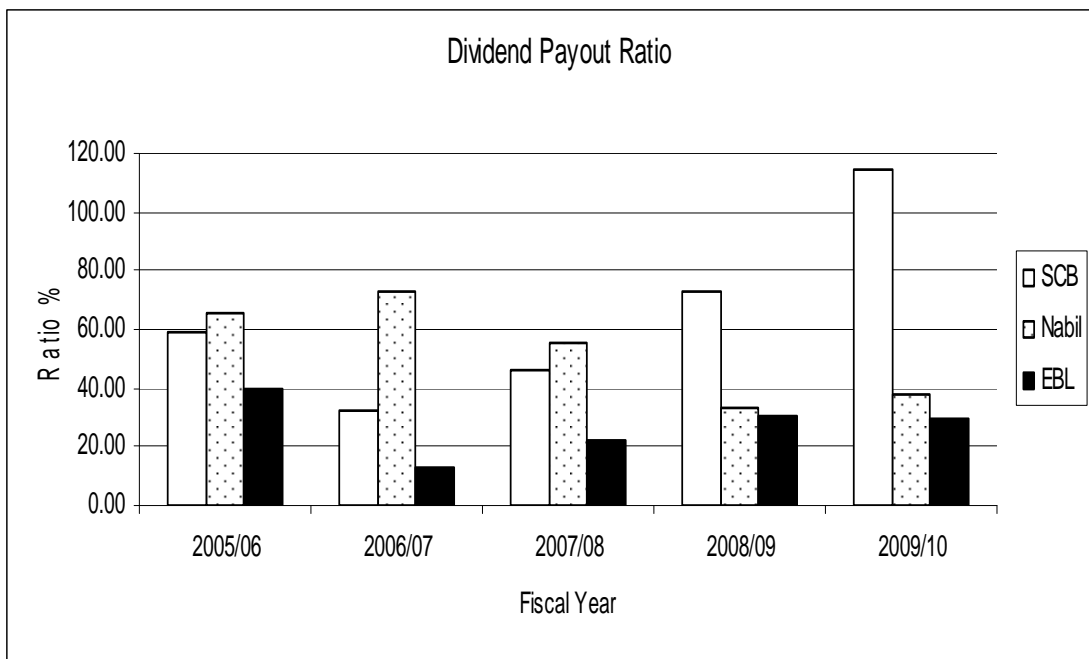


Table 4.19
Dividend Payout Ratio

Year	SCB	NABIL	EBL	Average
2005/06	73.93	65.78	39.82	59.85
2006/07	47.80	72.95	12.75	44.50
2007/08	60.64	55.40	21.78	45.94
2008/09	45.46	32.78	30.00	36.08
2009/10	70.83	38.16	29.95	46.32
Mean	59.73	53.02	26.86	46.54
SD	12.96	17.29	10.15	

The crucial part of study is price earning ratio and is studied here with workout in Table 4.20. From the Figure 4.20, it is observed that market value for almost all banks seem to increase in the initial half of the period and declined gradually onward. The external influence is clearly observed to financial status through study of this ratio. The external environment has affected the commercial banks with similar degree indifference of its actual performance.

Figure 4.20

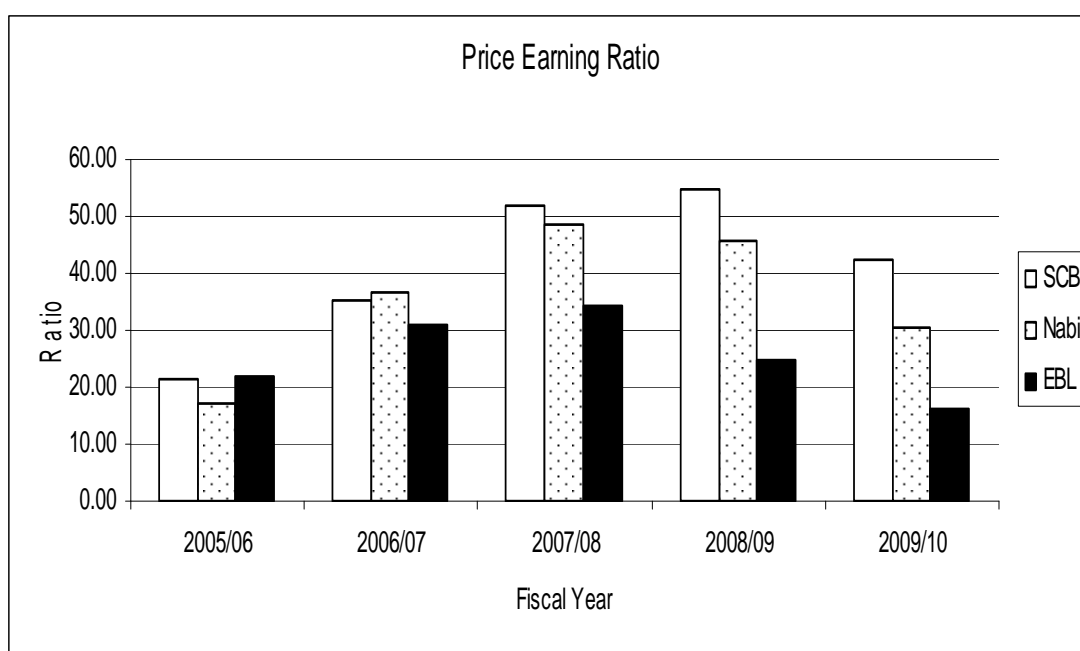


Table value for price earning ratio indicates the difference caused by market value of shares in the whole. The higher degree of influence is seen for leading banks with average ratio of 41.07 for SCB, followed by Nabil bank with 35.82 and EBL with lesser degree of 25.58.

Table 4.20
Price Earning Ratio

Year	SCB	NABIL	EBL	Average
2005/06	21.47	17.34	21.97	20.26
2006/07	35.25	36.84	30.99	34.36
2007/08	51.77	48.70	34.11	44.86
2008/09	54.64	45.89	24.55	41.69
2009/10	42.23	30.33	16.27	29.61
Mean	41.07	35.82	25.58	34.16
SD	13.40	2.65	7.12	

4.2 Statistical Tools

Statistical tools are one of the important tools to analyze the data. There are various tools for the analysis of tabulated data. Various statistical tools may be used for the evaluation of financial performance of the banks such as correlation analysis, trend analysis, coefficient of determination etc.

4.2.1 Coefficient of Correlation Analysis

As stated in research methodology, the statistical tool correlation is performed to study the relationship between total loan and advance against deposit, total

investment against total deposit, net profit after tax against total asset, dividend paid against net income and market value against total asset.

The trend analysis is performed to check the growth of capital and reserve, loan loss provision, book net worth, total staff so that the management aspect of bank could be anticipated.

Table 4.21
Correlation between Loans & Advances and Total Deposit

Banks	Indicators			
	Coefficient of correlation (r)	Coefficient of determination (r²)	Probable Error (P.Er.)	6P.Er.
SCB	0.9236	0.8531	0.0764	0.4582
Nabil	0.9941	0.9883	0.0059	0.0354
EBL	0.9971	0.9942	0.0029	0.0173

The Table 4.21 shows the degree of relationship between Loan and Advance against Total Deposit. The independent variable is total deposit (x) and dependent variable is Loan and Advances (y). The purpose of computing the coefficient of correlation is to observe to what extent and in which direction the loan & an advance (y) is affected by a unit change in total deposit (x). The coefficient of correlation is very significant for Nabil and EBL as seen from Table 4.21. Whereas a little variation is seen for SCB. Coefficient of determination (r²) indicates that approximately by 99%, the loan execution is closely related to total deposit for two banks viz. Nabil and EBL while the nature of loan execution varied with total deposit for SCB. However the relation is maintained to 85%.

Table 4.22
Correlation between Total Investment and Total Deposit

Banks	Indicators			
	Coefficient of correlation (r)	Coefficient of determination (r²)	Probable Error (P.Er.)	6P.Er.
SCB	0.9372	0.8784	0.0628	0.3766
Nabil	0.9674	0.9359	0.0326	0.1954
EBL	0.6977	0.4868	0.3023	1.8135

Next, the correlation of Total Investment against Total Deposit is shown in Table 4.22. The values of coefficient of correlation (r) in this case differ for the EBL. The value 0.6977 indicates the relation between Total Investment against Total Deposit is insignificant. In spite, SCB and Nabil have significant correlation in comparison to EBL. The value, ($r^2 > 6 \text{ P.Er.}$) suggests that SCB and Nabil have high degree of correlation for investment against total deposit. But ($r^2 < 6 \text{ P.Er.}$) for EBL indicates the investment pattern differ with Total Deposit.

Table 4.23
Correlation between Net Profit after Tax and Total Asset

Banks	Indicators			
	Coefficient of correlation (r)	Coefficient of determination (r²)	Probable Error (P.Er.)	6P.Er.
SCB	0.9867	0.9736	0.0133	0.0796
Nabil	0.9570	0.9159	0.0430	0.2577
EBL	0.9867	0.9736	0.0133	0.0797

The correlation for Net Profit after Tax against Total Asset has been shown in Table 4.23. In this case all the three banks have high degree of correlation exceeding

0.95, which implies the relationship is highly significant. More than 90% dependent variables (Net Profit) are explained well by independent variable (Total Asset). Again, $r^2 > 6$ P.Er., suggests the higher degree of relationship between net profit and total asset.

4.2.2 Trend Analysis

Trend analysis has been a very useful and commonly applied statistical tool to forecast the future events in quantitative terms. On the basis of tendencies in the dependent variable in the past period, the future trend is predicated. This analysis takes the historical data as the basis of forecasting. This method of forecasting the future trend is based on the assumptions that the past tendencies of the variables are repeated in the future or the past event affects the future events significantly.

Trend analysis is an analysis of bank's financial figures over time in order to determine the improvement, deterioration or stability of stability of its financial situation. This analysis is very effectively inform various, personnel, directly or indirectly, related to the bank for shareholders of the bank, it informs about the expected future returns, which helps then to decide whether to stick in the present investment or to search for the alternative investment opportunities. For professional bankers it indicates the future achievement of the bank. For depositors, it provides degree of safety in the form of financial credit worthless of the bank in the future.

The future trend is forecasted by using the following formula

$$Y=a+bx$$

$$a = \frac{\sum x}{N}$$

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

Where,

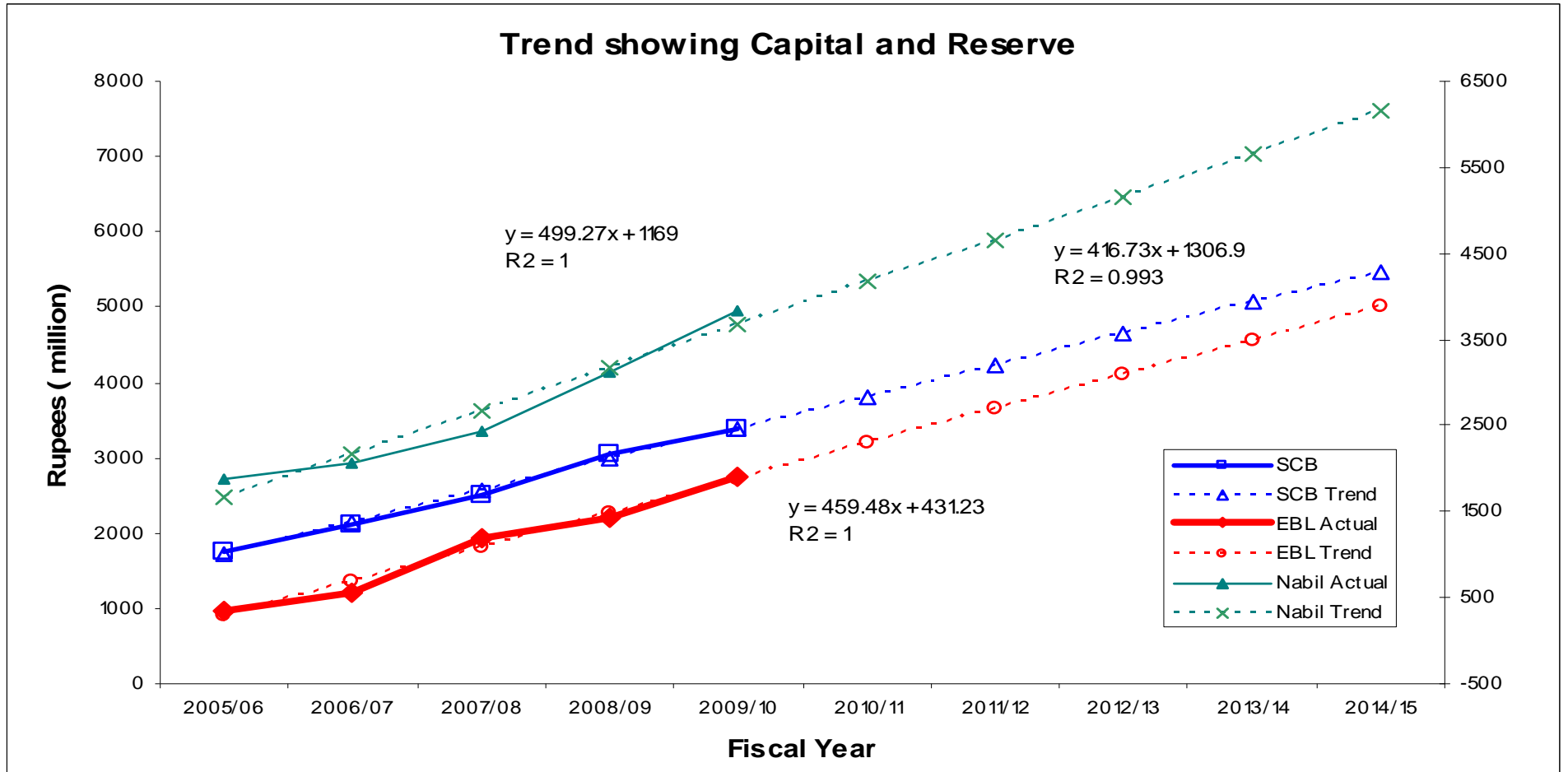
Y= Trend value

a = Y-intercept or the computer trend figure of the y variables, when x = 0 or arithmetic mean.

b = Slope of the trend line of the amount of change in y variables that is associated with change in 1 unit in x variable or rate of changes.

In Figure 4.21, the trend value for capital and reserve has been shown for three banks namely SCB, Nabil and EBL and extended the trend for up to fiscal 2014/15. The linear trend values are also shown in the figure with coefficient of determinant (r^2) computed through chart in excel sheet.

Figure 4.21



The figure indicates a clear increasing trend for almost all banks in future. The table value in Table 4.24 indicates the capital and reserve would raise above Rs. 5 billion by the next five year if the present trend is followed and since the data are highly correlated, it can be anticipated that the forecasted value have the 99% probability to come true.

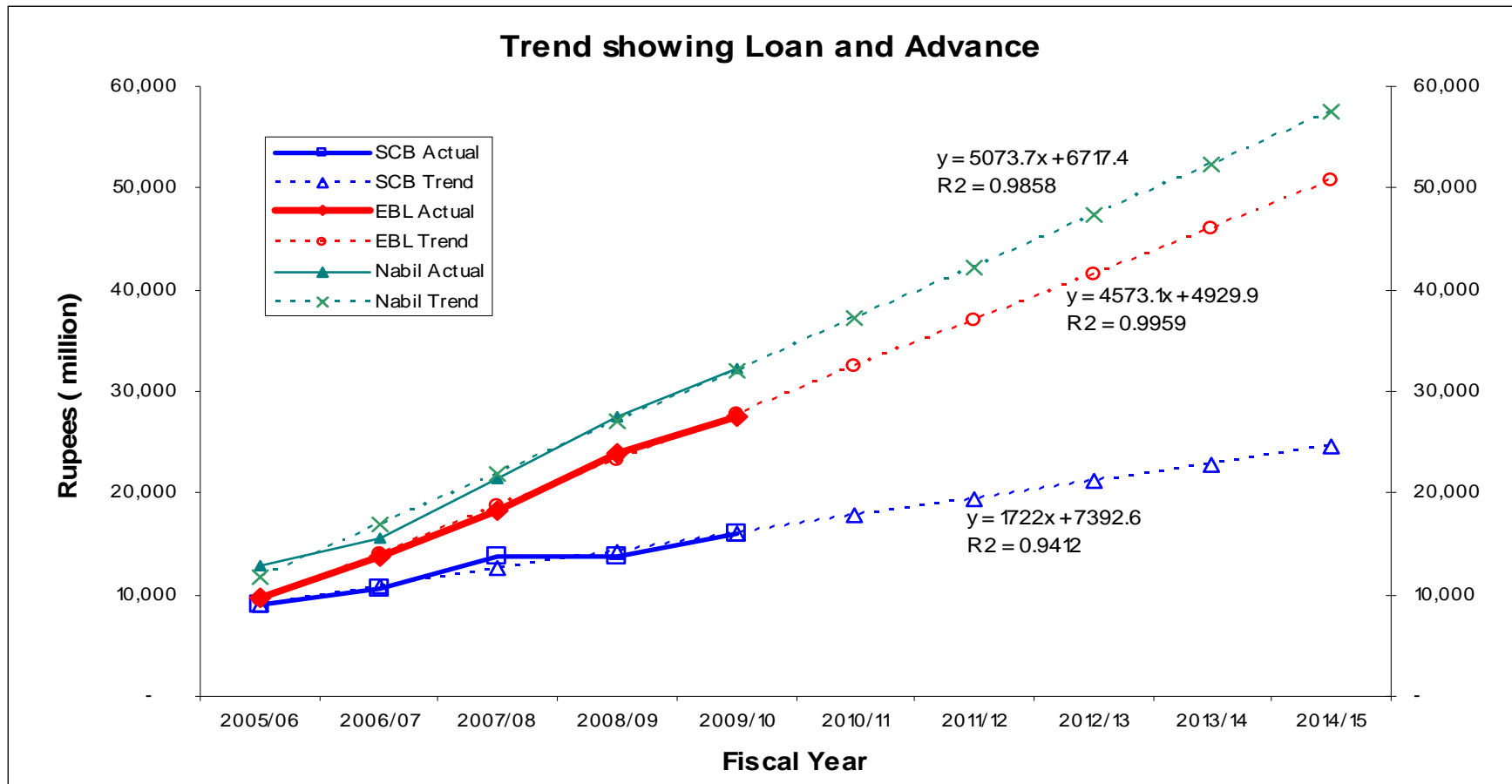
Table 4.24
Capital and Reserve

In million Rs.

Fiscal Year	SCB		Nabil		EBL	
	Actual	Trend	Actual	Trend	Actual	Trend
2005/06	1754	1724	1875	1668	963	891
2006/07	2116	2140	2057	2168	1202	1350
2007/08	2493	2557	2437	2667	1921	1810
2008/09	3052	2974	3130	3166	2204	2269
2009/10	3370	3391	3835	3665	2759	2729
2010/11		3807		4165		3188
2011/12		4224		4664		3648
2012/13		4641		5163		4107
2013/14		5057		5662		4567
2014/15		5474		6162		5026

Secondly the trend analysis is made for providence of Loan and Advances for SCB, Nabil and EBL. The trend line shows the increment of loan and advances continue in future with high degree of accuracy.

Figure 4.22



In comparison to SCB, Nabil and EBL tend to invest over loan and advances and high operating activity is anticipated in future. The table figure in trend shows the two fold of investment on operating activities by Nabli and EBL in loan and advance sector.

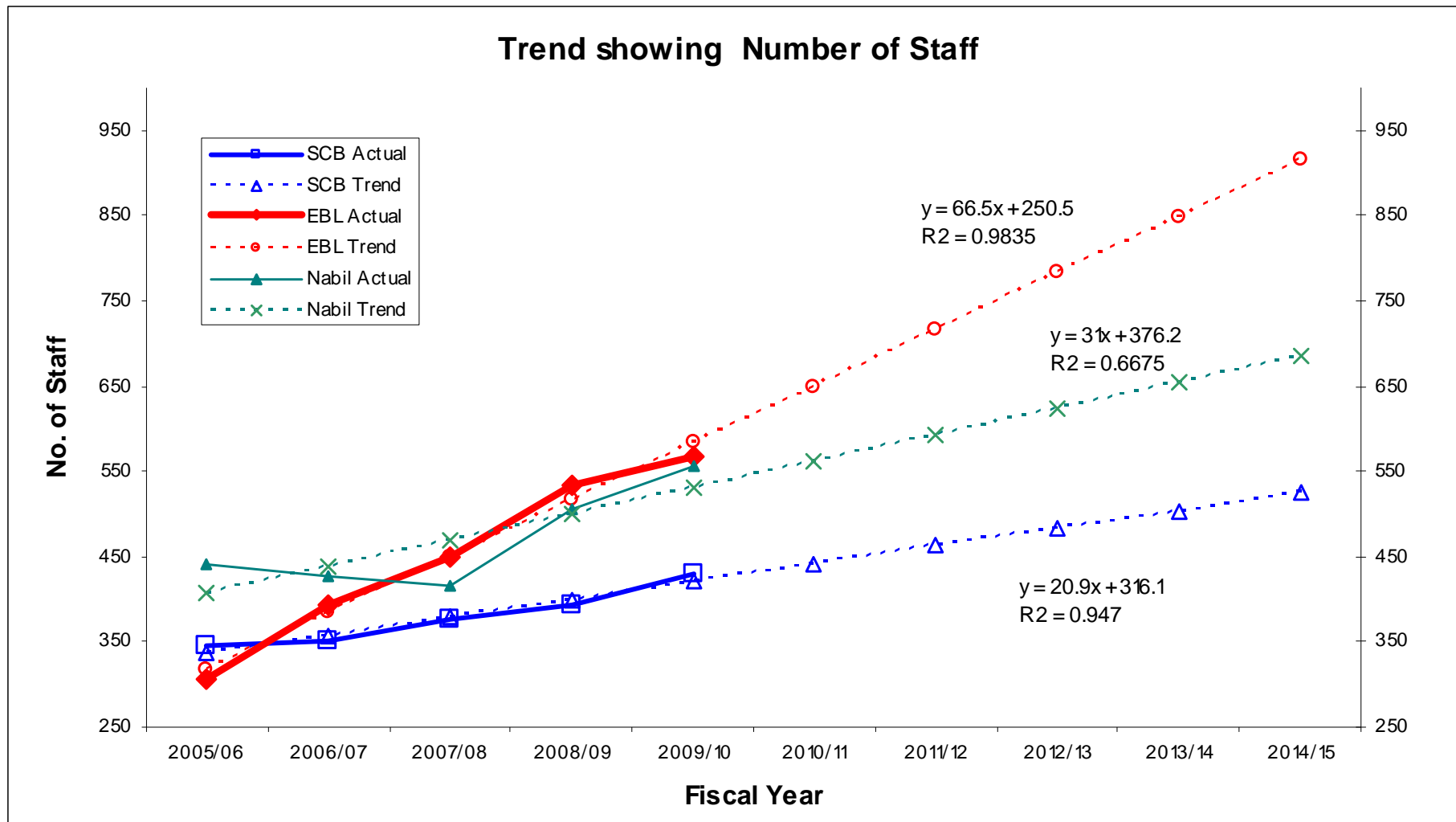
Table 4.25
Loan and Advance

In million Rs.

Fiscal Year	SCB		Nabil		EBL	
	Actual	Trend	Actual	Trend	Actual	Trend
2005/06	8935	9115	12923	11791	9801	9503
2006/07	10503	10837	15546	16865	13664	14076
2007/08	13719	12559	21365	21939	18339	18649
2008/09	13680	14281	27590	27012	23885	23222
2009/10	15957	16003	32269	32086	27556	27795
2010/11		17725		37160		32369
2011/12		19447		42233		36942
2012/13		21169		47307		41515
2013/14		22891		52381		46088
2014/15		24613		57454		50661

Next, the trend is shown for staff employment by three banks. The analysis shows the increasing recruitment is continued ahead. However the trend for Nabil differs to that of SCB and EBL. The decrement is seen in the fiscal year 2006/07 and 2007/08 in Nabil which is totally distinct with other two.

Figure 4.23



If the trend follows as is developed, the staffing scenario may totally different from present situation. The table value estimated for EBL for the fiscal year 2014/15 indicates that it would be the leading bank in recruiting employees in future with almost 900 staffs.

Table 4.26
Total Number of Staff

Fiscal Year	SCB		Nabil		EBL	
	Actual	Trend	Actual	Trend	Actual	Trend
2005/06	345	337	441	407	306	317
2006/07	351	358	427	438	393	384
2007/08	377	379	416	469	449	450
2008/09	392	400	505	500	534	517
2009/10	429	421	557	531	568	583
2010/11		442		562		650
2011/12		462		593		716
2012/13		483		624		783
2013/14		504		655		849
2014/15		525		686		916

4.3 Major Findings of the Study

The presentation and analysis of data provides the clear picture in terms of financial strength and weakness of banks under consideration. The major findings of the banks are concluded with the help of analysis and interpretation, which are described below.

Table 4.27
Summary of Financial Ratios

<u>Financial Measures</u>	<u>SCB</u>	<u>NABIL</u>	<u>EBL</u>	<u>Average</u>
<u>1. Financial Policy Measure</u>				
A. Liquidity				
i. Current Ratio	1.08	1.07	1.07	1.07
ii. Cash and Bank Balance to Current Deposit Ratio (%)	32.66	37.92	139.93	70.17
iii. Cash and Bank Balance to Current and Saving Deposit Ratio (%)	9.31	10.85	27.22	15.79
iv. Fixed Deposit to Total Deposit Ratio (%)	15.90	24.32	27.60	22.60
B. Leverage Ratio				
i. Debt Equity Ratio	12.33	12.60	15.06	13.33
ii. Debt Asset Ratio (%)	92.46	92.60	93.73	92.93
<u>2. Operating Efficiency Measure</u>				
A. Assets Management Ratio (Activity Ratio) %				
i. Loan and Advance to Total Deposit Ratio	42.31	68.75	73.78	61.61
ii. Loan and Advance to Fixed Deposit Ratio	305.79	292.89	272.22	290.30
iii. Loan and Advance to Saving Deposit Ratio	81.35	179.69	162.99	141.34
iv. Loan and Advances to Total Assets Ratio	37.28	59.44	64.80	53.84

<u>Financial Measures</u>	<u>SCB</u>	<u>NABIL</u>	<u>EBL</u>	<u>Average</u>
B. Credit Ratio (%)				
i. Total Investment to Total Deposit Ratio	54.21	31.97	22.07	36.08
ii. Investment on government Securities to Total Deposit Ratio	29.24	14.82	19.78	21.28
iii. Cash and Bank Balance to Total Deposit Ratio	7.00	5.93	15.04	9.32
<u>3. Performance Measure</u>				
A Profitability Ratio (%)				
i. Return on Equity (ROE)	33.78	31.98	26.39	30.72
ii. Return on Total Assets (ROA)	2.54	2.37	1.65	2.19
iii. Interest Earned to Total Assets Ratio	4.82	6.23	6.03	5.69
B. Growth Ratio (Rs.)				
i. Earning Per Share (EPS)	132.55	111.99	86.63	110.39
ii. Dividend Per Share (DPS)	79.00	62.00	23.00	54.67
C. Valuation Measure				
i. Dividend Payout Ratio (%)	59.73	53.02	26.86	46.54
ii. Price Earning Ratio (P/E Ratio)	41.07	35.82	25.58	34.16

4.3.1 Financial Ratio Analysis

Liquidity Ratio

From the above analysis, the following findings are drawn on liquidity position of the banks under consideration.

- Literature suggests that the current ratio should be 2:1 for good performance of banks. The current ratio as observed in above analysis indicated the overall ratio for SCB, Nabil and EBL remained to 1.07 which can lead to liquidity problem if external environment ruins.

- Cash and Bank Balance to Current Deposit ratio for EBL is found to be 140% that of current deposit indicating appropriate solvency condition of the bank. The value 32% and 38% for SCB and Nabil are indicating the risky situation during economic recession.
- Cash and Bank Balance to Current & Saving Deposit ratio again postulates that EBL has double the ratio that of SCB and Nabil i.e., 27.22 against 9.31 and 10.85 indicating highly liquid position of EBL.
- Fixed Deposit to Total Deposit ratio follows the same pattern as above showing that EBL leading with 27.6% against SCB and Nabil with 15.90% and 24.32%.

Leverage Ratio

- Debt Equity ratio is a little bit higher for EBL 15.06 times against 12.33 SCB and 12.60 times. Here the strategy of EBL seems tricky towards shareholders by making a powerful creditor than common stock holder.
- Debt Asset ratio is almost similar to all the three banks. The range of 92.5 to 93.7 is very narrow to differentiate one bank from another.

Asset Management Ratio (Activity Ratio)

- Loan and Advances to total deposit ratio for Nabil and EBL are quite higher ranging around 60% indicates these are extending credit for profit generating sectors while SCB 37.28% is conservative in this regard. Return is associated with risk and former two banks are taking risk in operating activity which a profit making organization needs to accept.
- Loan and advances to fixed deposit ratio has different outlook for SCB. In this case it is investing a lot in respect to fixed deposit. It is a secure portion which a bank can execute toward loan and advance. All the three banks are utilizing it in satisfactory scale. However SCB (306%) is leading the three banks under consideration.

- Loan and Advance to Saving Deposit ratio is very high for Nabil and EBL almost double of SCB. This shows the two banks aggressive strategy in operational activity.
- Loan and Advance to Total Asset ratio also support the above strategy of Nabil and EBL. The value around 60% of two banks is again near to double of SCB (37.28%).

Credit Ratio

- Total investment to Total Deposit ratio indicates SCB is investing a lot. The comparison with profitability ratio suggests that SCB is investing over secure sector other than operating activities. The value 54.21% of SCB in comparison to Nabil 31.97% and EBL 22.07% indicates clearly that SCB has generating income from investment.
- Investment on government securities to Total Deposit ratio is again high for SCB almost double of Nabil and EBL. This postulates the execution of money in secure finance.
- Cash and Bank to Total Deposit ratio is different for SCB and Nabil in comparison to EBL. Here EBL has high degree of cash and bank balance other than bonds or bills.

Profitability Ratio

- Return on Equity ratio is fluctuating highly for EBL in comparison to SCB and Nabil. However, the gradual increase of ratio throughout the period of EBL is good indicator of its health.
- The Return on Asset ratio is also varied to higher degree with increasing order for EBL showing CV of 14.62%. Nabil has the same situation with CV 13.33%. SCB is relatively consistent with its earning position.
- Interest earned to Total Asset ratio follows the above pattern for Nabil and EBL with 6.23% and 6.03% whereas SCB remained at 4.82% consistently. The degree of variation is again higher for other two banks around CV14%.

Growth and Valuation Ratios

- Earning per Share value has fluctuated in high degree for three banks. SCB leads all by average EPS of Rs. 132.5 followed by Nabil Rs. 112 and EBL Rs. 86.63. The net profit however observed to be increased in magnificent way for EBL from the beginning of period to 2009/10. The EPS in 2009/10 for EBL leaded to Nabil and SCB with Rs. 100.16 against around Rs. 77 for remaining two.
- The average value of Dividend per Share for SCB, Nabil and EBL varied similar to EPS rate as Rs. 79 for SCB, Rs. 62 for Nabil and Rs. 23 for EBL.
- Dividend Payout ratio is again highest to SCB, followed by Nabil and EBL. SCB and Nabil have almost double of dividend payment comparing to EBL.
- Price earning ratio is high to SCB bank 41% in comparison to Nabil 35.82% and EBL 25.58%. The gradual increase in initial half and decrease in market value of shares influenced the PE ratio in the similar way for three banks consecutively.

4.3.2 Statistical Analysis

Correlation Coefficient

- Correlation coefficient of loan and advances against total deposit is very much significant for Nabil and EBL. Whereas the coefficient is less for SCB showing loan and advances not following the pattern of deposit. However, 85 % of dependency can be observed for SCB when analysed. The ratio can till be considered to be satisfactory.
- Correlation coefficient of Investment against total deposit varies for all the three banks. SCB and Nabil banks have higher degree of correlation for investment nature. But EBL has distinctly contrasting figure showing lower degree of relevancy.
- Correlation coefficient of Net Profit after tax against total asset shows higher degree of relation maintained by banks for generating net profit. Above 0.95

Trend Analysis

- Trend analysis of capital and reserve shows the increasing trend of accumulating capital for operation of banking activities by all the three banks. However in long run Nabil may accumulate larger capital as the slope of trend reveals from diagram 21 i.e., $499.21(\text{Nabil}) > 459.48(\text{EBL}) > 416.73(\text{SCB})$.
- Trend value of Loan and Advance also shows the increasing trend of executing loan and advance in future. Comparatively, Nabil leads EBL and followed by SCB in future as observed in diagram 22.
- Trend of employment shows that EBL is hiking to recruitment in accelerated way followed by Nabil whereas SCB is strict in this regard. While comparing the three, it can be inferred that SCB has no provision towards employing staff and enlargement of organization.

CHAPTER - 5

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter sums up the whole studies and provide conclusion for commercial banks through study of the financial performance of three joint venture banks namely Standard Chartered Bank (SCB), Nabil Bank Ltd. and Everest Bank Ltd. as leading commercial banks of Nepal. Recommendations will be drawn upon concluding the actual financial practice followed by the banks.

5.1 Summary

There are more than 30 commercial banks in existence by the time preparing this dissertation work. Mega Bank Ltd., Civil Bank Ltd., Commerz and Trust Bank Ltd., Century Bank Ltd. and Janata Bank Ltd. are some newly established commercial banks in the field of commercial banking sector. While Standard Chartered Bank Ltd., Nabil Bank Ltd. and Everest Bank Ltd. have their decade of old history of establishment.

There is Nepal Rastra Bank which governs the rules and regulations for operation of commercial banks. The outlook of financial statements for almost all banking sector are overruled by Nepal Rastra Bank, Nepal Accounting and Auditing Standards and Directives laid by Inland Revenue Department. It could be possible to compare the financial status of commercial banks under consideration because of uniformity in their financial statements. Within the boundary of prevailing Acts, Rules and Regulation, banking sector are performing their business with optimum utilization of capital in proper sectors. However, some discrepancies are observed of different banks in strategy of operational activity, investment and financing than a general practice suggested by literatures.

Most of the figures presented in financial statements particularly focused towards internal management. Whereas, the external influence on banking performance are in dark side. The market value of share have been presented in individual banking reports whose relevancy with financial health of banking sector till

remained submissive. The statistical tool such as trend analysis is performed to anticipate the future value which is not complete without external information. Within such limitation some conclusions are drawn as below.

5.2 Conclusion

From the analysis and interpreting of data the following conclusions have drawn.

Financial Policy Measure

- The study of financial policy measures made through liquidity and leverage analysis postulate that the banks are not aware of maintaining their liquidity position sufficiently. The long term liquidity ratio that should be managed is 2:1 while overall average of the three banks is around 1.07.
- Leverage ratio is almost similar for all banks under consideration. However capital management of EBL is different because it is using high debt than equity. Retaining ownership of bank by certain management team may be the reason. However data supporting of EBL's investment in operating activities and gradual earning of profit is good indicator.
- The second analysis focused toward operating efficiency measure through study of loan and advances spread out by banks and investment activities. This reveals EBL is investing aggressively toward operating activities. If everything runs fine, the strategy made by EBL is a good indicator towards banking goal achievement. The higher proportion of investment and loan disbursement found for SCB is contradictory with proportion found for loan to the reference of its total asset. It can be concluded that FD portion is very less for SCB in comparison to other two banks.

Operating Efficiency Measure

- The asset management by banks found to be differed in bank to bank basis. The objective of banking activity remained vague as some banks invested their large proportion of capital in secure bonds and less in operating activities. While others dispensed their capital on loan and advances. SCB has invested much than utilized its fund in loan and advances. But Nabil and EBL have aggressively utilized in loan and advances.
- The Credit ratio analysis clearly exposes the SCB's interest over secure investment rather than towards loan and advances. The industrial and business activity cannot grow by such strategy, though the bank by itself generate profit and provide to shareholders.

Performance Measure

- The performance measures regarding profitability ratio, growth ratio and valuation measures studies revealed that the three banks under consideration are performing in different strategic modes. The SCB is found to be more conservative in profit making by investing over non-operating activities which may not be the well practice in raising national economy.
- The trend value for capital and reserve, loan and advance and staffing suggest that funding or financing, investing and enlargement of business all are in growing trend. The initial two trends imply the Nabil bank's hiking strategy for financial health whereas the third trend shows enlargement of business by EBL in future.
- The profitability ratio ranked the SCB ahead of Nabil and EBL. However the practice of banking sector remained suspicious from banking vision in broader aspect. EPS, DPS, Dividend payout ratio though is in favor of SCB is contemporary. Since the values from 2005/06 to 2009/10 indicates a stagnant

- There is a consistency of correlation in profit making. However the proportion of fund utilization is different for operating and investment activities by the banks.

5.3 Recommendation

Based on the analysis and finding of the study, the following guidelines are suggested and recommended to improve and strengthen the weaker aspects of financial activities of banks:

- Liquidity position of banking sector as studied is below standard practice. The banks should maintain their liquidity position sufficient to assure the customers investment is safe. It is also recommended that appropriate mechanism or guidelines be developed by Nepal Rastra Bank in order to enforce the banks maintain their liquidity at optimum level.
- Investing practice of banks may not be only the indicator for operational dynamism. The loan loss provision is another aspect which the banks and NRB should maintain as per timely requirement depending upon global scenario as well as nation's internal environment. The provision should be reviewed also in context of global economy recession and national political situation.
- How bankers presenting their financial statement may be misleading towards general peoples perception to the banking image. The micro level study of financial instrument can reveal whether banking sector is moving toward its real objective. Some agency working for such awareness is necessary, because whether newly opened banks are economically viable or not. Can they success in market and maintain the belief of people to invest over it? Are the banks

- The banks are the economic indicators of nation. So it should operate in vision developed for banking sector by Nepal Rastra Bank. The nature of investment over operating and non-operating activity should be demarked and policy should be made to invest by banks towards uplifting of national economy. How investment toward industrial growth and business activities be made, should be ultimate target by banking sector.
- Profit making may not be the only goal of commercial bank. It has to generate environment for industrial growth and business so that employment opportunity be developed and ultimately, per capita income be increased. SCB staffing trend shows the narrow view of it and stagnant toward generating contemporary profit. It should enlarge its business and invest in wider area such that its societal responsibility also is fulfilled.

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APPENDIX

Coefficient of Correlation between Loan & Advance and Total Deposit of SCB

Year	Total Deposit (x)	Loan & Advance (y)	x ²	y ²	xy
2005/06	23061	8935	531811201	79841691	206059957
2006/07	24647	10503	607475632	110305387	258858715
2007/08	29744	13719	884705464	188199907	408045937
2008/09	35351	13680	1249680737	187135751	483590678
2009/10	35183	15957	1237823889	254624421	561409112
	<u>147986</u>	<u>62793</u>	<u>4511496923</u>	<u>820107158</u>	<u>1917964399</u>

We have,

$$N = 5$$

$$\sum x = 147986$$

$$\sum y = 62793$$

$$\sum x^2 = 4511496923$$

$$\sum y^2 = 820107158$$

$$\sum xy = 1917964399$$

Correlation Coefficient "r" can be calculated by using the following formula

$$r = \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2} \sqrt{N\sum y^2 - (\sum y)^2}}$$

$$= \frac{5 \times 1917964399 - 147986 \times 62793}{\sqrt{5 \times 4511496923 - 147986^2} \cdot \sqrt{5 \times 820107158 - 62793^2}}$$

$$r = 0.9236$$

$$r^2 = 0.8531$$

$$P.Er. = 0.0443$$

$$6 P.Er. = 0.2659$$

Coefficient of Correlation between Loan & Advance and Total Deposit of Nabil

Year	Total Deposit (x)	Loan & Advance (y)	x ²	y ²	xy
2005/06	19347	12923	374321865	166992122	250017604
2006/07	23342	15546	544862284	241671236	362874003
2007/08	31915	21365	1018570255	456465503	681866691
2008/09	37348	27590	1394892214	761204405	1030435878
2009/10	46411	32269	2153953133	1041280183	1497621018
	<u>158364</u>	<u>109692</u>	<u>5486599751</u>	<u>2667613449</u>	<u>3822815193</u>

We have,

$$N = 5$$

$$\sum x = 158364$$

$$\sum y = 109692$$

$$\sum x^2 = 5486599751$$

$$\sum y^2 = 2667613449$$

$$\sum xy = 3822815193$$

Correlation Coefficient "r" can be calculated by using the following formula

$$r = \frac{N \sum xy - \sum x \sum y}{\sqrt{N \sum x^2 - (\sum x)^2} \sqrt{N \sum y^2 - (\sum y)^2}}$$

$$= \frac{5 \times 3822815193 - 158364 \times 109692}{\sqrt{5 \times 5486599751 - 158364^2} \cdot \sqrt{5 \times 2667613449 - 109692^2}}$$

$$r = 0.9941$$

$$r^2 = 0.9883$$

$$P.Er. = 0.0035$$

$$6 P.Er. = 0.0213$$

Coefficient of Correlation between Loan & Advance and Total Deposit of EBL

Year	Total Deposit (x)	Loan & Advance (y)	x ²	y ²	xy
2005/06	13802	9801	190507488	96065632	135282010
2006/07	18186	13664	330739818	186707128	248498454
2007/08	23976	18339	574862891	336322059	439703390
2008/09	33323	23885	1110418747	570477634	795907695
2009/10	36932	27556	1363995523	759352758	1017719884
	<u>126220</u>	<u>93246</u>	<u>3570524466</u>	<u>1948925211</u>	<u>2637111433</u>

We have,

$$N = 5$$

$$\sum x = 126220$$

$$\sum y = 93246$$

$$\sum x^2 = 3570524466$$

$$\sum y^2 = 1948925211$$

$$\sum xy = 2637111433$$

Correlation Coefficient "r" can be calculated by using the following formula

$$r = \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2} \sqrt{N\sum y^2 - (\sum y)^2}}$$

$$= \frac{5 \times 2637111433 - 126220 \times 93246}{\sqrt{5 \times 3570524466 - 126220^2} \cdot \sqrt{5 \times 1948925211 - 93246^2}}$$

$$r = 0.9971$$

$$r^2 = 0.9942$$

$$P.Er. = 0.0017$$

$$6 P.Er. = 0.0104$$

Coefficient of Correlation between Total Investment and Total Deposit of SCB

Year	Total Deposit (x)	Total Investment (y)	x²	y²	xy
2005/06	23061	12839	531811201	164828506	296070339
2006/07	24647	13553	607475632	183690137	334046826
2007/08	29744	13903	884705464	193288376	413525432
2008/09	35351	20236	1249680737	409500596	715363549
2009/10	35183	19848	1237823889	393923694	698289452
	<u>147986</u>	<u>80378</u>	<u>4511496923</u>	<u>1345231310</u>	<u>2457295598</u>

We have,

$$N = 5$$

$$\sum x = 147986$$

$$\sum y = 80378$$

$$\sum x^2 = 4511496923$$

$$\sum y^2 = 1345231310$$

$$\sum xy = 2457295598$$

Correlation Coefficient "r" can be calculated by using the following formula

$$r = \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2} \sqrt{N\sum y^2 - (\sum y)^2}}$$

$$= \frac{5 \times 2457295598 - 147986 \times 80378}{\sqrt{5 \times 4511496923 - 147986^2} \cdot \sqrt{5 \times 1345231310 - 80378^2}}$$

$$r = 0.9372$$

$$r^2 = 0.8784$$

$$P.Er. = 0.0367$$

$$6 P.Er. = 0.2201$$

Coefficient of Correlation between Total Investment and Total Deposit of Nabil

Year	Total Deposit (x)	Total Investment (y)	x²	y²	xy
2005/06	19347	6179	374321865	38174271	119538548
2006/07	23342	8945	544862284	80018581	208803992
2007/08	31915	9940	1018570255	98799056	317228277
2008/09	37348	10826	1394892214	117210482	404346373
2009/10	46411	13671	2153953133	186893961	634476818
	<u>158364</u>	<u>49561</u>	<u>5486599751</u>	<u>521096352</u>	<u>1684394008</u>

We have,

$$N = 5$$

$$\sum x = 158364$$

$$\sum y = 49561$$

$$\sum x^2 = 5486599751$$

$$\sum y^2 = 521096352$$

$$\sum xy = 1684394008$$

Correlation Coefficient "r" can be calculated by using the following formula

$$r = \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2} \sqrt{N\sum y^2 - (\sum y)^2}}$$

$$= \frac{5 \times 1684394008 - 158364 \times 49561}{\sqrt{5 \times 5486599751 - 158364^2} \cdot \sqrt{5 \times 521096352 - 49561^2}}$$

$$r = 0.9674$$

$$r^2 = 0.9359$$

$$\text{P.Er.} = 0.0193$$

$$6 \text{ P.Er.} = 0.1160$$

Coefficient of Correlation between Total Investment and Total Deposit of EBL

Year	Total Deposit (x)	Total Investment (y)	x ²	y ²	xy
2005/06	13802	4201	190507488	17644328	57977380
2006/07	18186	4984	330739818	24843392	90646009
2007/08	23976	5060	574862891	25599123	121309462
2008/09	33323	5948	1110418747	35384418	198220888
2009/10	36932	5008	1363995523	25083145	184968368
	<u>126220</u>	<u>25201</u>	<u>3570524466</u>	<u>128554405</u>	<u>653122108</u>

We have,

$$N = 5$$

$$\sum x = 126220$$

$$\sum y = 25201$$

$$\sum x^2 = 3570524466$$

$$\sum y^2 = 128554405$$

$$\sum xy = 653122108$$

Correlation Coefficient "r" can be calculated by using the following formula

$$r = \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2} \sqrt{N\sum y^2 - (\sum y)^2}}$$

$$= \frac{5 \times 653122108 - 126220 \times 25201}{\sqrt{5 \times 3570524466 - 126220^2} \cdot \sqrt{5 \times 128554405 - 25201^2}}$$

$$r = 0.6977$$

$$r^2 = 0.4868$$

$$\text{P.Er.} = 0.1548$$

$$6 \text{ P.Er.} = 0.9287$$

Coefficient of Correlation between Net Profit after Tax and Total Asset of SCB

Year	Total Asset (x)	Net Profit after Tax (y)	x^2	y^2	xy
2005/06	25767	659	663956433	433959	16974395
2006/07	28597	692	817770648	478405	19779417
2007/08	33336	819	1111274783	670632	27299377
2008/09	40067	1025	1605330079	1050860	41072824
2009/10	40213	1086	1617111099	1179117	43666506
	<u>167980</u>	<u>4280</u>	<u>5815443042</u>	<u>3812973</u>	<u>148792519</u>

We have,

$$N = 5$$

$$\sum x = 167980$$

$$\sum y = 4280$$

$$\sum x^2 = 5815443042$$

$$\sum y^2 = 3812973$$

$$\sum xy = 148792519$$

Correlation Coefficient "r" can be calculated by using the following formula

$$r = \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2} \sqrt{N\sum y^2 - (\sum y)^2}}$$

$$= \frac{5 \times 148792519 - 167980 \times 4280}{\sqrt{5 \times 5815443042 - 167980^2} \cdot \sqrt{5 \times 3812973 - 4280^2}}$$

$$r = 0.9867$$

$$r^2 = 0.9736$$

$$P.Er. = 0.0079$$

$$6 P.Er. = 0.0477$$

Coefficient of Correlation between Net Profit after Tax and Total Asset of Nabil

Year	Total Asset (x)	Net Profit after Tax (y)	x ²	y ²	xy
2005/06	22330	635	498627608	403558	14185390
2006/07	27253	674	742747430	454222	18367689
2007/08	37133	746	1378841802	557215	27718431
2008/09	43867	1031	1924348564	1063070	45229616
2009/10	52150	1139	2719647255	1297547	59404304
	<u>182734</u>	<u>4226</u>	<u>7264212660</u>	<u>3775613</u>	<u>164905430</u>

We have,

$$N = 5$$

$$\sum x = 182734$$

$$\sum y = 4226$$

$$\sum x^2 = 7264212660$$

$$\sum y^2 = 3775613$$

$$\sum xy = 164905430$$

Correlation Coefficient "r" can be calculated by using the following formula

$$r = \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2} \sqrt{N\sum y^2 - (\sum y)^2}}$$

$$= \frac{5 \times 164905430 - 182734 \times 4226}{\sqrt{5 \times 7264212660 - 182734^2} \cdot \sqrt{5 \times 3775613 - 4226^2}}$$

$$r = 0.9570$$

$$r^2 = 0.9159$$

$$P.Er. = 0.0254$$

$$6 P.Er. = 0.1521$$

Coefficient of Correlation between Net Profit after Tax and Total Asset of EBL

Year	Total Asset (x)	Net Profit after Tax (y)	x ²	y ²	xy
2005/06	15959	237	254698768	56307	3786994
2006/07	21433	296	459355241	87858	6352814
2007/08	27149	451	737086819	203598	12250289
2008/09	36917	639	1362853715	407980	23580001
2009/10	41383	832	1712532884	691834	34420758
	<u>142841</u>	<u>2455</u>	<u>4526527426</u>	<u>1447577</u>	<u>80390855</u>

We have,

$$N = 5$$

$$\sum x = 142841$$

$$\sum y = 2455$$

$$\sum x^2 = 4526527426$$

$$\sum y^2 = 1447577$$

$$\sum xy = 80390855$$

Correlation Coefficient "r" can be calculated by using following formula

$$r = \frac{N \sum xy - \sum x \sum y}{\sqrt{N \sum x^2 - (\sum x)^2} \sqrt{N \sum y^2 - (\sum y)^2}}$$

$$= \frac{5 \times 80390855 - 142841 \times 2455}{\sqrt{5 \times 4526527426 - 142841^2} \cdot \sqrt{5 \times 1447577 - 2455^2}}$$

$$r = 0.9867$$

$$r^2 = 0.9736$$

$$P.Er. = 0.0080$$

$$6 P.Er. = 0.0477$$

Calculation of Trend Value for Capital & Reserve of SCB

Year	Capital & Reserve	$x = (t = 2007/08)$	x^2	xy	$y = a + bx$
	y				$y = 2557 + 417x$
2005/06	1754	-2	4	-3508	1724
2006/07	2116	-1	1	-2116	2140
2007/08	2493	0	0	0	2557
2008/09	3052	1	1	3052	2974
2009/10	3370	2	4	6739	3390
	<u>12785</u>	-	<u>10</u>	<u>4167</u>	

$$\sum y = Na + b \sum x \dots\dots\dots(i)$$

$$\sum xy = a \sum x + b \sum x^2 \dots\dots\dots(ii)$$

$$12785 = 5 \times a + b \times 0$$

$$\text{or } a = 12785 \div 5$$

$$\therefore a = 2557$$

$$4167 = a \times 0 + b \times 10$$

$$\text{or } b = 4167 \div 10$$

$$\therefore b = 416.7$$

Forecasted Value of Capital & Reserve of SCB

Year	$x = (t = 2007/08)$	$y = 2557 + 417x$
2010/11	3	3807
2011/12	4	4224
2012/13	5	4641
2013/14	6	5057
2014/15	7	5474

Calculation of Trend Value for Capital & Reserve of Nabil

Year	Capital & Reserve	x = (t = 2007/08)	x ²	xy	y = a + bx
	y				y = 2667 + 499x
2005/06	1875	-2	4	3750	1668
2006/07	2057	-1	1	2057	2168
2007/08	2437	0	0	0	2667
2008/09	3130	1	1	3130	3166
2009/10	3835	2	4	7670	3665
	<u>13334</u>	<u>-</u>	<u>10</u>	<u>4993</u>	

$$\sum y = Na + b \sum x \dots\dots\dots(i)$$

$$\sum xy = a \sum x + b \sum x^2 \dots\dots\dots(ii)$$

$$13334 = 5 \times a + b \times 0$$

$$\text{or } a = 13334 \div 5$$

$$\therefore a = 2666.8$$

$$4993 = a \times 0 + b \times 10$$

$$\text{or } b = 4993 \div 10$$

$$\therefore b = 499.3$$

Forecasted Value of Capital & Reserve of Nabil

Year	x = (t = 2007/08)	y = 2667 + 499x
2010/11	3	4165
2011/12	4	4664
2012/13	5	5163
2013/14	6	5662
2014/15	7	6162

Calculation of Trend Value for Capital & Reserve of EBL

Year	Capital & Reserve	$x = (t = 2007/08)$	x^2	xy	$y = a + bx$
	y				$y = 1810 + 459x$
2005/06	963	-2	4	-1926	891
2006/07	1202	-1	1	-1202	1350
2007/08	1921	0	0	0	1810
2008/09	2204	1	1	2204	2269
2009/10	2759	2	4	5518	2729
	<u>9048</u>	<u>-</u>	<u>10</u>	<u>4595</u>	

$$\sum y = Na + b \sum x \dots\dots\dots(i)$$

$$\sum xy = a \sum x + b \sum x^2 \dots\dots\dots(ii)$$

$$9048 = 5 \times a + b \times 0$$

$$\text{or } a = 9048 \div 5$$

$$\therefore a = 1809.6$$

$$4595 = a \times 0 + b \times 10$$

$$\text{or } b = 4595 \div 10$$

$$\therefore b = 459.5$$

Forecasted Value of Capital & Reserve of EBL

Year	$x = (t = 2007/08)$	$y = 1810 + 459x$
2010/11	3	3188
2011/12	4	3648
2012/13	5	4107
2013/14	6	4567
2014/15	7	5026

Calculation of Trend Value for Loan & Advance of SCB

Year	Capital & Reserve	x = (t =2007/08)	x ²	xy	y=a+bx
	y				y=12559+1722x
2005/06	8935	-2	4	-17871	9115
2006/07	10503	-1	1	-10503	10837
2007/08	13719	0	0	0	12559
2008/09	13680	1	1	13680	14281
2009/10	15957	2	4	31914	16003
	<u>62793</u>	-	<u>10</u>	<u>17220</u>	

$$\sum y = Na + b \sum x \dots\dots\dots(i)$$

$$\sum xy = a \sum x + b \sum x^2 \dots\dots\dots(ii)$$

$$62793 = 5 \times a + b \times 0$$

$$\text{or } a = 62793 \div 5$$

$$\therefore a = 12558.6$$

$$17220 = a \times 0 + b \times 10$$

$$\text{or } b = 17220 \div 10$$

$$\therefore b = 1722$$

Forecasted Value of Loan & Advance of SCB

Year	x = (t =2007/08)	y=12559+1722x
2010/11	3	17725
2011/12	4	19447
2012/13	5	21169
2013/14	6	22891
2014/15	7	24613

Calculation of Trend Value for Loan & Advance of Nabil

Year	Capital & Reserve	$x = (t = 2007/08)$	x^2	xy	$y = a + bx$
	y				$y = 21938 + 5074x$
2005/06	12923	-2	4	-	11791
2006/07	15546	-1	1	-	16865
2007/08	21365	0	0	0	21938
2008/09	27590	1	1	27590	27012
2009/10	32269	2	4	64538	32086
	<u>109692</u>	-	<u>10</u>	<u>50737</u>	

$$\sum y = Na + b \sum x \dots\dots\dots(i)$$

$$\sum xy = a \sum x + b \sum x^2 \dots\dots\dots(ii)$$

$$109692 = 5 \times a + b \times 0$$

$$\text{or } a = 109692 \div 5$$

$$\therefore a = 21938.4$$

$$50737 = a \times 0 + b \times 10$$

$$\text{or } b = 50737 \div 10$$

$$\therefore b = 5073.7$$

Forecasted Value of Loan & Advance of Nabil

Year	$x = (t = 2007/08)$	$y = 21938 + 5074x$
2010/11	3	37159
2011/12	4	42233
2012/13	5	47307
2013/14	6	52381
2014/15	7	57454

Calculation of Trend Value for Loan & Advance of EBL

Year	Capital & Reserve	x = (t =2007/08)	x ²	xy	y=a+bx
	y				y=18649+4573x
2005/06	9801	-2	4	19603	9503
2006/07	13664	-1	1	13664	14076
2007/08	18339	0	0	0	18649
2008/09	23885	1	1	23885	23222
2009/10	27556	2	4	55113	27795
	<u>93246</u>	-	<u>10</u>	<u>45731</u>	

$$\sum y = Na + b \sum x \dots\dots\dots(i)$$

$$\sum xy = a \sum x + b \sum x^2 \dots\dots\dots(ii)$$

$$93246 = 5 \times a + b \times 0$$

$$\text{or } a = 93246 \div 5$$

$$\therefore a = 18649.2$$

$$45731 = a \times 0 + b \times 10$$

$$\text{or } b = 45731 \div 10$$

$$\therefore b = 4573.1$$

Forecasted Value of Loan & Advance of EBL

Year	x = (t =2007/08)	y=18649+4573x
2010/11	3	32368
2011/12	4	36941
2012/13	5	41514
2013/14	6	46088
2014/15	7	50661