

CHAPTER - I

INTRODUCTION

1.1 Background

The institutional development of modern banking in Nepal has just emerged 73 years before. In B.S.1933, the Tejarath Adda was established to provide credit facilities at a low rate; especially to the government officials at 5% interest rate on collateral of gold and silver. It was only in Kartik 30, 1994 B.S. that the first commercial bank was established with the name of Nepal Bank Ltd under the Nepal Bank Limited Act, 1994 as a semi-government organization. In Baisakh14, 2013 B.S., the first central bank named as Nepal Rastra Bank was established with an objective of working as bank of government and supervising, protecting and directing the functions of commercial banking activities. With the growing activities in the country, the necessity of an additional commercial bank was realized in the country. Consequently, another commercial bank fully owned by the government, named as Rastriya Banijya Bank was established in 2022 B.S. under the Commercial Bank Act 2021 B.S. Similarly, with the main objective of providing institutional credit for enhancing the production and productivity of the agricultural sector in the country, the Agricultural Development Bank, Nepal was established in 2024 BS under the ADBL Act 2024 BS, as successor to the cooperative Bank.

A new banking policy was introduced in fiscal year 2039/40 that opened the way for the establishment of new banks by the joint investment of foreign institutions. The new policy allowed joint venture banks with foreign collaboration to operate in Nepal. Its objectives were to create healthy competitive banking system and to provide banking facilities easily, conveniently in cheap rate. Nepal Arab Bank Limited (Nabil) was the pioneer Joint Venture Banks (JVBs) of Nepal making the history of joint venture banks twenty-six years old, as 2041 B.S. marked the beginning of a new era in Nepalese banking industry. In 2043 B.S., the second JVBs, Nepal Indosuez Bank Ltd. (currently Nepal Investment Bank Ltd) was established. In the same year, Nepal Grind lays Bank

Ltd. (currently Standard Chartered Bank Nepal Ltd.) in the form of JVB was also established. Many JVBs came into existence after the initiation of government's policy of economic liberalization and privatization in 2049 BS. They are Himalayan Bank Ltd. (2049); Nepal SBI Bank Ltd. (2052) came into existence in chronological order. Under favorable environment, various other banks were established thereafter. In the current scenario, 28 commercial banks are running their operation and some are still in pipeline.

Nepalese banking sector has faced drastic changes. From few government banks providing limited services, Nepalese banking sector has come a long way with large number of banks offering wide range of services. At present, the industry is witnessing a phase of intense competition. Consumers have seen a quantum leap in the quality and variety of service offered by the commercial banks.

The market share of the commercial banks clearly shows that government banks are the largest commercial bank in terms of capital fund, deposit mobilization, and loans and advances. However, the private sectors banks are more profitable than the government owned banks. Although the market share shows strong hold of government banks, they are actually being out-performed by the private banks and the market share of government commercial banks is on a decline.

All the private commercial banks are listed in the stock exchange so they should timely prepare their financial reports and publish in the newspaper for the information of the stakeholders. Therefore, their operation is fast. On the other hand, government owned commercial banks are out of such compulsion and their operation is slow.

The American Institute of Banking defines "commercial bank" as a corporation that accepts demand deposits subjects to check and makes short-term loans to business enterprise regardless of the scope of its other services.

In the Nepalese context, all Nepalese commercial banks are operating under Banking and Financial Institutions ACT, 2063 as Class "A" licensed institution.

The main function of commercial of commercial bank is accepting deposits and advancing loan. Bank is a financial institution that deals with monetary transaction. It acts as intermediaries between those who have surplus money and those who need it.

Banks attract the inoperative saving of the public in the form of deposits. These deposits are maintained by banks as current accounts, saving accounts or fixed accounts according to the wish of their customers. Banks further invest these deposits or lend it to businessmen and traders for interest earning. Due to this function, bank is contributing a lot in boosting the economy of the nation in various activities of agricultural, commercial and industrial sectors. The commercial bank arranges the amount of foreign exchange required by various organizations and travelers. Moreover, foreign trade transactions are facilitating through the issuance of letter of credit. Locker facilities are also provided by banks to the customers to keep valuable ornaments and documents. Banks also provide references about the financial position of their customers as and when required. The bank works as an agent of its customers to receive and make payments, pay and collect rent, pay insurance premium, pay telephone bills etc. Internationally valid credit cards, debit cards and ATM cards are issued by commercial banks these days. Banks remit money from one place to another. Nowadays, banks perform wide verities of works.

Private owned commercial banks

The commercial banks that have majority of shareholdings other than of government are private owned commercial banks (POCBs). The promoters are foreign institutions, public, companies and financial institutions. Shareholders elect a BOD, which is responsible for handling all operation matters of company.

Government owned commercial banks

The commercial banks that have majority of share holdings by the government are GOCBs. They are owned controlled and run by the government. The government

appoints BOD and CEO. There are three GOCBs in Nepal. Among them ADB and RBB are fully owned government bank whereas government is only largest shareholder of NBL. They are established run and governed by special act or decisions of the parliament.

1.2 Focus of the study

This study is focused on "Comparative study of financial performance between private and government commercial banks." The study mainly focuses the financial performance analysis of three private commercial banks: Standard Chartered Bank Nepal Limited (SCBNL), Nabil Bank Limited (Nabil) and Himalayan Bank Limited (HBL) and three government owned commercial banks; Rastriya Banijya Bank (RBB), Agriculture Development Bank Limited (ADBL) and Nepal Bank Limited (NBL).

Standard Chartered Bank Nepal Limited (SCBNL); formerly named as Nepal Grindlays Bank Ltd.; 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.

With 18 points of representation, 23 ATMs across the country and with more than 350 local staff, Standard Chartered Bank Nepal Ltd. is in a position to serve its customers through an extensive domestic network. In addition, the global network of Standard Chartered Group gives the Bank a unique opportunity to provide truly international banking services in Nepal.

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 corporate, multinationals, large public sector companies, government corporations, airlines, hotels as well as the 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.

Nabil Bank Limited (Nabil); the first JVB of Nepal, commenced its operations in 12th July 1984 A.D. Dubai bank Ltd, Dubai (later acquired by Emirates Bank International Limited, Dubai-EBIL) was the first joint venture partner of NABIL. Later EBIL sold its entire stock to National Bank Ltd, Bangladesh (NBLB). NABIL Bank Ltd. had the official name Nepal Arab Bank Limited until 31st Dec 2001. Hence, 50% equity shares of NABIL are held by NBLB and out of another 50% shares, 20% shares has been hold by various financial institutions and remaining 30% shares are issued to public of Nepal. 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 39 points of representation across the nation 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. Operations of the bank that includes day-to-day operations and risk management are managed by highly qualified and experienced management team. Bank is fully equipped with modern technology which includes ATMs (51 machines over the country), credit cards, state-of-art, world-renowned software from Infosys Technologies System Bangalore India, Internet banking system and Tele banking system.

Himalayan Bank Limited (HBL) was incorporated in 1993 A.D. by a few distinguished business personalities of Nepal in partnership with Employees Provident Fund and Habib Bank Limited, one of the largest commercial bank of Pakistan. Banking operation commenced from January 1993 A.D. It is the first commercial bank of Nepal whose maximum shares are held by the Nepalese private sector. Besides commercial banking services, the Bank also offers industrial and merchant banking services.

All Branches of HBL are integrated into Globus (developed by Temenos), the single Banking software where the Bank has made substantial investments. This has helped the Bank provide services like ‘Any Branch Banking Facility’, Internet Banking and SMS Banking. Living up to the expectations and aspirations of the Customers and other stakeholders of being innovative, HBL very recently introduced several new products and services. Millionaire Deposit Scheme, Small Business Enterprises Loan, Pre-paid Visa Card, International Travel Quota Credit Card, Consumer Finance through Credit Card and online TOEFL, SAT, IELTS, etc. fee payment facility are some of the products and services. HBL also has a dedicated offsite ‘Disaster Recovery Management System’. Looking at the number of Nepalese workers abroad and their need for formal money transfer channel; HBL has developed exclusive and proprietary online money transfer software- HimalRemit™. By deputing its own staff with technical tie-ups with local exchange houses and banks, in the Middle East and Gulf region, HBL is the biggest

inward remittance handling Bank in Nepal. All this only reflects that HBL has an outside-in rather than inside-out approach where Customers' needs and wants stand first.

The Bank has thirty-two branches and 51 ATM points including 29 inside the valley scattered all over the country

Himalayan Bank has access to the worldwide correspondent network of Habib Bank for fund transfer, letter of credit or any banking business anywhere in the world. Habib Bank is the largest and oldest bank in Pakistan having over 1700 domestic and 65 overseas branches covering all continents and over 1800 correspondents worldwide. Besides, Himalayan Bank has correspondent arrangement with 178 internationally renowned banks like Citibank, ABN Amro etc.

Rastriya Banijya Bank (RBB) is fully government owned, and the largest commercial bank in Nepal. RBB was established on January 23, 1966 (2022 BS Magh 10) under the RBB Act. RBB provides various banking services to a wide range of customers including banks, insurance companies, industrial trading houses, airlines, hotels, and many other sectors.

RBB has Nepal's most extensive banking network with over 125 branches. Through its branch network, RBB has been contributing to Nepal's economic development by providing banking services throughout the country.

RBB has many correspondent arrangements with major international banks all over the world that facilitate trade finance, bank-originated personal funds transfers and inter bank funds transfer via SWIFT. In a bid to promote remittance business, RBB works with Western Union and International Money Express, two leading person-to-person funds transfer networks.

In addition, RBB runs various programmes i.e. banking with the Poor, Micro Credit project for Women etc. to enhance the living standard of people as per the govt.

directives.

As well, RBB actively delivers various government programs to people living in remote parts of the country; these programs are intended to raise living standards.

Agricultural Development Bank (ABDL): With the main objective of providing institutional credit for enhancing the production and productivity of the agricultural sector in the country, the Agricultural Development Bank Nepal was established in 1968 under the ADBN Act 1967 AD, as successor to the cooperative Bank. The Land Reform Savings Corporation was merged with ADBN in 1973 A.D. Subsequent amendments to the Act empowered the bank to extend credit to small farmers under group liability and expand the scope of financing to promote cottage industries. The amendments also permitted the bank to engage in commercial banking activities for the mobilization of domestic resources.

Agricultural Development Bank Limited (ADBL) is an autonomous organization largely owned by Government of Nepal. The bank has been working as a premier rural credit institution since the last three decades, contributing a more than 67 percent of institutional credit supply in the country. Hence, rural finance is the principal operational area of ADBL. Besides, it has also been executing Small Farmer Development Program (SFDP), the major poverty alleviation program launched in the country. Furthermore, the bank has also been involved in commercial banking operations since 1984.

The enactment of Bank and Financial Institution Ordinance (BAFIO) in February 2004 abolished all Acts related to financial institutions including the ADBN Act, 1967. In line with the BAFIO, ADBL has been incorporated as a public limited company on July 14, 2005. Thus, ADBL operates as a "A" category financial Institution under the legal framework of BAFIO and the Company Act, 2053.

Nepal Bank Limited, The first bank of Nepal was established in November 15, 1937 A.D (Kartik, 30, 1994). It was formed under the principle of Joint venture (Joint venture between govt. & public). NBL's authorized capital was Rs. 10 millions & issued capital Rs. 2.5 million of which paid-up capital was Rs. 842 thousands with 10 shareholders. The bank has been providing banking through its 99 branch offices in the different geographical locations of the country. Its more than 40 percent of shares are hold by the government and around 50 percent by public.

Nepal Bank Limited seeks to provide an environment within which the bank can bring unique financial value and services to all customers. It wants to be a sound institution, where depositors continue to have faith in the security of their funds and receive reasonable returns. Borrowers are assured of appropriate credit facilities at reasonable prices. Other service- seekers receive prompt and attentive service at reasonable cost; employees are paid adequate compensation with professional career growth opportunities and stockholders receive satisfactory return for their investment. Nepal Bank Limited has the following objectives

-) Continue to maintain leading share of banking sector with a significant presence in all major geographical areas in the country.
-) Provide competitive and customer oriented banking services to all customers through competent and professional staff.
-) Reclaim leadership within the national financial community.

Financial performance covers the financial analysis and other portfolio analysis of the banks under consideration. Financial analysis is the process of determining the significant operating and financial characteristics of a firm from accounting data and financial statements. The goal of financial analysis is to determine the efficiency and the performance of the firm's management as reflected in the financial records and reports.

Besides the financial analysis, the study is also focused on income and expenditure analysis, NPA, and bankruptcy score analysis.

Financial ratio has helped the researcher to make a qualitative analysis about the financial performance of the banks. The income and expenditure analysis is the percentage in relation to total assets or total sales, which has helped the researcher to study trends in financial statement items over time. Bankruptcy score is the statistical tool to predict the financial status of the firm with the help of the financial ratios.

1.3 Statement of the problem

Both POCBs and GOCBs are competing in the Nepalese market but they vary in different aspects. POCBs are highly equipped by modern technology. Some are established as JVBs so they follow the worldwide and advance banking practices. Their decision-making processes are fast and they select highly qualified and trained employees to appoint. On the other hand, GOCBs are just in the starting phase of using modern technology. They are characterized by delay in decision-making process, interference of government in operation and management. However, they are highly trusted by people because of ownership of government and their long history legacy in banking sector.

Financial Performance Analysis or Financial Management is the main indicator of the success or failure of any financial institution and commercial banks. Financial condition of the business firm should be sound from the viewpoint of shareholders, debenture holders, financial institution and nation as a whole. The survival of the existing commercial bank and other financial institutions depend upon how they manage their assets and liabilities to maximize their profits with the minimum exposure of assets to risk, and are guided by three important conflicting criteria of solvency, liquidity and profitability. Commercial banks deal with other people's deposits, adequate cash flow, liquidity, and better utilization of assets.

Saving mobilization and effective credit management system is must for economic development especially for a country like Nepal where the economic growth rate is very low. In this regard, the good banking system can play a vital role in accelerating the pace of economic development through the mobilization of scattered savings and channeling it in the productive sector of the economy. The adaptation of open and free market economic and financial policies is believed to generate more savings as well as improve investment opportunities. Adequate infrastructure development in saving mobilization and investment is therefore the demand of the day. Therefore the bank can contribute a lot by savings and investing it in the productive and development sector of the economy of Nepal through bringing in appropriate and new innovative banking technologies. Keeping in pace with the development in the banking industry, the leading POCBs commercial banks SCBNL,NABIL,HBL have been regularly coming up with new and innovative service to attract customers as well as doing its level best to satisfy the existing customers. They have been able to maintain the position as the market leaders in the banking industry. In compare to other commercial banks, they are getting success in terms of recognize and profitability. Similarly, GOCBs are very larger bank with nationwide area of network. NBL is the oldest, RBB is the largest and ADBL is in the top most position to make investment in the agriculture sector, the backbone of Nepalese economy.

Nepal has become 147th member of World Trade Organization (WTO). In general, there is much curiosity in people about the opportunities and threats after the accession of membership of WTO. Many questions may arise at once. It is crystal clear that Nepal as to face various challenges in different aspects in coming days. Liberalization in services sector is inevitable. We cannot escape from the ground reality of globalization, widespread acceptance of WTO and necessity of membership in this international trade institution. It should not be opposed to hide our inefficiencies or governance problems. Rather it is right time to find out the impacts, continue and finish the reform process

making the service sector really competitive. Otherwise, we will lose the opportunities. Transparency and disclosure practices are must for the sustainable liberalization process and for the growth and development of financial services sector especially commercial banks. In short, SWOT analysis is necessary in this sector.

In spite of full-fledge liberalization process conducted in Nepal, financial system faces a number of problems and challenges. Negative net worth and huge accumulated losses, higher proportions of NPA, high interest rate differential, large interest rate spread are the major ones. Nepalese banking industry is currently going through a phase of intense competition. Financial sector has really suffered because of the political and economical turmoil prevalent in the country. At present situation, country is facing poor performance in industrial, trading, tourism and in other fronts of the economy. The vicious circle of low income, low savings and low investment; which is the key factor responsible for low growth rate of the country enhances the need for vigorous efforts to increase the level of saving.

The world economy has just recovered (some countries are still in the process) from the recession 2007-2009 that was mainly caused by failure of banking sector. Nepalese economy and banking sector cannot remain untouched from this devil in the present era of globalization. In the light of all above fact, the study is going to address following issues:

- 1) Are private banks financially sound in real? How is their competitive position in the present cut-throat competition age?
- 2) What is the financial position of government banks? How is their competitive position among themselves? Can they compete with private banks?
- 3) How is comparative financial position of private and government commercial banks?
- 4) Does the performance of private banks deserve the stock price reflected in the market (if market price of private banks reasonable)? And, whether the government banks are in condition to issue share in the market.

- 5) How is the trend of different aspects like deposits, investment, loan and advances, net profit and overall performance of private and government banks?

1.4 Objectives of the Study

The main objective of the study is to analyze, examine, compare and interpret the financial performance between POCBs (SCBNL, NABIL & HBL) and GOCBs (RBB, NBL & ADBL) of Nepal. To obtain the main objective following specific objectives are determined.

- To measure and compare liquidity, leverage, activity, profitability ratio and ownership/solvency ratios of sampled private and government commercial banks.
- To analyze and compare the position of their NPA, exchange gain or loss, staff related expenses and earning per share and explain the significance of relation between and among variables.
- To analyze and compare the market related values like P/E ratio, dividend on share capital etc. of private banks.
- To examine the NRB directives followed by sample banks.
- To provide the applicable suggestion and recommendation to concern parties.

1.5 Significance of the Study

Commercial banks are one of the major components of modern economy. They give greater contribution to GDP too. The production of finance and real-estate sub-sector is increasing comparatively. However, various financial sector liberalization programmes such as SAP and ESAP has been initiated with the loan and assistance of World Bank, IMF and ADB. The banking sector continued to be in though in this situation too. The slowdown in the economic segments has a definite impact on the banking sector too. Globalization and accession to WTO, SAFTA and BIMSTEC membership has invited more challenges as well as opportunities. In addition, Branches of foreign companies

already have entered the Nepalese market for modern services and wholesale banking since Jan.1, 2010.

At this situation, the commercial banks should be more competitive. They should become financially strength/healthy and must have growth potentiality. And they have to shape their plans and strategies accordingly. In such a situation, this study tried to analyze and indicate the overall financial health whether they are capable to compete the challenges and grab to opportunities or not.

The government banks had their own originality and this originality had the deflationary impact on economic and commercial activities. The traditional way of operations, hyper dependencies on paper work, lack of sophisticated banking system, unskilled and inexperienced bankers etc. were the features of these banks. In this context, there is a great challenge to them to adopt modern banking practices using sophisticated technology. So they have now great challenge to improve their way of operation and financial performance to be side by side with private banks.

Hence, the study endeavors to evaluate the financial performance of leading private commercial banks SCBNL,NABIL,HBL and government commercial banks by using various measures of financial and statistical tools such as financial ratios, income and expenditure statement analysis, NPA and bankruptcy score. This study will be valuable to shareholders, stock brokers, management of the banks, depositors, perspective customers, investors, government and other policy making bodies which are concerned with banking business. Especially shareholders will have keen interest in how these banks are performing, whether their fund are better utilized or not. In terms of profitability, safety and liquidity all investors will be interested in the performance of the banks. This study, thus, also tries to recommend some suggestions for improvement in financial performance.

1.6 Limitations of the Study

Every study has its own limitations. This study is also not an exception. The following are the main limitations of the study:

- The study is carried out on the basis of the published financial documents such as balance sheet, P/L accounts, related journals, magazines and books. These published documents have their own limitations.
- The study considers only past five years data.
- The study analyses only financial aspects leaving cost and management aspects out of the study.
- The study is mainly focused on the financial performance of the SCBNL, NABIL, HBL, RBB, NBL and ADBL among various commercial banks.
- Structural reform program was going on government banks in the study period. It has large impact on financial performance of private banks. But this study is silent about this fact.
- Time and resources put constraints for the study.

1.7 Organization of the Study

For the systematic presentation of the report, the research is divided into following five chapters:

- Chapter I : Introduction
- Chapter II : Review or Literature
- Chapter III : Research Methodology
- Chapter IV : Presentation and Analysis of Data
- Chapter V : Summary, Conclusion and Recommendation.

1. Introduction: It includes general background of the study, focus of the study, statement of the problem, objectives of the study, significance of the study and limitations of the study.

2. Review or Literature: It contains conceptual review/ review of related books, journals & articles, and past research works.

3. Research Methodology: This chapter expresses the way and technique of the studying applied in the research process. It includes research design, population and sample, data collection procedure and processing, tools and methods of analysis.

4. Presentation and Analysis of Data: This is the main body of research. In this chapter, collected and processed data are presented, analyzed and interpreted with using financial tools as well as statistical tools.

5. Summary, Conclusion and Recommendation: It includes summary of whole study, main conclusion that flow from the study, and offers suggestions & recommendations for the improvement in future.

CHAPTER - II

REVIEW OF LITERATURE

Review of literature is the study of previous research or article or book in related field or topics for finding the past studies' conclusion and deficiencies that may be known for further research. This chapter will help to check the chances of duplication in the preset study. Thus, the gap between the previous research and current research can be filled.

Therefore, the chapter is categorized under three main heading. Conceptual framework is concerned with fundamental of supportive text that will ensure the interpretation whether it is under the principles and doctrine of the theories related to the topic. Review of related studies is about the legislations related to commercial banks studies of previous thesis, related books and previous researches in similar topics. The last is research gap that will describe the difference between the previous thesis and current thesis.

2.1 Conceptual Framework

2.1.1 Concept of Commercial Bank

The term "bank" was originated from Italian word "Banko" now it keeps a specific meaning.

A bank is a business organization that receives and holds deposits and funds from other, makes loans and extends credits, and transfers fund by written order of depositors. A Bank is an undertaking that carries on the business of banking (Lawson etzal; 1997:276).

"The developed financial system of the world characteristically falls the three parts: the central bank, commercial banks and other financial institution. They are also known as financial intermediations". (Sayer; 1976:16).

Commercial Banks are mainly established to facilitate the development of trade and commercial sector of the country. The first commercial bank in the world was "Bank of England", established in 1694 A.D, as the form of central Bank of Britain. Commercial

banks are those financial institutions, which deal in accepting deposits of persons and institutions and lend it to trade, industry and even to agricultural sectors. Moreover commercial banks also provide technical and administrative assistance to industries, trades and business enterprises. The main purpose of priority sector investment scheme is to uplift the backward sector of the economy.

The American institute of banking has laid down the four major functions of the commercial bank such as receiving and handling deposits, handling payments for its clients, making loan and investments, and creating money by extension of credit.

Commercial banks are the heart of the financial system. They hold the deposits of many persons, government establishment, and business units. They make fund available through their lending and investing activities to borrower, individual's business firms, and services from the producers to customers and the financial activities of the government. They provide a large portion of the medium of facts show that the commercial banking system of the nations is important for the functioning of the economy (Cotter and Smith, 1975:145).

"A commercial Bank is defined by law as a depository institution that takes deposits and makes business loans" (William & Sartories, 1995:52).

The commercial Bank can also be defined as an "Investment bank". The investment banker is the link between the corporation in need of funds and the investor. As a middleman, the investment banker is responsible for designing and packaging a security offering and selling the securities to the public (Block & Hirt, 1997:428).

There are various studies on financial aspect, which deals in the context of Nepalese commercial and joint ventures banks.

To highlight some of the important factors, which have contributed to the efficiency and performance of joint venture banks a study has been carried out. The writer concluded that the establishment of joint venture banks have brought out in many new banking techniques such as computerization, hypothecation, consortium finance and modern fee based activities into the economy (Bista, 2048 B.S:214).

At present in Nepal, there are 1 central bank, 28 commercial banks, 50 development banks, 74 finance companies and five rural development banks operating across the country. Additionally, 19 cooperatives and around four dozen NGOs are involved in micro finance activities (Arthik, Mimansa 2009 NRB).

2.1.2 Function of Commercial Banks

Commercial Banks are the important type of financial institution for the nation in term of aggregate assets. The business of banking is very broad in modern business age. The number and variety of services provided by commercial bank will probably expand. Recent innovation in banking includes the introduction of credit cards, accounting services in banking business firms, factoring, and leasing participation in the Euro dollar market and lock-box banking (Cotter and Smith, 1976:123).

The function of commercial banks can be defined as accumulation of idle funds from several area and disburse the fund. They provide short-term credit, they offer several kinds of short- term investments, they serve as a fiduciary, they provide consulting services in cash management and other fields, they may provide as brokerage function that permits customers to buy and sell securities like commercial papers, bond and stocks, and they can offer some kinds of insurance. The following sections discuss some of these functions in more brief :- (Hill & Sartoris, 1995:049).

2.1.2.1 Depository Function

Banks offer several types of depository accounts. There are two basic types of depository accounts, time and demand. For time deposits, the cash in the account receives interest and must be held in a bank for a specified time period. Demand deposits may be withdrawn at any time by the account holder or other party on presentation of a valid draft or cheque drawn on the account.

2.1.2.2 Collection, Concentration, and Disbursement Functions

Banks serve as clearing house for cheque. When a firm receives a cheque in payment for some good or service, the firm deposits the cheque in a bank. The bank gives there firm credit for the cheque and returns the cheque to the bank on which it was drawn. Banks also serve as initiating receiving points for wires and automated clearing house transfers.

After cash has been collected in one bank, the cash balance generation is usually concentrated or pooled into a larger account at a centralized bank. Banks offer a number of services to assist firms to concentrating their cash. On the outflow side, disbursement cheques sent to vendors are drawn on banks.

2.1.2.3. Short-Term Credit Function

Banks provide financing to corporations to help meet short-term cash needs. Since banks take in cash in the form of short-term deposits, they in turn led cash primarily in the form of short-term loans. The short-term loans may be as the form of a credit line, revolving credit line, and term loans acceptance financing, letter of credit etc.

2.1.2.4 Investment Function

In addition to be the interest-bearing deposits mentioned, commercial banks provide other opportunities for cash managers to invest short-term funds. They are major brokers of

notes and bonds, government agency securities, and municipal notes and bonds. They also sell bank commercial paper and deal extensively in repurchase agreements.

2.1.2.5 Fiduciary Function

Many banks are empowered to operate a trust department. Fiduciary acts on behalf of another party. Banks that provide trust services invest, manage and distribute money as requested in wills, trusts, estates and retirement plans. A trust department may be appointed to serve as a corporate trustee or overseer for a corporate bond or preferred stock issue. The bank monitors compliance with indenture agreements, ensures that the corporation pays interest to the bondholders, and redeems bond as required by the agreement. In addition, a bank may serve as a transfer agent to keep records of the sale and purchase of a corporations stocks and bonds, or as a registrar to maintain lists of current stockholders and bondholders for the purpose for remitting dividend and interest payments.

2.1.2.6 Consulting services Function

Large banks generally offer consulting services, especially in the area of cash management. Such services are used in designing optimal collection, disbursement and concentration systems.

2.1.2.7 Brokerage and Insurance Function

Banks were permitted to purchase brokerage firm to help their customers buy and sell stocks and bonds. The law states, however, that a bank can own only a discount brokerage firm one that performs transactions but does not give investment advice. Additionally, banks can now offer certain types of insurance to bank customers.

2.1.3 Historical Development of Banking System in Nepal

In the context of Nepal formally depositing and lending is new phenomenon, where as informally. It was existed from the very beginning. The historical records show that Gunakam Dev, The king of Kathmandu borrowed money to rebuild his kingdom in 723 A.D. After 57 years a merchant 'Shankhadhar' introduced 'Nepal sambat' by clearing all the indebt ness of the people in 808 A.D. This is proof for the practice of money lending prevalent at that time.

After Jayasthiti Malla's classification and declaration 'Tanakdhari' as the people engaged in money lending business. Money lending business became quite popular. Thus the role of Tanakdhari was similar to that of banking agent. Even though, the practice of Tankdhari activities was not free of problem. The history of banking Nepal may be described as a component of the gradual and orderly evaluation in the financial and economic sphere of Nepalese line. The existence of an organize money market consisting landlords, Shanukars, shopkeepers and other indigenious individual money lenders has acted as barrier to institutionalized credit.

During the prime minister of 'Ranodip Singh' around 1877 A.D. 'Tejarath Adda'. Fully subscribed by the government was established in Kathmandu. This is the first financial institution of the country. The primary tasks of the 'Tejarath Adda' was granting of loans and safeguarding of total national deposits. At the time Indian currency was commonly used in most part of the Terai. The primary task of 'Tajarath Adda' was to provide the loan to government employees at very cheap rate and to attract deposit in government exchequer at the beginning but letter on general public were also allowed to take the loan at same rate of interest with gold and silver ornaments as securities or collateral. Although role in development process of banking system in Nepal is not clear in the past. However, the institution of 'Kausi Toshi Khana' as a banking agency during the regime of king Prithivinarayan Shah could also claim to be regarded as the first step toward initiating banking development in Nepal.

Later, Tejarath Adda was replaced by commercial banks. Nepal Bank limited, which marked the beginning of a new era in the history of modern banking of Nepal. At the time of Rana prime minister 'Juddha Shamsar', it was established as a semi government bank with the authorized capital of Rs. 10 million and the paid up capital 8.42 lakhs, Nepal bank limited, however was controlled by the private shareholders till 1951 A.D. In 1952, GON increased its share ownership in NBL up to 51 percent in the total share capital of bank in order to hold to control over its management.

'Sadar Mulukikhana' started to issue currency notes since 1954 A.D. After that Nepal Rastra bank as the central bank is established on 14 Baishakh, 2013 under Nepal Rastra bank Act 2012. The main objective of NRB is to ensure to facilitate and maintain economic interest of general public for safeguarding the issue of paper money to secure country wise circulation of the Nepalese currency to achieve stable system in its exchange rate and to develop banking system in the country. Hence, NRB a regulatory body is the bank of the banks, which provides necessary directives to the other bank.

After a long gap, the second commercial bank was established in 1964 A.D. as Rastriya Banijya Bank fully government ownership. Its authorized capital of Rs 10 millions and paid up capital of Rs. 3 million. Of course, the purpose of bank is to provide facilities and help economic welfare of the general public likewise, for the purpose of developing agriculture sector, government established agriculture development bank in 2024 B.S.

The government adopted liberal and market oriented economic policy in 2041 B.S. Since then joint venture commercial banks are welcomed in Nepal. Three joint Venture banks like Nepal Arab Bank Ltd. Nepal Indo-Suez Bank (renamed Nepal investment bank), Nepal Grind-lays bank (renamed standard chartered bank) limited was established. At present, there are 74 finance companies & 5 rural development banks operating across the country. Additionally 19 co-operatives and around four dozen NGOs are involved in microfinance activities.

2.1.4 Legislations Related to Commercial Banks

All the financial institutions including commercial banks are established and run under Banking and Financial Institutions Act, 2063. It is mandatory for them to follow the directives issued by NRB time to time. The act has provisioned that any person desirous of incorporating financial institutions banks should register such institutions as a public limited company in accordance with the law in force.

2.1.4.1 Banking and Financial Institution Act, 2063

Banking and Financial Institution Act, 2063 has divided financial institutions into four classes namely A, B, C and D on the basis of minimum paid up capital. Generally, A class institutions are commercial banks. The functions that may be carried out by A class institutions are stated in Section 47, sub-section 1 in Chapter 6 as:

Financial transactions which licensed institutions may carry on:

(1) Subject to this Act and the memorandum of association and articles of association, a class “A” licensed institution may carry on the following financial transactions:

- (a) Accepting deposits with or without interest, and refund such deposits;
- (b) Supplying credit as prescribed by the Rastra Bank;
- (c) Dealing in foreign exchange, subject to the laws in force;
- (d) Supplying credit for hire-purchase, hypothecation, and leasing, housing and service business;
- (e) Engaging in merchant banking business, subject to the directives of the Rastra Bank;
- (f) Making arrangements for jointly supplying credits on the basis of co-financing in collaboration with other licensed institutions in accordance with the mutual agreement entered into for the division of the collateral *pari passu*;
- (g) Issuing guarantees on behalf of its customers, having such customers execute necessary bonds in consideration thereof, obtaining security, and acquire their movable or immovable assets as collateral or on mortgage or the assets of third persons as collateral;

- (h) Supplying credit against the guarantee provided by any native or foreign bank or financial institution;
- (i) Issuing, accepting, paying, discounting or purchasing and selling letters of credit, bills of exchange, promissory notes, cheques, travelers cheques, drafts or other financial instruments;
- (j) Accepting deposits, making payments and transfer funds through telephones, telex, fax, computers or magnetic tapes or similar other electronic means or equipment, subject to the directives issued by the Rastra Bank;
- (k) Issuing and accepting credit cards, debit cards, charge cards and other financial instruments, as well, and appointing agents to discharge functions relating thereto, subject to the directives issued by the Rastra Bank;
- (l) Accepting, making payments and supplying credit through automated teller machines and cash dispensing machines;
- (m) Providing overdraft to persons whom it trusts; (n) Supplying a fresh credit in lump sum or by installment against the security of the same movable or immovable assets which have already been furnished with it or with any other licensed institution as security, to the extent covered by the total value of such security;
- (o) Acting as an agent of the Rastra Bank on the conditions prescribed by the Rastra Bank, and carrying on governmental and other transactions on behalf of the Government of Nepal;
- (p) Remitting or transmitting funds to different places within or outside the State of Nepal through bills of exchange, cheques or other financial instruments, purchasing and selling gold and silver bullion, shares, debentures, bonds, etc., and recovering dividends accruing on shares and interest on promissory notes, debentures, bonds, etc.;
- (q) Acting as a commission agent of its customers, taking custody of and arranging for the sale or purchase of shares, debentures or securities, collecting interest, dividends etc. accruing from shares, debentures or securities, remitting or transmitting such interests or dividends to places within or outside the State of Nepal;

- (r) Purchasing, selling or accepting bonds issued by the Government of Nepal or the Rastra Bank;
- (s) Arranging for safe deposit vaults;
- (t) Carrying on off-balance sheet transactions on such conditions as may be prescribed by the Rastra Bank;
- (u) Supplying credits not exceeding the amount prescribed by the Rastra Bank, against individual or collective guarantee, for the economic upliftment of the destitute class, low-income families, victims of natural calamities and inhabitants in any area of the country;
- (v) Exchanging with the Rastra Bank or any other licensed institutions particulars of, information or notices on debtors or customers who have obtained credits from it or other licensed institutions;
- (w) Providing guarantee for the supply of credit to its customers by any other licensed institution;
- (x) Mobilizing capital through shares, debentures, bonds, loan-bonds, saving-bonds or other financial instruments within the limit prescribed by the Rastra Bank;
- (y) Obtaining refinance credit from the Rastra Bank as per necessity, or obtaining or supplying credits to or from other licensed institutions;
- (z) Doing, or causing to be done, study, research and survey work relating to the establishment, operation and evaluation of projects, and providing training, consultancy and other information;
- (aa) Supplying funds received from the Government of Nepal or other native or foreign agencies as credits for the promotion of projects, or managing such credits;
- (bb) Prescribing conditions, as required, in order to protect its interests while supplying credits to any persons or institutions or doing any transaction with them;
- (cc) Obtaining credits by pledging its movable or immovable assets as collateral;
- (dd) Writing off credits, subject to the bye-laws framed by the Board;
- (ee) Properly managing or selling its assets;
- (ff) Performing such other functions as may be prescribed by the Rastra Bank.

2.1.4.2 Company Act, 2063

Company Act, 2063 Section 12 has provisioned that financial institutions including bank should be incorporated as public limited company as the act states:

To be incorporated as public company to carry on some specific transactions:

Notwithstanding anything contained elsewhere in this Act, a company carrying on the business of banking, financial transactions, insurance business related transactions, stock exchange business, pension fund or mutual fund or a company carrying on such other business or transactions as may be prescribed shall be incorporated as a public company.

2.1.4.4 Nepal Rastra Bank Act, 2058

Prior Right of the Bank: (1) For the purpose of recovering any loan, which the Bank has given to any borrower or any other type of claim of the Bank against any borrower, the Bank shall have prior right of security over cash deposited in an account in the name of such borrower at the Bank or in any commercial bank or financial institution or against any other movable and immovable property owned by the borrower for the purpose of recovering such loan.

(2) The Bank shall recover its loan by taking into its custody the cash or movable or immovable property having its prior right and selling such property as prescribed.

46. Compulsory Deposit in Commercial Banks and Financial Institutions:

(1) The Bank shall issue directives to the commercial banks and financial institutions to maintain compulsory reserve with the Bank in proportion to the deposits accumulated with them, borrowed fund or other liability prescribed by the Bank. It shall be the duty of commercial banks and financial institutions to maintain the compulsory deposit in the Bank as prescribed by the Bank.

(2) While computing the compulsory deposit of commercial banks and financial institutions, the Bank shall compute on the basis of daily average of deposit by prescribing the duration.

47. Failure to Maintain Compulsory Deposit: In cases where any commercial bank or financial institution fails to maintain the compulsory deposit prescribed by the Bank, the

Bank shall impose a fine on bank or financial institution for the period of such failure. While imposing the fine, the amount of fine shall not be more than three times of the maximum of the bank rate prescribed by the Bank.

48. Discount Operation:

(1) The Bank may conduct discount transaction on the following negotiable instruments submitted by the commercial bank and financial institutions who maintain their accounts with the Bank:-

(a) A promissory note or bill of exchange signed by at least two parties including a commercial bank payable in the State of Nepal within six months.

(b) Debt bond issued by Government of Nepal or the Bank payable within the State of Nepal and within six months from the date of acquisition by the Bank.

(2) The discount rates, terms and conditions and procedure of operating discount transaction shall be as prescribed by the Bank.

49. Loan and Refinance to Commercial Banks and Financial Institutions:

(1) The Bank may, subject to the terms and conditions prescribed by it, make available loan and refinance to commercial banks and financial institutions for a maximum period of six months against the security of the following assets:-

(a) International negotiable instrument referred to in clause (e) of sub-section (1) of section 66;

(b) The debt bond issued by Government of Nepal payable within the State of Nepal;

(c) The deposits accumulated in the Bank or the gold and precious metals, which the Bank may transact under this Act;

(d) The bill of exchange or the promissory notes referred to in sub-section (1) of section 48;

(e) Other securities as prescribed.

(2) Notwithstanding anything contained in sub-section (1) of section 48, the Bank may provide any type of credit to a commercial bank and financial institution for a maximum period of one year in cases where Government of Nepal has, for the sake of public

interest and welfare, deemed it appropriate to provide loan and has requested the Bank therefore and Government of Nepal has given a guarantee of securities of prevailing market rate for such loan or in extraordinary circumstances where the Bank has to work as a lender of the last resort.

50. Discount Rate and Rate of Interest for Refinance: The Bank shall fix the discount rate and the rate of interest for refinance from time to time. The Bank shall publish and transmit the notice of discount rate and interest rate of refinance for the information of all concerned.

Regulation, Inspection and Supervision of the Banks

76. Bank's Approval Required for Accepting Deposits or Giving Credits: (1) Any person, firm, company or institution shall, in order to accept any type of deposit or to provide loan, obtain approval from the Bank as may be prescribed.

(2) The Bank, while giving approval referred to in sub-section (1), may subject the approval to the terms and conditions prescribed by the Bank and it shall be the duty of the concerned person, firm, company or institution to abide by such terms and conditions.

77. Restriction on Rate of Interest: An individual, firm, company or organization authorized to accept deposit or to provide loan pursuant to prevailing laws, shall fix the rate of interest payable on deposit and to be charged on loan subject to arrangement prescribed by the Bank in the matter of rate of interest from time to time.

78. License to be Obtained from Bank:

(1) Commercial Banks and financial institutions shall, in order to conduct banking and financial transaction, obtain license from the Bank as prescribed.

(2) While issuing license pursuant to sub-section (1), the Bank may fix necessary terms and conditions and it shall be the duty of the licensed bank and financial institution to abide by such terms and conditions.

79. Regulatory Powers of Bank:

(1) The Bank shall have full powers to regulate the functions and activities of commercial banks and financial institutions.

(2) For the purpose of the regulation under sub-section (1), the Bank may frame rules and bye-laws on the matters which the Bank deems appropriate and issue necessary order, directives and circular and it shall be the duty of the concerned commercial bank and financial institution to abide by such rules, bye-laws, order, directives and circular.

(3) The Bank shall issue appropriate directives to commercial banks and require them to submit the following particulars:-

(a) Its balance sheet accounts, off balance sheet commitments, statement of income and expenditures and their ratio among accounts or items.

(b) Prohibitions, restrictions or conditions concerning specific types or forms of credit or investments, or of credit or investments, forms of commitments of a risk-bearing nature which are not matching as to maturity of assets and liabilities and off-balance-sheet items, foreign currency, spot or advance rate of interest, swap, option or similar instruments or access to the payments system through electronic or other means.

(c) Other particulars and documents prescribed by the Bank.

(4) Bank may issue necessary directives to commercial banks on the following subjects and require to submit particulars on the following subjects:-

(a) Books and accounts, profit and loss account, balance sheet and off-balance sheet transaction and commitment, statement of income and expenses and their ratio among accounts or items.

(b) Prohibitions, restrictions or conditions concerning specific types or forms of credit or investments, loan and investment in excess of the ceiling prescribed by the Bank, risk bearing commitment, position of foreign exchange, payment and electronic and other means of payment.

(c) Other particulars and documents prescribed by the Bank.

(5) The Bank shall have the following powers with regard to commercial banks and financial institutions:-

- (a) To enforce authority and responsibility granted under this Act and any other Act enacted for licensing, supervising and regulating commercial banks and financial institutions and to revoke the license of commercial banks and financial institutions and to take over or to provide in trusteeship the commercial banks or financial institutions which have been declared insolvent or are on the verge of insolvency;
- (b) To investigate or inspect, or supervise or to cause to investigate, inspect or supervise by any official of the Bank or the person designated by the Bank the books and accounts, records, documents or register of commercial banks or financial institutions in order to find whether or not any commercial bank or financial institution has conducted business and transaction in accordance with the provision made under this Act or the Rules, bye-laws framed there under and an order or directive issued there under;
- (c) To issue order to the member of the Board of Directors, official or employee of any commercial bank or financial institution to provide necessary information about the bank or institution in cases where it is necessary to inspect and supervise the transaction of such bank or financial institution.

80. Banking and Financial System and Credit Control:

The Bank may issue directives from time to time to commercial banks and financial institutions on banking financial system, currency and credit. It shall be the duty of commercial banks and financial institutions to abide by such directives.

81. Credit to Prescribed Sectors: (1) Commercial banks and financial institutions shall advance credit to the sectors prescribed by the Bank from time to time for a prescribed period and in the manner prescribed by the Bank.

(2) In cases where any commercial bank or financial institution does not advance the credit pursuant to sub-section (1) or advance credit less than prescribed amount, the Bank may recover as fine an amount equal to the interest which a commercial bank or financial institution would have charged for the amount of credit not advanced or advanced less than the prescribed amount from the concerned commercial bank or financial institution.

82. Information to be Furnished to Bank:

- (1) Commercial Bank and financial institution shall furnish the particulars of its transaction and financial position to the Bank as prescribed by the Bank.
- (2) The Bank may publish the particulars made available pursuant to sub-section (1).

83. Approval Required to Issue Debentures and Financial Instruments:

- (1) Commercial banks and financial institutions shall, while issuing any type of debenture or financial instruments, obtain a prior approval of the Bank.
- (2) While giving approval referred to in sub-section (1), the Bank may prescribe necessary terms and conditions and it shall be the duty of the concerned commercial bank and financial institution to abide by such terms and conditions.

84. Inspection and Supervision:

- (1) The Board shall frame and implement inspection and supervision bye-law conforming to international standard for inspection and supervision of the commercial banks and financial institutions licensed by the Bank.
- (2) The Bank may, at any time, inspect and supervise or cause to inspect and supervise any of the offices of commercial banks or financial institutions. Such inspection and supervision may be carried out by the deputed official of the Bank or an expert designated by the Bank at the office of the commercial bank or financial institution or by asking the concerned institution to submit detailed particulars and information to the Bank itself.
- (3) It shall be the duty of the concerned commercial bank and financial institution or Directors, officials or employees of such commercial bank and financial institution to make available the statement, data, record, information, particulars necessary for computer and auditing and other programs and particulars developed through the electric system and financial control system or necessary other documents to such official, expert or the Bank or to enable such official or expert to review or to examine them within the time prescribed by such officer or expert.

(4) The inspecting and supervising official or the Bank under this section may cause to record written statements of any Director, official or employee of the commercial banks or financial institutions with regard to the functions and proceedings which are deemed necessary in course of inspection and supervision.

(5) The Bank or the inspecting and supervising official may issue necessary directives to the commercial bank or financial institution on the matters deemed necessary while inspecting and supervising. It shall be the duty of the concerned commercial bank or financial institution to abide by the directives issued by the Bank or by the inspecting or supervising official. The inspecting or supervising official shall inform the Bank as soon as possible about the directives so given.

(6) The official or expert carrying out the inspection and supervision under this section shall submit the report of the inspection and supervision he has undertaken generally within fifteen days upon completion of his works to the Bank. In case such report is not completed within fifteen days, the Governor may extend the time limit for another fifteen days.

(7) The report submitted pursuant to sub-section (6) should be submitted in the next meeting of the Board.

(8) The Board may, after making appropriate decision on matters contained in the report submitted pursuant to sub-section (7), issue appropriate directions to the Governor about the actions to be taken in the matter. It shall be the responsibility of the Governor to implement or cause to implement such directions.

85. Exchange of Mutual Cooperation:

(1) The Bank may, in order to supervise commercial banks and financial institutions under its supervisory jurisdiction, exchange cooperation with concerned foreign supervisory authority on reciprocal basis.

(2) The Bank may exchange the notices or information received for carrying out supervision pursuant to sub-section (1) with the foreign supervisory authority provided

that such authority undertakes to respect the confidentiality of the information so received.

(3) The Bank may exchange mutual cooperation with other institutions regulating the policies relating to financial system to promote financial system.

100. Punishment for Violation of Bank's Regulation:

(1) In case any commercial bank or financial institution licensed from the Bank, violates an order or directive issued by the Bank under this Act or under the regulation or bye-laws framed there under, the Bank may impose one or more of the following punishment to such commercial bank or financial institution:-

- (a) Giving reprimand or written warning;
- (b) Obtain an undertaking from Board of Directors for adopting reformative measures;
- (c) Issuing written order to end up frequent violations, to abstain from such violation and to adopt reformative measures;
- (d) Suspend or terminate the services of the Bank's employee;
- (e) Prohibit commercial bank or financial institution to distribute dividend to its shareholders;
- (f) Prohibit commercial bank or financial institution to accept deposits or to grant loan and advance;
- (g) Imposing full or partial restriction on the transaction of business of the commercial bank or financial institution;
- (h) Suspend or revoke license of the commercial bank or financial institution.

(2) Where a Director or official or employee of a licensed commercial bank or financial institution violates an order or directive issued by the Bank under this Act or under the regulation or bye-law framed there under or in cases where, they have acted against the interest of the depositor or general public or where they failed to submit the documents, particulars, data required by the Bank or the inspecting or supervising official within the time prescribed, the Bank may impose the following punishments to such Director, official or employee:-

- (a) Giving reprimand or written admonition;
- (b) Suspending;
- (c) Imposing a cash fine not exceeding five hundred thousand rupees;
- (d) Giving order to the Board of Directors of concerned commercial bank or financial institution to stop payment of all benefits including remuneration and allowances;
- (e) Giving order to the Board of Directors of the concerned commercial bank or financial institution to remove Directors from his office of Director or to terminate the services of officer or employee.

101. Procedures for Pecuniary Penalty and Punishment:

- (1) While imposing pecuniary penalty or punishment pursuant to sections 99 and 100, the Bank shall have to follow the following procedures:-
 - (a) Prior to imposing pecuniary penalty or punishment, the Bank shall issue a written notice to the accused institutions or persons stipulating the following matters to submit its reply within fifteen days, on the proposed fine or punishment:-
 - (1) Nature of the offense,
 - (2) Amount of fine or proposed punishment that may be imposed on the basis of nature of offence, and
 - (3) Summary of the facts related to the offence.
 - (b) The institution or person accused pursuant to clause (a) should submit written replies within fifteen days accepting or denying the charges.
 - (c) In case the denial of the charge by the accused institution or person is found to be satisfactory, the Bank may change, limit or dismiss such charge.
 - (d) In case the accused institution or person accept the charge or does not give satisfactory replies, the Bank shall impose such fine or punishment.
 - (e) The Bank may issue order to deduct the amount of fine imposed pursuant to clause (d) from the accounts of the concerned commercial bank or financial institution maintained at the Bank.

(2) The cash fine to be recovered by the Bank pursuant to clause (e) of subsection (1) shall be deposited in the general reserve fund.

(3) Notwithstanding anything contained in sub-section (1), there is no need to follow such procedure while imposing punishment under clauses (a), (b), (c) or (d) of subsection (1) and clauses (a) and (b) of sub-section (2) of section 100.

102. Filing Appeals: The commercial bank or financial institution or the director or official or employee thereof not satisfying with the punishment imposed by the Bank under sections 99 and 100 may, within thirty five days from the date of punishment, file an appeal at the Appellate Court.

Chapter - 12

Miscellaneous

103. Payment, Clearing and Settlement:

(1) The Bank shall make necessary arrangement for the clearing and settlement of cheques, payment orders; inter bank payment security transactions made in the currencies prescribed by the Bank and any other payment instrument and carry out the functions of regulation, inspection and supervision thereof.

(2) While carrying out the functions referred to in sub-section (1), the Bank may prescribe necessary procedures.

(3) For the purpose of clearing and settlement arrangement referred to in subsection (1), the commercial bank or financial institution shall, subject to the terms and conditions prescribed by the Bank, open account in the Bank or any other financial institution prescribed by the Bank.

104. Collection of Data:

(1) The Bank shall, in order for achieving its objectives or carrying out its functions, collect data necessary for it from itself or from Government of Nepal or other agencies. For this purpose, the Bank may seek help from the authorized persons, institution, and organization within and outside the State and international association and organizations.

(2) The Bank may make necessary provisions for coordination and reformation in the system of collection, storing and distribution of data relating to its area of competence.

Other Policies

a. New arrangements for interest rate fixation

The Nepal Rastra Bank has made the following arrangement for the fixation of interest rate:

- i. Commercial banks have to inform NRB and also communicate it to public through mass media about the interest rate offered on all types of deposit and interest charged on lending rates on different heading and for different purpose immediately after changes and regularly in every three months.
- ii. While issuing notices on interest rate, commercial bank cannot state the provision that the rate will be fixed on the bases of mutual understanding.

b. Amendment and Adjustment to the Bank Rates

The prime rate and the selective rate on the loan of last resort to be provided by NRB to the banks and other financial institutions under the refinancing/ rediscounting facility have been adjusted and unified. The unified bank rate has been fixed to 6% and the following amendments have been made on reporting procedures to be followed by the banks for availing refinancing/ rediscounting facility.

- i. These banks should compulsorily report to the credit information center on regular basis and the report should include updated defaulter's list. The NRB will stop refinancing facility for the banks that are detected of not sending such report from the inspection. Beside NRB will act in accordance with NRB Act.
- ii. These banks will be charged interest at 2% rate as penalty, if they fail to repay the loan under refinancing facility on time.

c. New Arrangement for Compulsory Cash Balance

NRB has cancelled all previous arrangements regarding compulsory cash balance necessary to maintain by the commercial banks. It has issued new regulations, which require commercial banks to deposit cash at NBR equivalent to 6.5% cash balance of all domestic deposit liabilities in their own account.

d. Capital requirement for establishing new commercial banks/ joint venture banks in Nepal

A minimum paid up capital of Rs. two billions is required to incorporate a new commercial bank in any side of the country. However than banks under operation at the time the directive comes in force shall meet above requirement by 2070 Ashadh end. They should make proportionate increment in paid up capital each year from the base year 2064/065 to meet Rs. two-billion requirement. Following penal provisions are for violating the directive

1. Stoppage of dividend payment for not meeting said paid up capital in 2064/065
2. Prohibiting even for collecting deposit for not meeting said paid up capital in 2065/066
3. Prohibiting for making credit investment for not meeting said paid up capital in 2066/067.
4. Failing to meet capital requirement in 2067/068 will be prohibited for doing all transactions except credit collection and deposit payment. The process of repealing the license will be initiated after the period.

2.1.5 Financial Performance Analysis

Traditionally, banks act as financial intermediaries to channel funds surplus units to deficit units. Unlike other non-banking financial companies, commercial banks don not produce any physical goods. They produce loans and financial innovations to facilitate trade transactions because of special role they play in the economy, concerned authorities heavily regulate them. (Paudel N.P., 2053: 64-69).

Balance sheet profit and loss account and the accompanying notes are the most widely aspects of financial statement of the bank. The bank's balance sheet includes financial claims as liabilities in the form of deposit and as assets in the form of loans. Fixed assets appear in small portion out of the total assets. Financial innovations, which are generally contingent in nature, are considered as off balance sheet items. Interest received on loans advances and investment

and paid in deposit liabilities are major components of profit and loss account. The other sources of income are fee, commission and discounts, foreign exchange income, dividend on investment, other service charge etc.

The users of financial statement of bank require relevant, reliable and comparative information to evaluate the financial performance and position and hence make economic decision regarding the bank. According to 'Commercial Bank Act 2031' the audited balance sheet and profit and loss account must be published in the leading national; newspaper for the information of general public.

Most of the users of financial statements seek to assess the bank's overall performance. Following factors affect the evaluation of bank overall performance;

- The structure of balance sheet and profit and loss account
- Operating efficiency and internal management system
- Managerial decisions taken by the top management regarding interest rate lending policies exchange rates etc
- NPA
- Environment changes such as changes in Technology, Government Competition, and Economy etc.

2.1.6 Financial Statement analysis

Financial statement is the indicator of business performance that whether business is profitable or not. Therefore, financial analysis reflects the financial position of a firm, which is the process of determining the operational and financial characteristics of firm. Different types of financial statement analysis can be used on the basis of this research's objectives. Financial statement analysis is helpful to the decision maker for finding out favorable or unfavorable situation of a business concern. Financial performance is the main indicator of success or failure of the company.

The main function of financial analysis is the pinpointing of the strengths and weakness of a business undertaking by regrouping and analysis of figures

contained in financial statements, by making comparison of various components and by examining their content. Financial managers can use this as the basis to plan future financial requirements by means of forecasting and budgeting procedures (Man Mohan and Goyal S.N., 1997:356).

According to the Hampton, "Financial analysis is used primarily to gain insight in the operating and financial problems confronting the firms, with respect to these problems we must be careful to distinguish between the cause of problem and symptom of it". It is thus an attempt to direct the financial statements in to their components on the basis of purpose in hand and establish relationship as between these components on the one hand as between individual components and totals of these items on the other. Along with this, a study of various important factors over the past several years is also undertaken to have clear understanding of changing profitability and financial condition of the business organization (Hampton J.J., Op. Cit: 99).

Financial analysis is the process of determining financial strengths and weakness of Analysis Company by establishing strategic relationship between the components of analysis balance sheet and other operative data (Pandey I.M., 1994:96).

Weston, Basley and Brigham have stated, "Financial statement analysis involves a comparison of analysis firm's performance with that of other firms in the same line of business which often is identified by the firm's industry classification. Generally speaking, the analysis is used to determine the firm's financial position in order to identify its current strengths and weakness and to suggest actions that might enable the firm to take advantage of the strength and correct its weakness (Weston J.F., Besley S. & Brigham, E. F., 1996:78).

Financial statement analysis is largely is largely analysis study of relationship among the various financial factors in analysis business as disclosed by the single set of statement and analysis study of the trend of these factors as shown in analysis series of statement (Myer J.N., 1961:4).

Financial analysis is process if identifying the financial strength and weakness of the firm by property establishing relationship between the items of the balance sheet, which represents analysis snapshot of the firm's financial position analysis at analysis moment in time and next, income statement, that depots analysis summary of the firm's profitability overtime (Vanhorn, J.C. & Watchowcz, J.M. 1997:120).

Interest parties in financial statement analysis are management, investors or shareholders or owner, creditors, employees and trade union, bankers and lender and government etc. (Dongol & Dangol, 2061:593) financial statement analysis technique of answering various questions regarding the performance of a firm in the pas, present and the future (Pradhan, 2004:45).

2.1.7 Financial Statement

Financial statements provide information about a firm's position at a point in time as well as its operation over some past period. However, the real value of financial statement lies in the fact that they can be used to help predict the firms financial position in the future, and to determine expected earnings and dividends from an investors standpoint, predicting the future is what financial statement analysis is useful both as a way to anticipate future conditions and more important as a starting point for planning actions that will influence the future course of events. (Weston & Brigham, 1990:93).

Financial statements are vital sources of information to a company's stakeholders in learning about the financial health of the company and to know how their respective interest is thereby affected. (Chitrakar, 2003:8) Financial statements are prepared primarily for users outside an organization; managers also find their organization's financial statements useful in making decision (Hilton & Ronald, 2002:9-5).

There are primarily four components of financial statement:

1. Balance Sheet
2. Income Statement

3. Statement of Retained Earnings
4. Statement of cash Flows

1. Balance Sheet

The balance sheet shows the balances in the organization's assets, liabilities and owners equity as of the balance sheet date. It represents an organizational financial position at a point in time.

2. Income Statement

The income statement reports the income for the period between two-balance-sheet dates.

3. Statement of Retained Earnings

The retained earnings statement shows how income and dividends for the period have changed the organizations retained earnings.

4. Cash flow Statement

It shows how cash obtained during the period and how it was used. The cash flow statement is designed to convert the accrual basis of accounting used to prepare the income statement and balance sheet back to a cash basis. This may sound redundant but it is necessary .The accrual basis of accounting generally is preferred for the income statement and balance sheet because it more accurately matches revenue sources to the expenses incurred generating those specific sources.

However, it also is important to analyze the actual level of cash flowing into and out of the business. Like the income statement, the statement of cash flow measures financial activity over a period of time. In addition, the cash flow statement tracks the effects of changes in balance sheet accounts. The cash flow statement is one of the most useful financial management tools to run business.

It is useful in providing information to the users of financial statements about the ability of the enterprise to generate cash and cash equivalents and the need of the enterprise to utilize those cash flows (Wagle & Dahal, 2004:11.1-11.2).

2.1.7.1 Importance of Financial Statement Analysis

1. To measure the firm's liquidity, profitability and solvency position
2. To assess the firm's operating, efficiency financial position and performance
3. To fulfill the objectives and interest of short-term creditors, present and potential investors, Long-term creditors, management and regulating authorities

2.1.7.2 Objectives of Financial Statement Analysis

1. To judge the financial health of the firm
2. To judge the profitability of the business undertaking
3. To evaluate the capacity to repay the loans and interests there on
4. To evaluate the solvency position of the firm
5. To examine and evaluate the return on investment and or capital employed.

2.1.7.3 Limitations of Financial Statement Analysis

Analysis of financial statement suffers from certain limitations. The major limitations of financial analysis can be summarized as follows:

1. Financial analysis fails to disclose the current worth of the enterprise.
2. Financial analysis is based on financial statements, which record historical facts. They do not record the changes in the price level.
3. The financial analysis is based on facts and figures contained on financial statements. Hence the limitations of financial statements such as influence of personal judgment, disclose of monetary facts only are the limitations of financial analysis (Munankarmi, 2002:467).

2.1.7.4 Analytical Technique Used

Four analytical tools are used in widespread in analyzing financial statements.

1. Horizontal Analysis
2. Trend Analysis
3. Common-size/ Vertical analysis
4. Ratio Analysis

Horizontal Analysis

Horizontal analysis is the analysis of financial statement over a series of years. The calculation of changes in absolute amount or percentage changes in the statement item or total is horizontal analysis (Bajracharya, et.al, 2004:1016).

When the financial statement of previous year along with current year are presented horizontally with added columns to reflect absolutely changes in amount and percentage for each item from the previous year to current year, it forms the horizontal analysis. (Wagle & Dahal, 2004:10.2) for example, assume that the sales figure fiort eh previous yer and current year amounts to Rs. 200000 and Rs 300000 respectively. This can be reflected in comparative income statement as:

Table 2.1: Horizontal Analysis of Financial Statement

Items	Previous year	current Year	Increase/ Decrease	
			In Amount (Rs.)	In %
Sales	200000	300000	100000	50%

Trend Analysis

Trend analysis is nothing more than the extension of horizontal analysis for several yers. It is carried out by assigning a value of 100 to the items of base year (Year with normal financial and operating environment) financial statements and then expressing the

financial statements items in the following years as a percentage of base year value. it is also known as time series analysis (Wegle : Dahal, 2004:10.2).

Trend ratios involve a comparison of the ratios of a firm over time that is present ratios are compared with past ratios for the same firm. Trend ratios indicate the direction of change in the performance-improvement, deterioration or constancy-over the years (Khan & Jain, 2006:4.2). Trend analysis is the comparison over the three or more years (Hilton & Ronald, 2002:920).

Common- Size Statement Analysis

Common size analysis is a vertical analysis. It expresses all items in the statement as percentage of a selected item (the base) in the statement. Financial statement that shows only percentage and no absolute amounts are common-size statements. This is the first step in a comprehensive ratio analysis. Management performance can be evaluated through common-size statement analysis. It should be evaluated from the prospective of liquidity, profitability and stability, activity & possibility management itself can be using these parameters to improve the organization's performance of future. It is also known as vertical analysis. Financial analysts use vertical analysis to gain insight into the relative importance or magnitude of various items on the financial statements (Hilton & Roland, 2002:921).

2.1.8 Ratio Analysis

Ratios are the tools for measuring liquidity, solvency, profitability and management efficiency of the firm and it is equally useful to the internal management, prospective investors, creditors, outsiders etc. An analysis of the firm's ratios generally is the first step in financial analysis (Weston & Brigham, 1990:93).

Ratio analysis uses financial report and data summarizes the key relationship in order to appraise financial performance. The effectiveness will greatly improve when trends are

identified, comparative ratios are available and inter-related ratios are prepared (Munakarmi, 2002:468).

Ratio analysis is widely used tool of financial analysis to interpret the financial statement so that the strength and weakness of a firm as well s its historical performance and current financial condition can be determined. The term ratio refers to the numerical or quantitative relationship between two items/variables. The relationship can be expressed as; percentage, fraction and proportion of numbers. Alternative methods of expressing items, which are related to each other, are for the purpose of financial analysis referred to as ratio analysis. A rationale of ratio analysis lies in fact that makes related information comparable. Single figure by itself has no meaning but when expressed in items of a related figure it yields significance instances (Khan and Jain, 1996:60).

Ratio analysis is a tool of scanning the financial statements of the firm. Through this one comes to know in which areas of the operation the organization is strong and in which areas it is weak (Bajracharya, et.al. 2001:1017). Ultimately, ratio analysis is a tool of scanning the financial statement of the firm.

Nature of Ratio Analysis

In financial analysis, ratio analysis is used as an index of yardstick for evaluating the financial position and performance of the firm. It helps in making decisions as it helps establishing relationship between various ratios and interprets there on. It helps analysts to make quantitative judgment about the financial position an performance of the firm. Ratio analysis involves the following four steps.

1. Selection of relevant data from the financial statement depending upon the objectives of the analysis
2. Calculation of required ratio from the data presenting them either in pure ratio form or in percentage
3. Comparison of calculated ratios with:

- i. The ratio of the same concern over a period of year to know upward or downward trend or static position to help in estimating the future or
 - ii. The ratio of another firm in the same line or
 - iii. The ratio of projected financial statements or
 - iv. The ratio of the industry average
 - v. The pre-determined standards of
 - vi. The ratio between the department of the same concern assessing either the financial position or the profitability or both
4. Interpretation of the ratio

The ratio analysis is classified into seven broad groups for better understanding and analysis:

1. Liquidity Analysis
2. Profitability Analysis
3. Activity ratio analysis
4. Long-Term Debt and Solvency Analysis
5. Market value Analysis
6. Other Relevant ratio
7. NPA Analysis

2.1.8.1 Liquidity Analysis/ Working Capital Analysis

It measures the adequacy of a firm's resources to meet its near term cash obligations. It is pre-requisite for the very survival of firm. Liquidity analysis measures the liquidity position and short-term obligation.

To meet the current or short-term obligations, commercial banks must maintain adequate out in commercial banking. NRB has directed all the banks to maintain adequate CRR to meet its current obligations. Thus to measures the banks liquidity positions. CRR

assumes the key indicator has other ratios. It is also found that central banks practically pay more attention towards the CRR of commercial banks.

Cash Reserve Ratio (CRR)

CRR measures the ability to meet short-term obligation and reflect the short-term financial strength and solvency of the bank. The cash reserve ratio (CRR) is being used as a prime and effective instrument to inject liquidity to and absorb liquidity from the economy. The CRR, which has been used particularly for last few to reduce the cost of resources of commercial banks and to manage necessary liquidity in the economy, has been gradually lowered in the neighboring countries as well as the majority of the countries in the world in complement to the prevalent use of indirect monetary instruments and prudential regulatory measures. "In this context, the CRR has been maintained at 6.5% for FY 2008/09"(Monetary Policy, 2009/10: NRB).

2.1.8.2 Profitability Ratio Analysis

A company should earn profit to service and grow over a long-term period of time. Profits are essential but it would be wrong to assume that every action initiated by management of a company should be aimed at maximizing profits irrespective of social consequences.

Profit is the differences of revenues and expenses over a period. Profit is the ultimate output of a company and it will have no future if it fails to make sufficient profits. Therefore, the financial manager should continuously evaluate the efficiency of its company. Therefore, the profitability ratio measures the net income of the firm relative to its revenue and capital. The following major profitability ratios are calculated to measure the efficiency of banks.

Net Profit Margin

This ratio measures the overall profitability of the firm by establishing relationship between profit and sales revenue. The relationship between the net profit and sales

indicated management's ability to operate the business with sufficient success not only to recover the cost of production, operating expenses of business and cost of borrowed mat also to leave margin of reasonable compensation to the owners for providing their capital at risk. This ratio is calculated by:

$$\text{Net profit Margin} = \frac{\text{Net Profit}}{\text{Total Income}} \times 100$$

$$= \dots\dots\dots\%$$

Return on Assets (ROA)

It measures the productivity of the assets. It is a measure in terms of relationship between net profit and assets. The income figure used in computing this ratio should be operating income (Munakarmi, 2002:485). This ratio is calculated by:

$$\text{Return on Assets} = \frac{\text{Net Profit}}{\text{Total Assets}} \times 100$$

$$= \dots\dots\dots\%$$

Interest Income on Loan and Advances

The major source of operating income of any commercial bank is interest income. Among the interest income should, loans and advance and overdraft are the major source of interest income. Investment on government securities and debentures are also the major source of interest income. Interest income to loan and advance ratio shows the high utilization of loan and advances. Higher percentage income reflects better operational efficiency or higher level of risk due to higher volume of investment in loan and advances (Shrestha, 2003: 124). This ratio is calculated by:

$$\text{Interest income on loan and advances} = \frac{\text{Interest Income}}{\text{Total Loan and Advance}} \times 100$$

$$= \dots\dots\dots\%$$

Operating Ratio

Operating ratio of banks tries to establish relationship between operating expenses and total income. Operating expenses include administrative expenses, interest on short-term loan, discount allowed and bad debts (Munakarmi, 2002:484). This ratio is calculated as follows:

$$\begin{aligned} \text{Operating Ratio} &= \frac{\text{Operating Expenses}}{\text{Total Assets}} \times 100 \\ &= \dots\dots\dots \% \end{aligned}$$

2.1.8.3 Activity Ratio Analysis

Funds of creditors and owners are invested in various assets to generate sales and profits. The better the management of assets better the large the amount of sales. Activity ratios are employed to evaluate the efficiency with which the firm manages and utilized its assets. These ratios are also called turnover ratios because they indicate the speed with which assets are being converted or turned over ratio into sales. Activity ratios, thus involve a relationship between sales and assets. A proper balance between sales and assets generally reflects that assets are managed well. Several activity ratios can be calculated to judge the effectiveness of asset utilization (Pandey, 1997:119). Various activity ratios are calculated to find out the degree of effective utilization of resources by the bank.

Credit Deposit Ratio

Loan and advances to total deposit ratio is calculated by dividing total loan and advances mobilized by deposits collected from the depositors. To measure the activity position of commercial banks, loan and advances to total deposit ratio is calculated (Shrestha, 2003:96). This ratio is calculated by:

$$\begin{aligned} \text{Credit Deposit Ratio} &= \frac{\text{Total Loan and Advances}}{\text{Total Deposits}} \times 100 \\ &= \dots\dots\dots \% \end{aligned}$$

2.8.1.4 Long-term Debt & Solvency Analysis

It is also known as "Leverage or Capital Structure Ratio". Solvency analysis may be defined as financial ratios, which through light on the long-term solvency of a firm reflected in its ability to assure the long-term creditors with regard to (a) periodic payment of investors during the period of loan and (b) payment of principal on maturity or in predetermined installments at due dates. There are aspects of the long-term solvency of the firm:

1. Ability to repay the principal when due and
2. Regular payment of the interest (Khan & Jain, 1996:98)

To measure banks capacity of borrowing as means of capital accumulation i.e. over extension of credit and borrowing power, which determine the long-term solvency of the banks; several capital structure ratios are calculated. These ratios help to calculate the proportion of outsiders and owners contributions of these banks. To highlight on debt serving capacity financial health, strength and weakness assets of the bank, it is better to calculate capital-structure ratio.

Capital Adequacy Ratio

Capital adequacy ratio is calculated by dividing total capital fund (Net worth) by total deposits. Capital adequacy has remained one of the biggest issues in banking industry and the appropriate capital adequacy ratio for commercial banks has always been a controversial issue. According to capital adequacy principal, safety and stability fragile system ultimately rests upon the confidence of the depositors and creditors. NRB emphasizes upon capital as cushion to absorb unexpected losses arising from various risks that can create instability in banks earnings. Thus, they prescribe a ratio of capital to total assets.

As per the directions of NRB, the commercial banks must maintain minimum percentage of adequacy of capital fund on risk weighted assets of the bank. NRB has provided a risk

of on balance that and off-balance sheet of assets with risk rates on the basis of which commercial bank should calculate risk weighted assets. As per the directive of NRB in the 2008/09, capital adequacy ratio (CAR) to be maintained by the banks and financial institutions on the basis of risk-weighted assets (RWA) will be continued at 10.0%, with core capital at 6% (Monetary Policy, 2008/09, NRB). The ratio of core capital supplementary capital and total capital fund on risk-weighted assets in case of the banks has been as follows:

1. **Core Capital:** It is the combination of paid up capital, share premium, non-redeemable preference share, general retained fund and retained earnings of banks.
2. **Supplementary Capital:** It is combination of general loan loss provision, exchange equalization reserve, assets re-valuation reserves, hybrid capital instrument, unsecured sub-ordinates term debt and other free reserves.
3. **Total Capital Fund:** It is the total of core capital and supplementary capital (Panta, 2005:63). In other words, it is total assets minus current liabilities or the net worth.

Interest Expenses to total Deposit Ratio

Ratio measures the cost of the deposits with borrowing in relative term. Interest expenses are the major expenses of the operation expenses of the commercial banks. Interest expenses consist of interest paid on various deposits (saving, fixed, call) and borrowings.

The performance of banks is dependent upon its ability to generate cheaper fund. Cheaper the funds better the profitability on generating loan & advances and vice-versa. High ratio is indicative of costly fund and adversely affects the lending activities of bank. It is calculated by:

$$\begin{aligned} \text{Interest Expenses to Total Deposit Ratio} &= \frac{\text{Interest Expenses}}{\text{Total Deposit}} \times 100 \\ &= \dots\dots\dots \% \end{aligned}$$

2.1.8.5 Market Value Analysis

The market value ratios represent a group of ratio that relate to the firms stock price to its earning and book value per share. These ratios give management an indication of what investors think of the company/banks past performance and future prospectus. If the firm's liquidity, asset management, debt management and profitability ratios are all good then its market value ratio will be high its price will be probably be as high as can be expected (Weston & Brigham, 1996:104).

Earning Per Share

Apart from the return of return, the profitability of a firm from the profit view of the ordinary shareholders is the earning per share (EPS). It measures the profit available to the equity shareholders on per share basis i.e. the amount they can get on each share held. In other words, this ratio measures the earning available to an equity shareholder on a per share basis. The objectives of computing this ratio is to measure the profitability of the firm on per equity share basis. There are two components of this ratio as under:

1. Net profit after preference dividend
2. Number of equity shares outstanding

It is computed by dividing the next profit after preference dividend by the number of equity shares outstanding. It is expressed as an absolute figure.

$$\text{Earning per Share} = \frac{\text{Net Profit after Tax-Preference Dividend}}{\text{No.of Equity Shares Outstanding}}$$

= Rs.

Price-Earning Ratio

Price –earning ratio is widely used by the security analyst to value the firm's performance as expected by investors. It reflects investors' expectation about the firm's growth in the firm's earning. This ratio measures investors' expectation and the market appraisal of the performance of the firm (Munakarmi, 2002:490). Price-earning ratio shows how much the investors are willing to pay per dollar of reported profits (Weston & Brigham, 1996:296). This ratio is calculated as follows:

$$\text{P-E Ratio} = \frac{\text{Market Price Per Share}}{\text{EPS}} \times 100$$

$$= \dots\dots\dots \%$$

Therefore, calculation of P/E ratio of commercial banks is more appreciate by an investor's point of view.

Cash Dividend on share Capital

The amount of earning distributed and paid as cash dividend is considered as the cash dividend on share capital or dividend per share. The net profit after taxes belongs to the equity shareholder (Munakarmi, 2002:489). This ratio is computed by dividing the amount of dividend distributed to shareholders by the number of common shares outstanding. It may be expressed as under:

$$\text{Dividend per Share} = \frac{\text{Earning Dividend Paid to Shareholders}}{\text{No.of Equity Shareholders}}$$

$$= \text{Rs. } \dots\dots\dots$$

2.1.8.6 Other Relevant Ratios

To measures commercial bank's performance, it is necessary to study other relevant ratios too. This ratio includes:

1. Staff Expenses to Total operating Expenses
2. Staff Bonus to total staff expenses
3. Weighted average interest rate spread
4. Exchange fluctuation gain to Total Income

Staff Expenses to Total Operating Expenses Ratio

Staff expenses to total operating ratio are the contribution of total staff expenses in total operating expenses. It is conclude that higher ratio means the bank has provided better salary and other allowances. It is also the sign of highly motivated staff (Panta, 2005:60). On the other hand, the high ratio affects the net profit. This ratio is calculated as follows:

$$\text{Staff expenses to Total Staff Expenses Ratio} = \frac{\text{Staff Expenses}}{\text{Total Operating Expenses}} \times 100$$

$$= \dots\dots\dots \%$$

Staff Bonus to Total Staff Expenses Ratio

This ratio is calculated with provision for staff bonus in terms of expenses. Provision of staff bonus, one of the important operating expenses of the banks, refers to the extra incentives services. Bonus helps to uplift the morale of he staff as well as make them prompt for the next operation. Bonus is distributed if the banks have more profit. A high portion of staff bonus shows that bank has high operating profit. This ratio is calculated as follows:

$$\text{Staff Bonus to Total Staff Expenses Ratio} = \frac{\text{Staff Bonus}}{\text{Total Staff Expenses}} \times 100$$

$$= \dots\dots\dots \%$$

Weighted Average Interest Rate Spread

It is the difference between interest rate changed by a bank on loan and advances and interest rate offered on deposits. Generally, commercial banks charge more interest rate on lending than they provide interest rate on deposits. Interest rate spread is calculated as follows:

$$\text{Interest Rate Spread} = \text{Spread Rate on Lending} - \text{Interest Rate on Deposits}$$

High spread shows the bank charges rate for the borrowers than they provide for depositors.

Exchange Gain to Total Income Ratio

Foreign exchange h\gain is another source of income, which includes trading income and re-valuation income. This ratio is computed by dividing exchange gain by total income of the commercial bank. NRB has given instruction to allocate a portion of these incomes as "Foreign exchange Fluctuation Fund" and to retain one third of his income and show it in the balance that as payable to NRB. This ratio is income of commercial bank. It also represents high foreign

currency transactions. The higher transactions give the higher percentage of ratio.

$$\text{Ex- fluctuation Gain to Total Income Ratio} = \frac{\text{Fx-fluctuation Gain}}{\text{Total Income}} \times 100$$
$$= \dots\dots\dots \%$$

2.1.8.7 Non-Performing Asset (NPA)

Non- performing asset (NPA) in terms of banking sectors consists of those loans and advances that are not performing well and likely to be turn as bad loan. It may be simply define as bad loan. As per NRB directives, it has been categorized all classifieds loans and advances. NPA has several impacts on the financial institution. On the one hand, investment becomes worthless, as expected return cannot be realizable and on the other hand, the profitability is directly affected.

NPA as categorized by NRB are classified as loans and advances. For the probable loss on lending, that cannot be recovered even after liquidation. NRB has directed to maintain loan loss provision. The loan loss provision is to be maintained by debiting profit and loss account. Thus as the quality of loan degrades the ratio of loan loss provision is increased.

2.1.8.7.1 Causes of NPA in Nepalese Commercial Banks

1. Lack of clear lending policy\
2. Lack of proper analysis of loan and advances
3. Lack of good governance debt management inside the bank
4. Overall economic crisis in the country
5. Weakness in consortium financing
6. Lack in internal control and auditing system
7. Lack of proper supervision of central bank
8. Bad intention of borrowers

2.1.8.7.2 NRB Directives on Classification of Loan and Provisioning

Nepal Rastra bank has issued Unified Directives to bank and financial institution for implementation effective 16 July 2005. This also contains the new directive (No. 2) concerning classification of loan portfolios and provisioning. Except a few important changes, this directive has retained most of the provisions.

Classification of Loan and Advances

The classification criteria are as follows:

1. PASS category: all loans and advances the principal of which are not past due or past for a period up to 3 (three) months. Only loans falling under PASS category are termed as "Performing Loan".
2. SUBSTANDARD category: all loans and advances the principal of which are past due for a period of more than 3 months and up to 6 months.
3. DOUBTFUL category: all loans and advances the principal of which are past due for a period of more than 6 months and up to 1 (one) year.
4. LOSS category: all loans and advances the principal of which are past due for a period of more than 1 (one) year.

The respective overdue periods of PASS, sub-standard and doubtful loans shall be considered for higher classification from the next day of the date of expiry of the overdue period provided for each category.

Lending institutions are not restricted from classifying the loan and advances from low risk category to high-risk category. For instance, loans falling sub-standard may be classified into Doubtful or Loss, and loans falling under Doubtful may be classified into loss category.

Loan Loss Provisioning

1. The loan loss provisioning on the outstanding loans and advances and bills purchases shall be done on the basis of classification as follows:

Table 2.3 Loan Loss Provision as per Loan Classification:

Classification of Loan	Loan Loss Provision
Pass	1%

Substandard	25%
Doubtful	50%
Loss	100%

2. Provision on restructured or rescheduled loans shall be made as follows:

- i. A minimum of 12.5% provision shall be made on restructured or rescheduled loans.
- ii. In respect of restructuring or rescheduling of deprived sector loan and guaranteed of insured priority sector loan, the requisite provisioning shall be only 25% of the rates stated above.
- iii. Where the installment of principal and interest of restructured or rescheduled loan is services regularly for two consecutive years, such loan can be converted into PASS loan.

Rescheduling/restructuring of loan resulting improvement in classification to lowest risk category (PASS) is not prohibited. However, such rescheduled loan shall require provisioning of at least 12.5%. The upper limit of such provisioning requirement is not specified even if a LOSS loan is reclassified and categorized as PASS loan. However, adjustments to loan loss provisioning is allowed only on satisfactory service of the loan up to 2 consecutive years.

3. Full provisioning shall be made against the uninsured priority, deprived sector loans and small and medium scale industrial loans.

However, in case of insured loans the provisioning requirement will be only 25% of the prescribed normal rates. Concession provisioning is not limited to priority/deprived sector and small/medium industries only as was the case earlier. The condition is purchase of insurance cover. All loans, including priority sector, deprived sector, not covered by the insurance (presumably with Deposit insurance and credit Guarantee Corporation) fall under normal category. The norms of classification remain same for these loans and advances also.

In the case of rescheduling/ restructuring of insured credit, the proportion of loan loss provisioning would be 3.125% (being 25% of 12.5%). However, in the case of recommended sick industries, the minimum provisioning requirement wick is 6.25% (25% of 25%).

4. Where the loan is extended only against personal guarantee, a statement of the assets and equivalent to the personal guarantee amount not claimable by any other shall be obtained. Such loans shall be classified as per above. When the loans fall under the category of pass, Substandard and Doubtful, in addition to the normal loan loss provision, applicable for the category, an additional provision by 20 % point shall also be provided "Additional loan loss provision" as above shall also be provided for the loans which is partly covered by collateral of physical assets and personal/ institutional guarantee is obtained to cover the shortfall. Classification of Such loan and advances shall be prepared separately.

By virtue of above, the loan loss provision required against a personal guarantee loan will 21%, 45% and 70% for pass, sub-standard and Doubtful category respectively. Such an additional loan loss provisioning will be required where loan is extended against the personal guarantee only without having obtained other form of collateral. The directive also requires additional provisioning where the value of partial collateral falls short of the loan amount and partially covered by personal guarantee.

NPA as categorized by NRB are classifieds loans and advances; for the probable loss on lending that cannot e recovered even after liquidation. NRB has directed to maintain loan loss provision. The loan loss provision is to maintain by debiting profit and loss account. Thus as the quality of loan degrades the ratio of loan loss provision is increased.

2.1.8.7.3 Effect of NPA on Profitability of the Bank

Under the circumstance assets that do not earn any income to the bank affects the profit in a number of ways. The resources locked up in NPA are borrowed at a cost and have to earn minimum return to service this cost.

1. NPA on the one hand do not earn any income but on the other hand drain the profits earned by performing assets through the claim on provisioning requirements.
2. Since they do not earn interest, they bring down the yield on advances and the net interest margin or the spread.
3. NPA has a direct impact on return on assets and return on equity.
4. NPA bring down the profits, affect the shareholder value and thus adversely affect the investor confidence.

2.2 Review of Related Studies

2.2.1 Review of Journal and Articles

Some of the journals and articles published by management experts in financial aspects have been reviewed in this section:

Edward I. Altman (1968) in "Journal of finance" employed financial ratios to predict corporate bankruptcy through multiple discriminate analyses. Out of the twenty-two financial ratios examined, Altman selected the five that did the best combine job in predicting bankruptcy. These ratios were working capital to assets, retained earnings to total assets, earnings before interest and taxes to total assets, market value of equity to book value of total debt, and sales to total sales to total assets, market value of equity to book vale of to total debt & sale to total assets. Using these ratios, Altman found the discriminate model to be an accurate predictor bankruptcy.

Dambolena and Khoury (1980), in "Journal of finance" the main focus of their study was to know the stability of all financial ratios over time as well as their ratios as explanatory variables in the derivation of a discriminate function. The data were collected from 68 firms half of them failed and half of them did not fail. The study revealed

Profitability ratios, Activity and turnover ratios, liquidity ratios, Indebtedness ratios. The major findings of this study were:

(i) Standard deviation of ratios over times appeared to be the strongest measure of ratio stability.

(ii) The ratios of net profit to sales net profit total asset, fixed assets to net worth funded debt to net working capital total debt to net working capital and fixed assets to net worth funded debt to net working capital relevant in predicting corporate failure.

W.H Beaver (1996), in "Journal of Accounting Research" tested the ability of financial ratios to predict failure. This study revealed five ratios that could discriminate between failed and non-failed firms. The ratios are case; case flow to total debt; net income to total asset; total debt total asset; total debt to total assets; working capital to total asset and current ratios. It was obvious that failed firms had more debt and low return on asset. They had less cash but more receivable as well as low current ratios.

Mr. N.P. Poudel, in the journal entitled, "Financial statement Analysis: An Approach to Evaluate bank's Performance" which was published NRB Samachar (An annual publication-2053) is reviews as follows:

According to Mr. Poudel, 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 bank's balance sheet and profit and loss a/c. The bank's balance sheet is composed of financial claims as liabilities in the form of deposits and as assets in the form of loans. Fixed assets accounts form a small portion of the total assets. Financial innovations, which are generally contingent in nature, are considered as off-balance sheet item.

According to Mr. Poudel the principle objectives of analyzing financial statement are to identify: Liquidity, Profitability and solvency. Most of users of the financial statements are interest in assessing the bank's overall performance that is affected by the following factors:

- The structure of Balance sheet and profit and Loss account
- Operating efficiency and internal management system
- Managerial decision taken by top management regarding interest rate, exchange rate, lending policies etc
- Environmental changes (Technology, Government, Competition and economy).

The other factors to be considered in analyzing the financial statement of bank are 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 indicates a bank's strength and solvency. Bank facing with capital adequacy problem may increase capital or reduce assets or reallocate the existing assets structure in order to maintain the desired level of capital base.

In the Business Age (2006), Rameshwor Yadav in the articles "The growing trend of consumer banking" summarized some newly adopted policy by the commercial banks in favor of consumer. While long-term investment opportunities remain uncertain in the country, the Nepalese banks are starting to diversify the loans in order to reduce excess liquidity and other financial risks. Nepalese banks are moving towards a new era of banking so that the relatively recent concept of consumer banking is swiftly becoming popular and flourishing among the middle to high national jobholders private companies to corporate houses and national to multinational companies. The banks are offering all kind of personal as well as commercial facilities. These days, Nepalese banks are coming up with new products and consumer package on a regular basis. They are increasingly collaborating with the international banks too, embracing their banking models, learning lesson from their traditional and latest concept and keeping up to date with the new technologies coming in, hence giving added facilities to the consumers too, Nepalese bank, rapidly expanding their reach through the country are expanding their service hours keeping the customer's convenience in mind.

Govinda Bahadur Thapa in his articles "Nepal banking system: can on the mess be managed" stated that the joint venture banks have been earning a huge profit not from fund based lending but from investing outsidess. That is why, there banks have been less interested to lending aggressively in the domestic market. Economics activities have slowed down in Nepal for several years; however, commercial banks have not lowered their lending rate to revitalize the economy. On the contrary, the commercial banks have been discouraging the deposit to get rid of excess liquidity. In addition, new avenue that is investing aboard has been opened for the commercial banks to earn profit rather then motivating then to invest locally.

The above journals & articles focus in the various aspects of the bank's economic environment. What over aspects of the bank the above journals target, they all have to be combinable assessed and kept in strict consideration for effective & efficient financial performance of the banks in the Nepalese economy.

2.2.2 Review of Previous Thesis

Vikram Chandra Gurung (1995), in his study entitled "A financial study of joint venture banks in Nepal: a comparative study of Nepal Grindlsya Bank LTD and Nepal Indosuez Bank Ltd", with the basic objectives to evaluate the performance of two joint venture banks: Nepal Grindllays Bank LTD and Nepal Indosuez Bank LTD. Time period covered by the research was five years i.e. from fiscal year 1989/90 to 1993/94. He concluded that:

- Both joint venture banks indicate unsatisfactory in liquidity position and interest coverage ratios.
- The capital structures of both the banks are extremely leveraged but they have been maintaining sound capital adequacy ratio as directed by Nepal Rastra Bank.
- Both the joint venture banks have been efficient in utilizing most of their total assets.

- Profitability records of both banks have registered an increasing trend during the first half in the study period and have decreased there after.

He has recommended maintaining improved capital structure by increasing equity base. Both banks should pay due attention in liquidity and coverage position. He further suggested extending their banking facilities even in rural areas by opening up branches.

Mr. Resta Jha (1998), has conducted a research on a topic "Comparative Analysis of financial performance of the selected Joint Venture Banks". Mr. Jha has mainly focused on research in examining different financial ratios of four commercial banks namely NABIL, NIBL, NGBL and HBL.

Time period covered by the research was five years from fiscal year 1993/94 to 1996/97. Necessary data and other information had been collected mainly from secondary sources of data. In this research, Mr. Jha had pointed out the major findings as:

- ROA of NIBL was highest as compared to other sample banks respectively. Return on total deposits was also highest in case of NIBL. Interest earned on total assets was also highest in case of NIBL.
- Return on net worth or shareholders fund was highest in case of HBL.
- Current cash and bank balance to deposit ratio found that NIBLs current ratio at the end of FY 1996/1997 stood highest as compared to other banks.
- Among the analysis of leverage ratio (total debt to total asset ratio, long-term debt to total asset ratio, total debt to net worth ratio & long-term debt to net worth ratio) the total debt to total assets ratio was above 85 percentage for all the selected banks during 1996-1997, which signifies the excessive use of debts or outsider to finance total assets.

Mrs. Brinda Shrestha (2003), had conducted a research on a topic "A comparative Analysis of financial performance of the selected joint venture banks". She had mainly

focused her research on comparative examining the overall performance of NABIL, HBL and NB Bank through financial analysis.

Time period covered by the research was five years from 1997/1998 to 2001/2002. Necessary data and other information had been collected mainly from the secondary sources of data. Mrs. Shrestha had pointed out various findings. Some remarkable findings of the research were:

- Liquidity analysis indicates better liquidity position of NB Bank. Although liquidity position of HBL and NABIL are lower, they were still able to meet their current obligations.
- Activity/Turnover analysis that the loan and advance to total deposit and to saving deposit ratio of NB bank was the highest with NABIL in the second place while that of HBL was the least. This implied NB Bank was efficiently utilizing its deposit on loan and advances.
- Leverage/Capital structure analysis indicated the long-term debt to net worth ratio of NB Bank was the highest and NABIL was the lowest. An unbalanced capital structure was the common situation in all the commercial banks. The banks were using excessive debt capital.
- Capital adequacy ratio calculated for these banks below the prescribed ratio by NRB.
- Profitability of these were reflected by the determination of return on investment, return on shareholder equity, interest earned to total assets ratio, interest income to interest expenses ratio.
- The market value ratio such as price-earning ratio, dividend payout ratio of NABIL was the highest and HBL was the second highest.

Mr. Gopal Prasad Ghimire (2003) had conducted a research on a topic "Financial Performance of Commercial Banks: A Comparative case study of NB Bank, HBL and

EBL". He had mainly focused on his study in examining the financial performance of those three banks such as profitability, liquidity, activity and capital structure analysis.

Time period covered by the research was five years from 1996/97 to 25001/02. Necessary data and other information were primarily based on secondary data such as annual reports and other related journals, books etc. In this research, Mr. Ghimire had pointed out various findings:

- The liquidity position of banks was not satisfactory.
- The HBL was more efficient in utilizing the deposits in loans and advances or other more profit-generating sector.
- The banks did not do many exercises in more credit creation and reducing the interest rate for loan and advance for more competitiveness.
- The banks did not maintain the CRR as per NRB directives.
- The EPS of HBL had been rapidly decreasing over the period. However, the EPS of another two banks were in increasing trend.

Mr. Prasun Acharya (2005), had conducted a research on a topic. "A comparative study on financial performance of Nepal SBI Banks and Everest Bank Ltd". He had mainly focused on his study in examining financial performance of those banks through profitability, liquidity and activity analysis.

Time period covered by the research was five years from fiscal year 052/53 to 056/57. Necessary data and other information was primarily base on secondary data. In this research, Mr. Acharya had pointed out various findings:

- They had not a special attention towards NPA
- Both banks had higher operating expenses.
- Both banks had not found out the new productive sectors for their investment purpose.
- Both banks had not given attention towards attracting new deposits.

Mr. Yug Basnet (2005), had conducted a research on a topic "A comparative study on financial performance between the commercial banks". The study had covered only two banks i.e. NB Bank and Nepal SBI bank. He had mainly focused on his study in examining the financial performance of these two banks. Time period covered by the research was five years from fiscal year 1998/99 to 2002/03. Necessary data was primarily based on secondary sources of data. In this research, Mr. Basnet had pointed out some remarkable findings:

- Liquidity analysis indicates the banks did not maintain sufficient liquidity.
- The efficiency analysis showed that the ratio is in fluctuating trend of Nepal SBI Bank and decreasing trend of NB Bank.
- The profitability position of NB Bank was comparatively better than that of Nepal SBI Bank.
- Capital structure ratio of both banks was highly levered.

Mr. Ishwori Prasad Panta (2006) had conducted a research on a topic "A comparative study of Everest bank Ltd. and Nepal Industrial & Commercial Bank Ltd." He had mainly focused on his study in comparing and analyzing liquidity, profitability, solvency and activity ratio analysis as well as so other major ratio such as weighted average interest rate spread exchange fluctuation gain to total income ratio etc.

Time period covered by the research was six years data from FY 1998/99 to 2003/04. Necessary data and other information have been collected from the secondary sources of data. In this research, Mr. Panta had pointed out various remarkable findings were:

- CRR of the banks were maintained as per the directives of NRB.
- Both banks had maintained NRB balance to deposits ratio remarkable higher than the standard prescribed by the NRB.
- Both banks were maintaining lower capital adequacy ratio. The total assets, net worth to total deposit and not worth to total credit seemed less satisfactory.

- They should encourage to small, medium an large-scale organizations to avail their services.
- Both banks were suggested to review their overall structure and investment portfolio to make better mix in capital structure as well as investment portfolio.

Mr. Govind Ghimire (2007), has conducted a research on a topic "Non performing assets of Commercial banks: Cause and Effect". He had mainly focused his research in analyze and identify the impact, cause and consequences of NPA of commercial banks namely NBBL, Nepal SBI bank and BOK.

Time period covered by the research was five years from fiscal 1997/98 to 2001/02. Necessary data and other information were collected from secondary sources of data. In this research, Mr. Ghimire had pointed out various findings. Some major findings of the research were.

- There is growth of operating profit maintained by all the samples banks but the growth of net profit is negative due to increase in loan loss provisioning.
- It is found that there is some relationship between credit expansion and increment of NPA. NBA (Non-banking Assets) is created due to having NPA. However, it is not certain that NPA always creates NBA.
- In regard to the creation of high level of NPA, it has been found that relationship of borrowers with top management is the major determining factor in lending. Commercial banks are giving least weight on personal integrity of the borrower. Follow up of overdue loan and advances in commercial banks starts one month later the maturity of the loan. It proves the poor loan recovery system in those banks.
- Bad intention of borrower, weak monitoring and mi-management are the most responsible factor of NPA growth. Similarly, weak legal provision and

credit concentration are found as the least preferred in turning good loan to bad loan. Lack of portfolio analysis, not being effective credit policy and shortfall on security were also identified as factors affectively in NPA growth.

- Supervision and monitoring system have been identified as average factor. It is also identified that banks give highest priority to trade found that the service sector is not given mush priority.

2.3 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. Therefore, the **up to date study over the change of period** is major concern for the researcher and concerned organization as well as industry as a whole. This study covers the more recent financial Data and analysis is done within the latest guidelines and curriculum of Nepal Rastra Bank.

There is a certain gap between the present research and past research. Previous research conducted study generally on comparative financial analysis within private commercial banks or government banks separately. In addition, the financial parameters were compared across banks or across time only. The previous researchers did not disclose the comparative analysis between private and government commercial banks properly. Thus, to fulfill this gap the present research is conducted analyzing comparative financial performance between private and government commercial banks across banks, across group (Private and government) and across time with up to date statistics.

Most important point to remember about performance analysis is that every financial measure should be compared across time and across over same line of

companies to be meaningful. Banks as a service-organization, only few financial ratios would be sufficient to compare the performance, however different sources and different analyses use different lists or combination of financial ratio analysis. Prior research has been conducted on the basis of traditional financial ratio analysis. The value of the approach was quantitative relations.

The world is becoming more dynamic and subject to rapid changes. This research will be based upon the modern approaches to financial analysis; in which comparable group approach and include consideration of economic and strategic factors where feasible. Even the study will base upon those core indicators especially related with banking sector as well as it will **compares across time and across same line of banks**. Thus, the research will be an interest to a wide range of its stakeholders and other government regulatory interests.

CHAPTER - III

RESEARCH METHODOLOGY

Research methodology is a sequential procedure and collection of scientific methods to be adopted in a systematic study. In other words, research methodology describes the methods and process applied in the entire of the study. It is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it we study the various steps that are generally adopted by a researcher in studying his/ her research problem along with the logic behind them. Thus, this deals with the research design, nature of procedures and tools of analysis.

3.1 Research Design

A research design is the plan structure & strategy of investigation. It is the arrangement of condition purpose with economy in procedure. It is a blueprint for the collection measurement and analysis of data. "Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to control variance. The plan is the overall scheme or program of the research. It includes an outline of what the investigator will do form the writing the hypothesis and their operational implications to the final analysis of data" (Kerlinger, 1986:275).

The present research tries to analyze the comparative financial performance of private and government commercial banks in the present e-generation. The research followed analytical and descriptive research design. The study was based on most recent financial data provided by the concerned banks i.e. the data become secondary sources to the research work. Comparative data of six commercial banks have been presented in such a way, so as to make the research informative to the readers. Financial as well as statistical tools were used to analyze and interpret.

3.2 Population and Sample

There are many commercial banks in Nepal; however the research basically covered six commercial banks. Three are private and the other three are government commercial banks. All commercial banks i.e. 26 commercial banks operating in the country were the total population for the study. Only leading three from private investment sector and three from government investment sector NEPSE were selected as a sample for purpose of sampling technique. The sampled banks were:

Private Owned Commercial Banks

1. Standard Chartered Bank Nepal Ltd.
2. NABIL Bank Ltd.
3. Himalayan Bank Ltd.

Government Owned Commercial Banks

1. Agriculture Development Bank Ltd.
2. Rastriya Banijya Bank
3. Nepal Bank Ltd.

3.3 Nature and Sources of Information/ Data Collection Procedure

The main sources of information were the concerned Banks and their published reports, NRB and its published reports, Experts views, Newspaper and many other published and non-published sources. Required reports are downloaded from the websites of the banks. Mainly the secondary sources of data were collected in order to achieve the real and fact data as far as available.

The secondary sources of data the information received from books, journals, newspapers, published reports and dissertations and concerned websites etc. The major sources of secondary data were as follows:

- Annual reports of the concerned banks.
- Related websites of concerned banks.
- Economic survey, Ministry of finance
- NRB Samachar, NRB Directives.
- Company ACT, 2063
- Banking and financial statistics of NRB.
- Survey, reports, journals issued by NRB.
- Annual reports, NEPSE.
- Book related to financial performance analysis.
- Previous Dissertations.
- News paper, Journals and Business magazines.
- Other publications etc.

3.4 Data Processing and Presentation Procedure

The information or data obtained from the different sources were in raw form. From that information, direct presentation was not possible so it was necessary to process data and converts it into required form. Only after then, the data were presented for this study. For this study, only required data were taken from the secondary sources (Bank's publications) and presented in this study. For presentation different tables were used. Similarly in same case graphical presentation were also made. For reference, the

photocopies of raw data were annexed. So far a computation was concerned. It has been done with the help of scientific calculator and spreadsheet software Microsoft Excel.

3.5 Tools for Analysis and Presentation

Various percentage data were collected as per the nature of the study and this study required more financial tools cum statistical tools for analysis and presentation of used data to attain the objectives of the study.

3.5.1 Financial Tools

Several financial tools were used to measure the strength and weakness of commercial banks. In addition, Non-performing asset and weighted average interest rate spread also been studied under this research work.

1. Liquidity analysis

- i. CRR

2. Solvency analysis

- i. Capital adequacy ratio
- ii. Interest express to total deposit ratio.

3. Profitability analysis

- i. Net profit to total income ratio
- ii. Return on assets.
- iii. Interest income on loan and advances.
- iv. Operating ratio.

4. Activity or Turnover analysis

- i. Total Credit to total deposits ratio

5. Market value analysis

- i. Per share income
- ii. Market value per share
- iii. P-E ratio
- iv. Cash dividend in share capital

- v. Dividend in share capital (including bonus)

6. Other relevant ratios analysis

- i. Staff expenses to total operating expenses
- ii. Staff bonus to total staff expenses.
- iii. Weighted average interest rate spread.
- iv. Exchange- Fluctuation gain to total income

7. NPA (Non Performing Assets)

3.5.2 Statistical Tools

1. Arithmetic Mean

An arithmetic mean of a gain given set of observations is the sum of the observation divided by the number by the number of observations. In such a case all the items are equally important. Simple arithmetic mean is used in this study as per necessary for analysis.

We have,

$$\text{Mean } (\bar{X}) = \frac{\sum X}{n}$$

Where,

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

n = Number of observations.

X = Values of variables.

2. Standard Deviation

The standard deviation is usually denoted by the letter sigma (σ).It is a widely used measure of dispersion and is defined as the deviation of the observation from their arithmetic mean of a set of value. It is also known as root mean square

deviation. Standard deviation in this study has been used to measure the degree of fluctuation of interest rate and that of other variables as per the necessity of the analysis.

We have,

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

3. Coefficient of Variation (C.V)

The relative measure of dispersion based on standard deviation is called coefficient of standard deviation and 100 times coefficient of standard deviation is called coefficient of variation. It is denoted by C.V. Thus,

$$\text{C.V.} = \frac{\sigma}{\bar{X}} \times 100$$

Where,

σ = Standard deviation

\bar{X} = Mean value of variables

Coefficient of variation being a pure number is independent of the units of measurement and thus is suitable for comparing the variability or uniformity of two or more distribution. The distribution having less C.V. is said to be less variable or more consistent or more stable. A distribution having greater C.V. is said to be more variable or less consistent or less stable. C.V. is used in this research for comparing the uniformity of variables of sample banks.

4) Correlation Analysis

Correlation is the statistical tool, which studies the relationship between two variables. Two variables are said to be correlated when the change in the value of one variable is accompanied by the change of another variable. There are different methods of correlation analysis but in this research, Karl Pearson's coefficient of correlation has been

used. It is simply denoted by 'r_{xy}' or 'r'. Correlation has been calculated in this study for two purposes. First, to check the calculation whether the obtained value of 'r' is beyond the limit of +1 to -1, which means that there is some mistake in the calculation. Second, to know the degree and direction of the relationship between two variables, if the value of r is +1, there is perfect positive correlation, if the value of r is -1, there is perfect negative correlation and if the value of r is "0" there is no relationship between the variables. In practice, perfect correlation is hard to be found.

The correlation is calculated as follows:

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

Where:

N= No. of observations of X and Y

XY= sum of the product of the observations in series X and Y

X= sum of the observations in series X

Y= sum of the observations in series Y

X²= sum of square of variables in series X

y²= sum of square of variables in series Y

Probable Error of Correlation Coefficient:

Probable error of correlation coefficient usually denoted by P.E. (r) is an old measure of testing the reliability of an observed value and test of significance of correlation coefficient in so far as it depends upon the conditions of random sampling. If r is the observed correlation coefficient in a sample of n pairs of observations than its standard error, usually denoted by S.E. (r) is given by:

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

Probable error of the correlation coefficient is given by:

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

Where,

r = the value of correlation coefficient

n = number of pairs of observations.

P.E. is used in interpretation whether the calculated value of r is significant or not.

- i. If $r < \text{P.E. } (r)$ i.e. if the observed value of r is less than its P.E., then correlation is not at all significant.
- ii. If $r > 6 \text{ P.E. } (r)$ i.e. if observed value of r is greater than 6 times its P.E., then r is definitely significant.
- iii. If $\text{P.E.} < r < 6 \text{ P.E.}$, nothing can be concluded with certainty.

5) Regression /Trend Analysis

Trend analysis is a tool to predict the value of variables based on their average past relationship. An equation is developed from the relation of variables and the equation is used to forecast the values in the future period. Trend analysis informs about the expected future return, future achievement of the banks, future credit, worthiness of the bank, financial capability of the bank and many other information which would be helpful to concerned parties of the banks such as shareholders, professional bankers, depositor and borrowers. In this study, the method of least square is selected as a statistical tool for the analysis of selected banks. The formula of least square method for the straight line is represented by the equation.

$$Y_t = a + bX_t \dots\dots\dots (I)$$

Where,

Y = Dependent Variable

X = independent Variable

a = Y intercept of X when $Y=0$

b = slope of the line i.e. change in Y associated with change in X

t = years of observation ($t=1 \dots n$)

In order to determine the values of the constants 'a' and 'b' the following two normal equations are to be solved.

$$Y = na + b \sum X \dots\dots\dots (II)$$

$$\sum XY = a \sum X + b \sum X^2 \dots\dots\dots (III)$$

The constant 'a' is simply equal to mean Y value (Y intercept) and the constant 'b' gives the rate of change or the slope of the trend line. Putting the values of 'a' and 'b' in equation (I) gives the line of best fit to represent the variables under study.

The straight line trend is represented by the equation $Y_c = a + b x$

Whereas, in multiple regression it may take more than one independent variables and slope such as: $Y_c = a + b_1x_1 + b_2x_2$

Where, Y_c is used to designate the trend values calculated using 'a' and 'b'.

Coefficient of Determination (r²)

The coefficient of determination is a measure of the degree of linear association or correlation between two variables one of which happens to be independent and other being dependent variable. In other words r measures that percentage total variation in dependent variables explained by independent variable. The coefficient of determination value can have ranged from zero to one. A value of one can occur only if the unexpected variation is zero which simply means that all the data points in the scatter diagram fall exactly on the regression line.

Regression Constant (a)

The value of constant, which is the intercept of the model, indicates the average level of dependent variable when independent variable is zero. In other words, it is better to understand that 'a' (constant) indicates the mean or average effect on dependent variable of all the variables omitted from the model.

Regression Coefficient (b)

The regression coefficient of each independent variable indicates the marginal relationship between the variable and value of dependent variable, holding constant the effect of all other independent variables in the regression model. In other world the coefficient describes how change in independent variable affects the values of dependent variables estimate.

Standard Error of Estimate (SEE)

With the help of regression equation perfect setting is practically impossible. The standard error of estimate measures the dispersion about an average line. It also measures the accuracy of the estimated figures. The smaller the value of SEE the closer will be the dots to the regression line and proves better estimate based on the equation of the line. If standard error of estimate zero then there is no variation about the line and the correlation will be perfect. With the help of standard error of estimate, it is possible for us to ascertain how and to what extent the representative regression line is the description of the average relationship between two series.

T-Statistics

T test is used to test the validity of our assumption if sample size is less than 30. While applying t-test in the context of small sample, the t-value is calculated first and compared with the table value of 't' at a certain level of significance for given degree freedom. If the calculated value of 't' exceeds the table value (say 0.05 level of significance) we interpret the difference to be significant and conclude that there is significant relation between variables. But if calculated t value is less than the concerning value of 't' (value from t table) the difference is not treated as significant. And, null hypothesis of no relation is accepted.

'F' Statistics

The ratios of two independent chi-square variations divided by their respective degree of freedom is known as F-statistic and the distribution of F-statistic is called fisher's F-distribution. The sampling distribution of F-statistic does not involve in population parameters and depends only on the degree of freedom. The range of values of F is from 0 to infinity. The value of F cannot be negative since both value of the F ratio are squared

values. Here, in the study F test is used for testing the linearity of regression. It is for testing the significance of difference between observed sample and expected values. If the calculated value of 'F' > tabulated value at certain level of significance and given degree of freedom we conclude that the difference between actual and expected value is significant. If the calculated value of F less than the table value of F, it concludes that the different is not significant.

Test of Hypothesis

Hypothesis is usually considered as the principal instrument in research. It can also be considered as suggested solution of the research problems. Its main function is to suggest new experiments and observation. With the available data decision makers apply the hypothesis testing and give the decision accordingly. It may not be proved absolutely but in practice it is accepted if it has withstood a critical testing. Usually the statistical hypothesis is tested at 1%, 5% and 10% level of significance. Thus, the significance test will be conducted in the analysis of the data.

The hypothesis tests of this research work are:

1) Analysis of Variance Test (F-Test): The analysis of variance is used to test whether the difference between the means of three or more populations is significant or not (Shrestha and Silwal 2057:261). So, the researcher used F-Test i.e. two ways ANOVA to find out differences among the sample means.

Null Hypothesis (Ho):

- i) $\mu_{SCNBL} = \mu_{NABIL} = \mu_{HBL}$ i.e. there is no significant different in variable (e.g. CRR) among three different banks for five different years. (CRR of three banks is same.)
- ii) $\mu_{4/5} = \mu_{5/6} = \mu_{6/7} = \mu_{7/8} = \mu_{8/9}$ i.e. there is no significant different in variable (e.g. CRR) in five years for three banks.(CRR of five years is same)

- Alternative Hypothesis (H1): i) $\mu_{SCNBL} \neq \mu_{NABIL} \neq \mu_{HBL}$ i.e. there is significant different in variable (e.g. CRR) among three different banks for five different years. (CRR of three banks is not same.)
- ii) $\mu_{4/5} \neq \mu_{5/6} \neq \mu_{6/7} \neq \mu_{7/8} \neq \mu_{8/9}$ i.e. There is significant different in variable (e. g. CRR) in five years for three banks.(CRR of five years is not same)

Two-way ANOVA: The sum of squares of variation in columns (SSC) plus the sum of squares of variations in row (SSR) plus the sum of square as the residual value (SSE) make up the total sum of squares of variations (SST) i.e.

$$SST = SSC + SSR + SSE$$

The total no. of degree of freedom = Cr-1

Where C and r = No. of columns and no. of rows respectively.

Degree of freedom between columns = C-1

Degree of freedom between rows = r-1

Degree of freedom between residual = (C-1) (r-1)

Table 3.1 Two Way ANOVA Table:

Source of Variations	D.F.	Sum of Square	Mean sum of Square	F-Ratio
Due to column factor	c-1	SSC	MSC=SSC/C-1	$F_c = MSC/MSE$
Due to rows factor	r-1	SSR	MSR=SSR/r-1	$F_r = MSR/MSE$
Residual (error)	(c-1) (r-1)	SSE	MSE=SSE/(c-1) (r-1)	

2) T- Test (to test the significant difference between two sample means)

As comparative financial performance analysis is the core objective of the study, t test (double sample case) is used to test whether there is significant difference between average performance of private and government commercial banks. The performance

indicators are all the results displayed by financial tools used in the study. The t-test procedure is given below.

Null Hypothesis (H₀): $\mu_{\text{POCB}} = \mu_{\text{GOCB}}$ i.e. no significance difference in average performance (e.g. net profit margin) between private and government commercial banks.

Alternative Hypothesis (H₁): $\mu_{\text{POCB}} \neq \mu_{\text{GOCB}}$ i.e. there is significance difference in average performance (e.g. net profit margin) between private and government commercial banks.

Test Statistics under null hypothesis,

$$T \text{ (calculated)} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

Where,

\bar{X}_1 = Mean of first sample (POCB)

\bar{X}_2 = Mean of second sample (GOCB)

S_p^2 = an unbiased estimate of the common population variance and its value is computed as:

$$S_p^2 = \frac{1}{n_1 + n_2 - 2} \{ (X_1 - \bar{X}_1)^2 + \dots + (X_1 - \bar{X}_1)^2 + (X_2 - \bar{X}_2)^2 + \dots + (X_2 - \bar{X}_2)^2 \}$$

Level of significance () = 5 %

Degree of Freedom (d. f.) = $n_1 + n_2 - 2$

If critical values at 5% d. f. is less than the calculated value above then Null Hypothesis is accepted otherwise Alternative Hypothesis is accepted.

3.5.3 Diagrammatic Representation

Diagrams & graphs are visual aids that give bird's eye view of a given set of numerical data. They represent the data in simple, comprehensive and readily understandable form.

Multiple bar diagrams are used for presenting a comprehensive picture of the banks selected for the research study. Line graph is used to represent the trend of financial indicator variables of private and government banks.

CHAPTER - IV DATA PRESENTATION & ANALYSIS

Raw Data were properly processed, tabulated and analyzed in this chapter to appraise the performance of selected commercial banks. For better understanding and presentation financial cum statistical tools were used. Tables were based on data provided by concerned banks & charts were created according the selected table. An attempt has been made to analyze & interpret financial data of the subject matter in sequential order.

4.1. Ratio Analysis

4.1.1 Liquidity/ Working Capital Analysis

Commercial banks need liquidity to meet loan demand and deposit withdraws. Liquidity is also needed for meeting cash reserve ratio (CCR) requirement prescribed by NRB. The failure of the bank to meet its cash obligation due to lack of sufficient liquidity will result bad credit worthiness and loss of creditors confidence. A very high degree of liquidity is also bad: idle or non-performing assets earn nothing. Therefore, it is necessary to strike a proper balance between liquidity crunch and liquidity crisis.

4.1.1.1 Cash Reserve Ratio (CRR)

A bank must ensure that it has a sound liquidity position to face the instant claims by its creditors. Therefore, CRR measures the ability to meet short-term obligation and reflect the short-term financial strength and solvency of the bank.

Adequate liquidity is must also in the banking sector in order to protect its solvency and to honor its short-term obligations & liabilities. Failing to do so, banks might have gone for liquidation and hence to protect the creditors interest, Central Bank (NRB) has directed all the banks to maintain the adequate CRR by the provisioning of 6.5 percent of total deposit.

Table 1
Cash Reserve Ratio (in percentage)

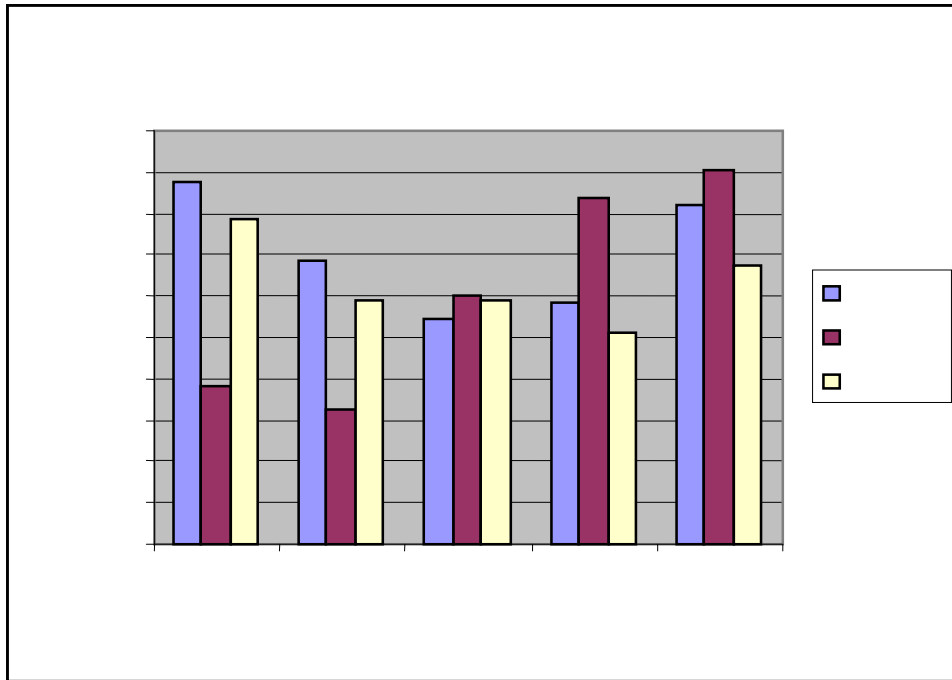
Year	POCB			GOCB		
	SCBNL	NABIL	HBL	ADBL	RBB	NBL
2004/05	8.77	3.83	7.86	11.15	12.91	17.14
2005/06	6.86	3.26	5.92	16.1	10.97	19
2006/07	5.46	6	5.92	11.38	11.11	18.24
2007/08	5.84	8.37	5.13	11.13	14.14	15.82
2008/09	8.18	9.03	6.76	14.81	17.91	20.29
Mean	7.02	6.10	6.32	12.91	13.41	18.10
S.D	1.44	2.60	1.04	2.37	2.84	1.71
C.V	20.46	42.58	16.41	18.32	21.19	9.47

Source: Annual Reports (2004/05 - 2008/09)

Table 1 is computed using scientific calculator. This shows the average CRR of SCBNL, Nabil & HBL are 7.02, 6.10 & 6.32 percent respectively and the CV of the same banks is 20.46, 42.58 & 16.41 percent respectively. Similarly, the average CRR of ADBL, RBB & NBL is 12.91, 13.41 & 18.10 and the CV of the same banks are 18.32, 21.19 & 9.47 respectively. This shows that the average CRR of SCBNL, NABIL & HBL is not much different and all are above NRB directives of 6.5% except NABIL and HBL. On the basis of CV, It indicates that the value of HBL is more consistent due to lower CV than other two banks. In the government sector, the average CRR of NBL is far higher than other two banks but it is more consistent than other banks due to lower CV.

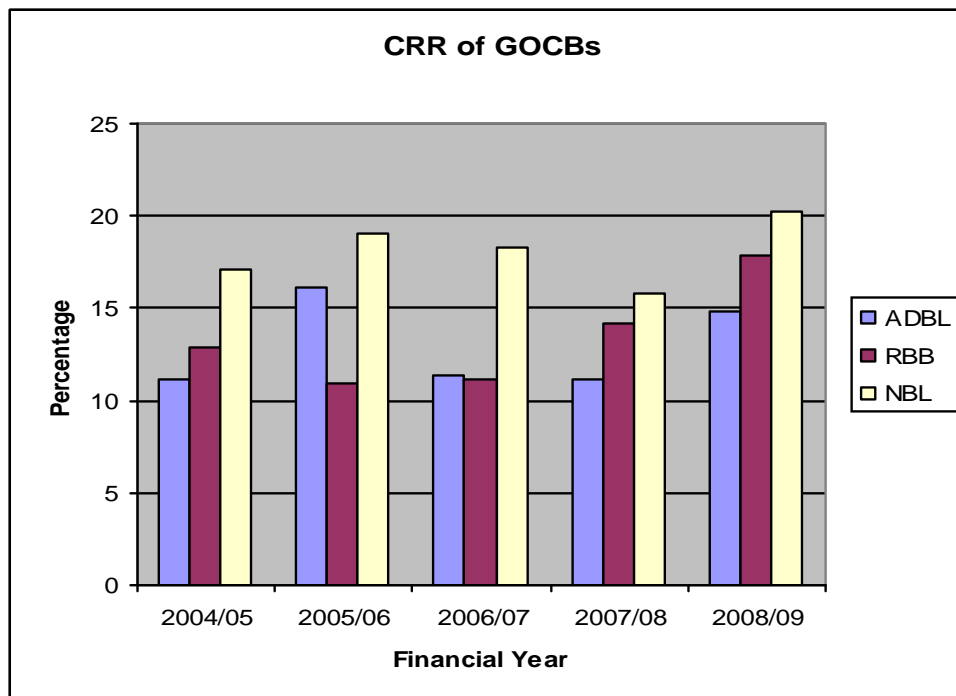
Graphic representation

(Figure 4.1.1.1a)



The figure 4.1.1.1a presents that the CRR of all banks (SCBNL, NBL & HBL) is decreasing gradually to the year 2006/07 but after that, it catches the increasing trend.

(Figure 4.1.1.1 b)



The figure 4.1 b shows that all CRR of government banks cross the level of 10% throughout the research period. Among the banks, NBL maintains highest CRR whereas other bank's CRR is moderate lying between 11 and 18 percent.

Test of Hypothesis (Two-way ANOVA)

Hypothesis 1: (Among POCBs in five different years)

Set up hypothesis:

Null Hypothesis (Ho): i) $\mu_{SCNBL} = \mu_{NABIL} = \mu_{HBL}$ i.e. there is no significant different in CRR among three different banks for five different years. (CRR of three banks is same.)

iii) $\mu_{4/5} = \mu_{5/6} = \mu_{6/7} = \mu_{7/8} = \mu_{8/9}$ i.e. there is no significant different in CRR in five years for three banks.(CRR of five years is same)

Alternative Hypothesis (H1): i) $\mu_{SCNBL} \neq \mu_{NABIL} \neq \mu_{HBL}$ i.e. there is significant different in CRR among three different banks for five different years. (CRR of three banks is not same.)

iii) $\mu_{4/5} \neq \mu_{5/6} \neq \mu_{6/7} \neq \mu_{7/8} \neq \mu_{8/9}$ i.e. there is significant different in CRR in five years for three banks.(CRR of five years is not same)

Test Statistics:

Under Ho, the test statistic is,

$$F_C = MSC / MSE \quad \text{with d.f. } [(c-1), (c-1)(r-1)]$$

$$F_R = MSR / MSE \quad \text{with d.f. } [(r-1), (c-1)(r-1)]$$

Level of significance = 5%

For banks: Calculated F statistics, $F_C = F_{.05}(2, 8) = 0.3447$ (Source: APPENDIX 1)

For years: Calculated F statistics, $F_R = F_{.05}(4, 8) = 0.9216$ (Source: APPENDIX 1)

Area of Critical Region:

The tabulated value of F at 5% level of significance

For banks: Tabulated F Statistics $F_C = F_{.05}(2,8) = 4.46$ (Source : F- distribution table)

For Years: Tabulated F Statistics $F_R = F_{.05}(4,8) = 3.84$ (Source : F- distribution table)

Decision:

i. The calculated $F(2, 8) < \text{tabulated } F(2, 8)$. Therefore, we accept null hypothesis and conclude that there is no significant difference in CRR for three banks in five different years.

ii. The calculated $F(4, 8) < \text{tabulated } F(4, 8)$. Therefore, we accept null hypothesis and conclude that there is no significant difference in CRR for five years in three banks.

Hypothesis 2: (Among GOCBs in five different years)

Set up hypothesis:

Null Hypothesis (Ho): i) $\mu_{ADBL} = \mu_{RBB} = \mu_{NBL}$ i.e. there is no significant different in CRR among three different banks for five different years. (CRR of three banks is same.)

iv) $\mu_{4/5} = \mu_{5/6} = \mu_{6/7} = \mu_{7/8} = \mu_{8/9}$ i.e. there is no significant different in CRR in five years for three banks.(CRR of five years is same)

Alternative Hypothesis (H1): i) $\mu_{ADBL} \neq \mu_{RBB} \neq \mu_{NBL}$ i.e. there is significant different in CRR among three different banks for five different years. (CRR of three banks is not same.)

iv) $\mu_{4/5} \neq \mu_{5/6} \neq \mu_{6/7} \neq \mu_{7/8} \neq \mu_{8/9}$ i.e. there is significant different in CRR in five years for three banks.(CRR of five years is not same)

Test Statistics:

Under Ho, the test statistic is,

$$F_C = MSC / MSE \quad \text{with d.f. } [(c-1), (c-1)(r-1)]$$

$$F_R = MSR / MSE \quad \text{with d.f. } [(r-1), (c-1)(r-1)]$$

Level of significance = 5%

For banks: Calculated F statistics, $F_C = F_{.05}(2,8) = 11.21$ (Source: APPENDIX 2)

For years: Calculated F statistics, $F_R = F_{.05}(4,8) = 2.55$ (Source: APPENDIX 2)

Area of Critical Region:

The tabulated value of F at 5% level of significance

For banks: Tabulated F Statistics $F_C = F_{.05}(2,8) = 4.46$ (Source : F- distribution table)

For Years: Tabulated F Statistics $F_R = F_{.05}(4,8) = 3.84$ (Source : F- distribution table)

Decision:

i. The calculated $F(2, 8) > \text{tabulated } F(2, 8)$. Therefore, we reject null hypothesis and conclude that there is significant difference in CRR for three banks in five different years.

ii. The calculated $F(4, 8) < \text{tabulated } F(4, 8)$. Therefore, we accept null hypothesis and conclude that there is no significant difference in CRR for five years in three banks.

Comparative Liquidity analysis:

Table 2

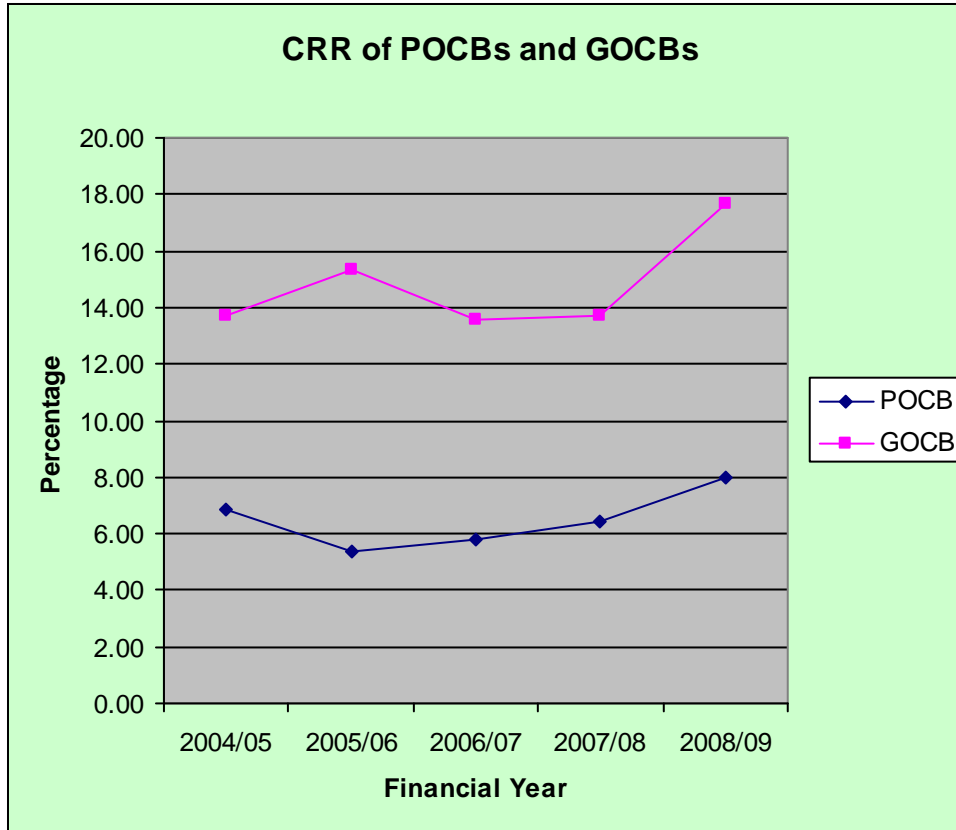
Cash Reserve Ratio(in percentage)		
Year	AVRG CRR OF POCB	AVRG CRR OF GOCB
2004/05	6.82	13.73
2005/06	5.35	15.36
2006/07	5.79	13.58
2007/08	6.45	13.70
2008/09	7.99	17.67
Mean	6.48	14.81
S.D	1.02	1.76
CV	15.73	11.89
Pearson's Correlation Coefficient, $r = 0.59$ (Source: APPENDIX 9)		
Probable Error (P.E.) = 0.197 (Source: APPENDIX 9)		

Table 2 shows the average CRR of POCB and GOCB are 6.48 percent and 14.81 percent respectively. Similarly, CV of same group is 15.73 percent and 11.89 percent respectively. It depicts that GOCBs are stronger than POCBs on liquidity perspective, as average CRR of GOCB is consistently higher than POCB's average CRR.

The correlation Coefficient of GOCBs and POCBs is 0.59 that signifies that their CRR is moderately positively correlated. Since, the value of P.E. does fall in the range where nothing can be said with certainty about significance of the calculated value of r .

LINE GRAPH

(Figure 4.1.1.1 c)



The above line graph shows that the average CRR of GOCBs is far higher than that of POCBs in each year. CRR of POCBs slightly downs for first year but after it takes upward trends but GOCBs CRR moves up and down in haphazard way.

Test of Hypothesis (Double Sample Mean T-Test)

Hypothesis:3

Null Hypothesis (H₀): $\mu_1 = \mu_2$ i.e. there is no significance different in average CRR between POCB and GOCB.

Alternative Hypothesis (H₁): $\mu_1 \neq \mu_2$ i.e. there is significance difference in average CRR between POCB and GOCB.

Test Statistics under Null Hypothesis,

$$T_{\text{calculated}} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

T calculated $|T_{\text{cal}}| = 9.15$ (Source: Appendix 27)

Level of significance () = 5%

Degree of Freedom = $n_1 + n_2 - 2 = 8$

Critical value at 5% level of significance for 8 d. f. for two tailed test, $T_{tab}=2.306$

Decision: Since $|T_{cal}| > T_{tab}$, Null Hypothesis is rejected. Therefore, there is significant difference in CRR between POCBs and GOCBs.

4.1.2 Profitability Analysis

The operating efficiency of the banks and its ability to ensure adequate return to its shareholders depends ultimately on the profit earned by the banks. Sufficient profits must be obtained from investors for expansion and growth and to continue towards the social overheads for welfare of the society" (Pandey, 1997:124). Thus, profitability ratios are computed to measure the efficiency of banks in terms of profit margin, return on assets, interest on loan & advance and operating ratio.

4.1.2.1 Net Profit Margin (NPM)

Net profit margin indicates margin of corporation left to the owners, as percentage of total revenue for providing their capital after all expenses have been net. It helps in determining the efficiency with which the affairs of the business are being managed. A net profit would enable the firm to withstand adverse economic conditions and low margin will have opposite implications.

Table 3
Net Profit Margin (in percentage)

Year	POCB			GOCB		
	SCBNL	NABIL	HBL	ADBL	RBB	NBL
2004/05	34.01	34.33	32.98	-1.78	37.69	41
2005/06	37.06	35.32	35.16	8.33	37.02	28
2006/07	34.55	32.16	34.9	15.76	39.63	9.59
2007/08	39.94	29.58	41.58	8.49	38.59	8.53
2008/09	36.84	30.56	39.96	15.69	36.47	22.68
Mean	35.48	32.39	36.92	9.30	37.88	21.96
S.D	1.38	2.43	3.66	7.19	1.26	13.54
C.V	3.90	7.51	9.92	77.36	3.32	61.64

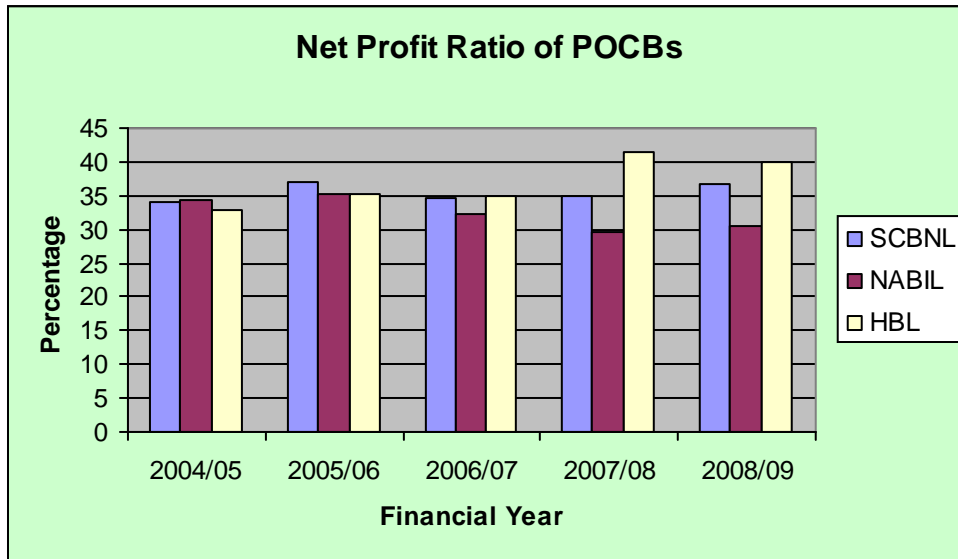
Source: Annual Reports (2004/05 - 2008/09)

Table 3 depicts the computation of average net profit margin of the banks. Average NPM of SCBNL, NABIL, ADBL, and RBB & NBL are 35.48, 32.39, 36.92, 9.30, 37.88 & 21.96 respectively. Among POCBs NABIL has lowest profit ratio whereas, it is ADBL (i.e.9.30) in case of GOCBs. On the basis of CV of NPM; SCBNL (among POCBs) and

RBB (among GOCBs) have lowest, showing greater consistency. The CVs of ADBL and RBB are very high with respective CV of 77.36 percent and 61.64 percent showing very high variability and uncertain NPM.

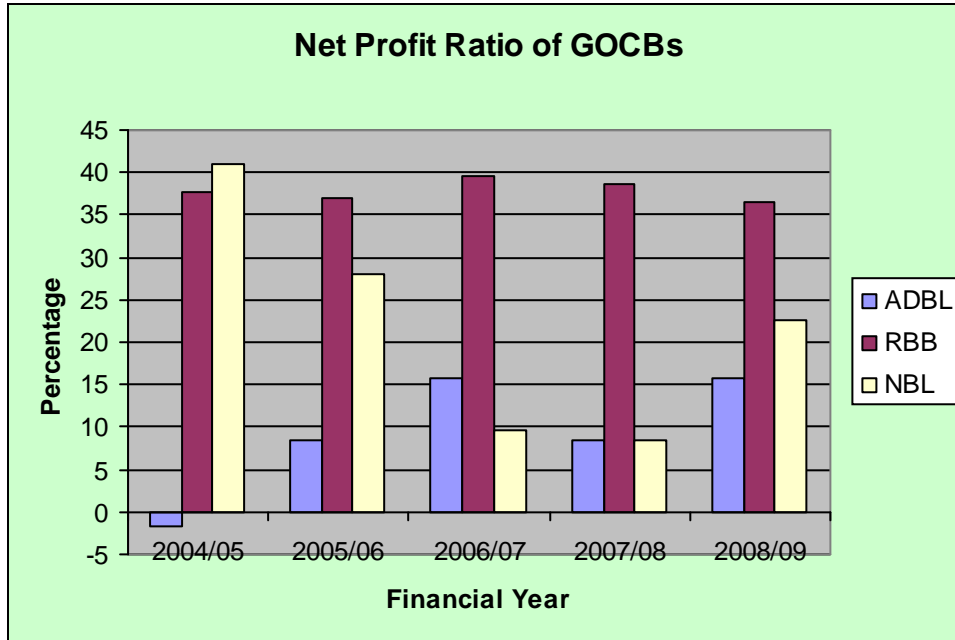
Graphic Representation

(Figure 4.1.2.1 a)



The figure 4.1.2 a shows that the net profit ratio of private banks roars around 30 to 40 percent and thus maintains the average in between the figure and don't follow a remarkable trend and fluctuation.

(Figure 4.1.2.1 b)



The diagram 4.1.2.b shows the average net profit ratio of government banks. According to the figure ADBL is very poor as it has very low and negative ratio in 2004/05. RBB is very strong in this regard as its ratio moves in high but narrow range of 35 to 40 percent. NBL's ratio is high in the first year but decreases sharply until 2008/09.

Hypothesis 4: (Among POCBs in five different years)

Set up hypothesis:

- Null Hypothesis (Ho):
- i) $\mu_{SCNBL} = \mu_{NABIL} = \mu_{HBL}$ i.e. there is no significant different in NPM among three different banks for five different years. (NPM of three banks is same.)
 - v) $\mu_{4/5} = \mu_{5/6} = \mu_{6/7} = \mu_{7/8} = \mu_{8/9}$ i.e. there is no significant different in NMP in five years for three banks.(NPM of five years is same)

- Alternative Hypothesis (H1):
- i) $\mu_{SCNBL} \neq \mu_{NABIL} \neq \mu_{HBL}$, i.e. there is significant different in NPM among three different banks for five different years. (NPM of three banks is not same.)
 - v) $\mu_{4/5} \neq \mu_{5/6} \neq \mu_{6/7} \neq \mu_{7/8} \neq \mu_{8/9}$, i.e. there is significant different in NPM in five years for three banks.(NPM of five years is not same)

Test Statistics:

Under Ho, the test statistic is,

$$F_C = MSC / MSE \quad \text{with d.f. } [(c-1), (c-1)(r-1)]$$

$$F_R = MSR / MSE \quad \text{with d.f. } [(r-1), (c-1)(r-1)]$$

Level of significance = 5%

For banks: Calculated F statistics, $F_C = F_{.05}(2,8) = \mathbf{2.96}$ (Source: APPENDIX 3)

For years: Calculated F statistics, $F_R = F_{.05}(4,8) = \mathbf{0.35}$ (Source: APPENDIX 3)

Area of Critical Region:

The tabulated value of F at 5% level of significance

For banks: Tabulated F Statistics $F_C = F_{.05}(2,8) = \mathbf{4.46}$ (Source : F- distribution table)

For Years: Tabulated F Statistics $F_R = F_{.05}(4,8) = \mathbf{3.84}$ (Source : F- distribution table)

Decision:

i. The calculated $F(2, 8) <$ tabulated $F(2, 8)$. Therefore, we accept null hypothesis and conclude that there is no significant difference in NPM for three banks in five different years.

ii. The calculated $F(4, 8) <$ tabulated $F(4, 8)$. Therefore, we accept null hypothesis and conclude that there is no significant difference in NPM for five years in three banks.

Hypothesis 5: (Among GOCBs in five different years)

Set up hypothesis:

Null Hypothesis (Ho): i) $\mu_{ADBL} = \mu_{RBB} = \mu_{NBL}$ i.e. there is no significant different in NPM among three different banks for five different years. (NPM of three banks is same.)

vi) $\mu_{4/5} = \mu_{5/6} = \mu_{6/7} = \mu_{7/8} = \mu_{8/9}$ i.e. there is no significant different in NPM in five years for three banks.(NPM of five years is same)

Alternative Hypothesis (H1): i) $\mu_{ADBL} \neq \mu_{RBB} \neq \mu_{NBL}$ i.e. there is significant different in NPM among three different banks for five different years. (NPM of three banks is not same.)

vi) $\mu_{4/5} \neq \mu_{5/6} \neq \mu_{6/7} \neq \mu_{7/8} \neq \mu_{8/9}$ i.e. there is significant different in NPM in five years for three banks.(NPM of five years is not same)

Test Statistics:

Under Ho, the test statistic is,

$$F_C = MSC / MSE \quad \text{with d.f. } [(c-1), (c-1)(r-1)]$$

$$F_R = MSR / MSE \quad \text{with d.f. } [(r-1), (c-1)(r-1)]$$

Level of significance = 5%

For banks: Calculated F statistics, $F_C = F_{.05}(2, 8) = 9.74$ (Source: APPENDIX 4)

For years: Calculated F statistics, $F_R = F_{.05}(4, 8) = 0.25$ (Source: APPENDIX 4)

Area of Critical Region:

The tabulated value of F at 5% level of significance

For banks: Tabulated F Statistics $F_C = F_{.05}(2,8) = 4.46$ (Source : F- distribution table)

For Years: Tabulated F Statistics $F_R = F_{.05}(4,8) = 3.84$ (Source : F- distribution table)

Decision:

i. The calculated F (2, 8) > tabulated F (2, 8). Therefore, we reject null hypothesis and conclude that there is significant difference in NPM for three banks in five different years.

ii. The calculated F (4,8) < tabulated F (4,8). Therefore, we accept null hypothesis and conclude that there is no significant difference in NPM for five years in three banks.

Comparative analysis:

Table 4

Net Profit Margin (in percentage)		
Year	AVRG NPM OF POCB	AVRG NPM OF GOCB
2004/05	33.77	25.64
2005/06	35.85	24.45
2006/07	33.87	21.66
2007/08	35.37	18.54
2008/09	35.79	24.95
Mean	34.93	23.05
S.D	1.03	2.94
CV	2.94	12.75
Pearson's Correlation Coefficient, r = -0.05 (Source: APPENDIX 10)		
Probable Error (P.E.) = 0.301 (Source: APPENDIX 10)		

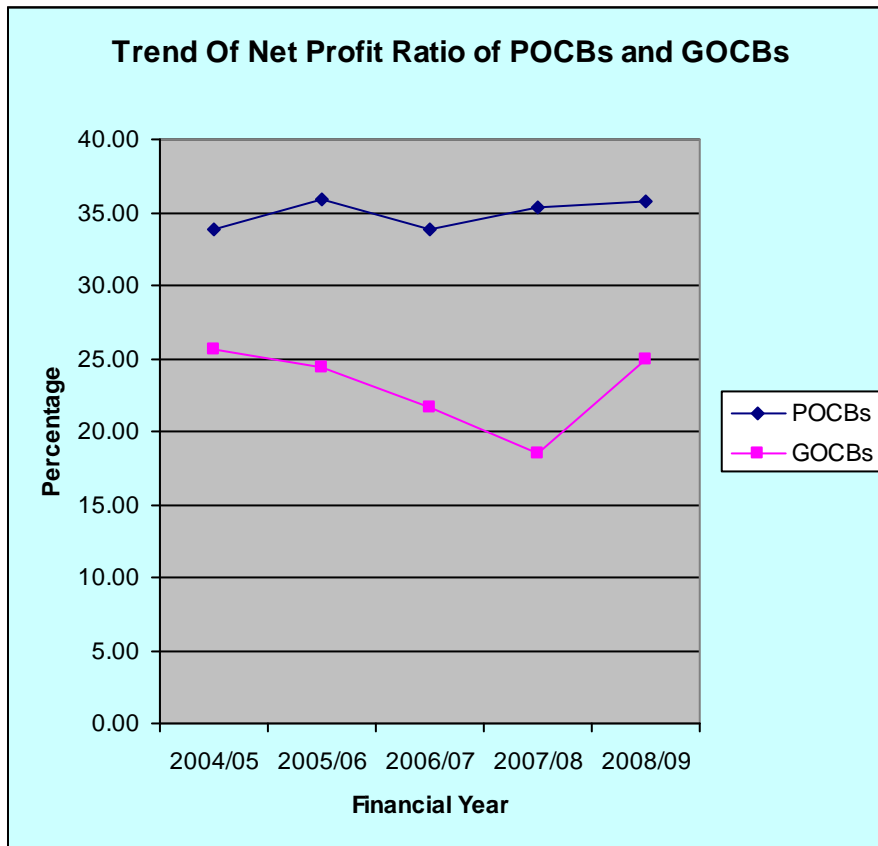
Table 4 shows five year’s average NPM of POCBs, GOCBs, and average of average. The POCBs with 34.93 Percent NPM are more profitable than GOCBs that have only 23.05

percent NPM. Similarly, the respective CVs of POCBs and GOCBs are 2.94 and 12.75 that tells that profits of POCB show more consistent behavior than that of GOCBs.

Pearson' correlation coefficient of NPM of POCBs and GOCBs is -.05 it means the variables in the consideration are almost uncorrelated. The Probable Error (P.E.) is less than the value of r so calculated r is not significant.

Line Graph

(Figure 4.1.2.1 c)



The above diagram shows that NPM of POCBs is far higher than that of GOCBs is each year.

Test of Hypothesis (Double Sample Mean T-Test)

Hypothesis-6

Null Hypothesis (H₀): $\mu_1 = \mu_2$ i.e. there is no significance difference in average NPM between POCB and GOCB.

Alternative Hypothesis (H₁): $\mu_1 \neq \mu_2$ i.e. there is significance difference in average NPM between POCB and GOCB

Test Statistics under Null Hypothesis,

$$T \text{ calculated} = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

T calculated $|T_{cal}| = 4.85$ (Source: APPENDIX 28)

Degree of Freedom = $n_1 + n_2 - 2 = 8$

Critical value for 8 d. f. for two tailed test, $T_{tab} = 2.306$

Decision: Since $|T_{cal}| > T_{tab}$, Null Hypothesis is rejected. Alternative hypothesis is accepted. Therefore, there is significant difference in NPM between POCBs and GOCBs.

4.1.2.2 Return on Assets (ROA)

The effectiveness in using the total fund supplied by the owners and creditors is judged by this ratio. Higher ratio shows the higher return on assets used in business thereby indicating effective use of the resources available and vice-versa.

Table 5
Return On Assets, ROA (in percentage)

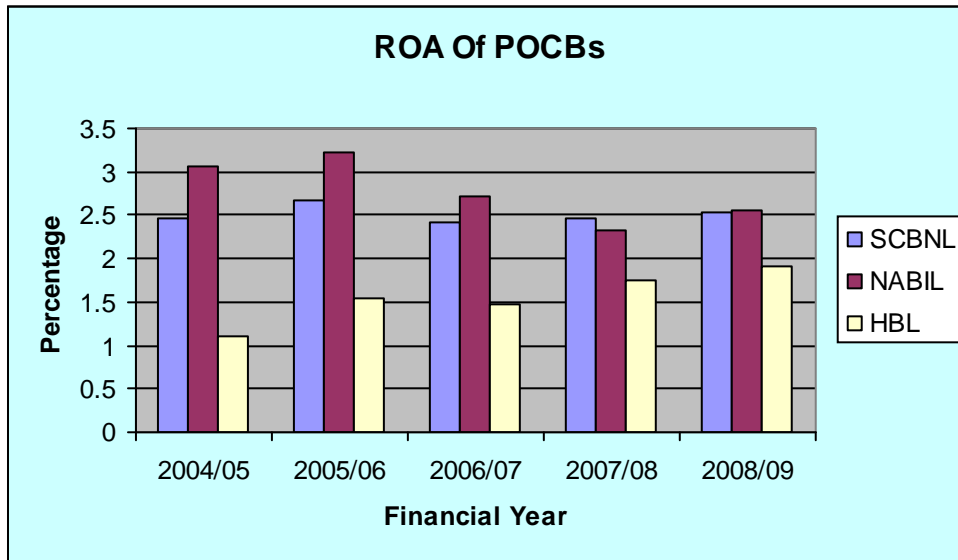
Year	POCB			GOCB		
	SCBNL	NABIL	HBL	ADBL	RBB	NBL
2004/05	2.46	3.06	1.11	-0.2	1.87	3.68
2005/06	2.66	3.23	1.55	1	3.37	3.36
2006/07	2.42	2.72	1.47	2.77	3.14	0.58
2007/08	2.46	2.32	1.76	1.52	2.91	0.57
2008/09	2.53	2.55	1.91	2.04	2.73	1.88
Mean	2.51	2.78	1.56	1.43	2.80	2.01
S.D	.09	0.37	0.31	1.12	0.57	1.48
C.V	3.78	13.34	19.58	78.54	20.51	73.42

Source: Annual Reports (2004/05 – 2008/09)

Table 5 shows the average ROA of SCBNL, Nabil, HBL, ADBL, RBB and NBL are 2.51, 2.78, 1.56, 1.43, 2.80 and 2.01 percent respectively. As such SCBNL, Nabil and RBB have similar line up of ROA, so is the case with HBL & ADBL. NBL has ROA in

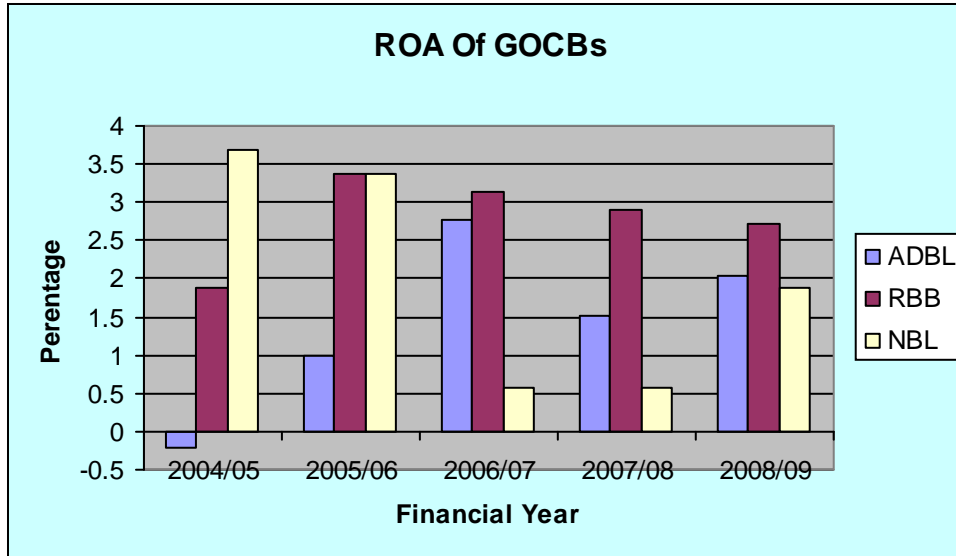
between of the two. This show the similar ROA earning banks have similar efficiency in utilizing their assets. On the basis of C.V., the ratio seems most consistent with SCBNL. RBB and other two POCBs: NABIL and HBL have moderate consistency with CV of 20.51, 13.34 and 19.58 respectively whereas; ADBL and NBL have very high fluctuation of ROA being respective CV of 78.54 and 73.42 percent. It becomes clearer in the figure below.

(Figure 4.1.2.2 a)



From the above diagram, it is seen that ROA of NABIL decreases slowly after 2005/06 but still is stronger than other banks in utilizing the assets because of higher ratio than others utilize. SCBNL faces continuous but slight up and downs in the ROA but always is higher than HBL lying around 2.5 and thus has strongest consistency. HBL seems weak in this respect as it has lower ROA than other two banks in each year.

(Figure 4.1.2.2 b)



The figure 4.1.3.b tells that government is not well in regard of ROA. RBB is strong among them due to high and less variable ROA but after 2005/06 the ROA of RBB walks downward slowly. ADBL's position is the worst as it has negative ROA in the year 2004/05 then its ROA increases greatly up to year 2006/07 than moves down and up. ADBL's fluctuation rate is also very high. C.V. of 78.54 proves it. Similarly, NBL could not maintain its high ratio of the year 2004/05 & 2005/06 for 2006/07 but slightly improves the position in 2008/09.

Hypothesis 7: (Among POCBs in five different years)

Set up hypothesis:

- Null Hypothesis (Ho):
- i) $\mu_{SCNBL} = \mu_{NABIL} = \mu_{HBL}$ i.e. there is no significant different in ROA among three different banks for five different years. (ROA of three banks is same.)
 - vii) $\mu_{4/5} = \mu_{5/6} = \mu_{6/7} = \mu_{7/8} = \mu_{8/9}$ i.e. there is no significant different in ROA in five years for three banks.(ROA of five years is same)

Alternative Hypothesis (H1): i) $\mu_{SCNBL} \neq \mu_{NABIL} \neq \mu_{HBL}$ i.e. there is significant different in ROA among three different banks for five different years. (ROA of three banks is not same.)

- vii) $\mu_{4/5} \quad \mu_{5/6} \quad \mu_{6/7} \quad \mu_{7/8} \quad \mu_{8/9}$ i.e. there is significant different in ROA in five years for three banks.(ROA of five years is not same)

Test Statistics:

Under H_0 , the test statistic is,

$$F_C = MSC / MSE \quad \text{with d.f. } [(c-1), (c-1)(r-1)]$$

$$F_R = MSR / MSE \quad \text{with d.f. } [(r-1), (c-1)(r-1)]$$

Level of significance = 5%

For banks: Calculated F statistics, $F_C = F_{.05}(2,8) = \mathbf{21.23}$ (Source: APPENDIX 5)

For years: Calculated F statistics, $F_R = F_{.05}(4,8) = \mathbf{0.49}$ (Source: APPENDIX 5)

Area of Critical Region:

The tabulated value of F at 5% level of significance

For banks: Tabulated F Statistics $F_C = F_{.05}(2,8) = \mathbf{4.46}$ (Source : F- distribution table)

For Years: Tabulated F Statistics $F_R = F_{.05}(4,8) = \mathbf{3.84}$ (Source : F- distribution table)

Decision:

i. The calculated F (2,8) > tabulated F (2,8). Therefore, we reject null hypothesis and conclude that there is significant difference in ROA for 3 banks in five different years.

ii. The calculated F (4,8) < tabulated F (4,8). Therefore, we accept null hypothesis and conclude that there is no significant difference in ROA for five years in three banks.

Hypothesis 8: (Among GOCBs in five different years)

Set up hypothesis:

Null Hypothesis (H_0): i) $\mu_{ADBL} = \mu_{RBB} = \mu_{NBL}$ i.e. there is no significant different in ROA among three different banks for five different years. (ROA of three banks is same.)

viii) $\mu_{4/5} = \mu_{5/6} = \mu_{6/7} = \mu_{7/8} = \mu_{8/9}$ i.e. there is no significant different in ROA in five years for three banks.(ROA of five years is same)

Alternative Hypothesis (H_1): i) $\mu_{ADBL} \quad \mu_{RBB} \quad \mu_{NBL}$ i.e. there is significant different in ROA among three different banks for five different years. (ROA of three banks is not same.)

viii) $\mu_{4/5} \quad \mu_{5/6} \quad \mu_{6/7} \quad \mu_{7/8} \quad \mu_{8/9}$ i.e. there is significant different in ROA in five years for three banks.(ROA of five years is not same)

Test Statistics:

Under H_0 , the test statistic is,

$$F_C = MSC / MSE \quad \text{with d.f. } [(c-1), (c-1)(r-1)]$$

$$F_R = MSR / MSE \quad \text{with d.f. } [(r-1), (c-1)(r-1)]$$

Level of significance = 5%

For banks: Calculated F statistics, $F_C = F_{.05}(2,8) = \mathbf{1.42}$ (Source: APPENDIX 6)

For years: Calculated F statistics, $F_R = F_{.05}(4,8) = \mathbf{0.24}$ (Source: APPENDIX 6)

Area of Critical Region:

The tabulated value of F at 5% level of significance

For banks: Tabulated F Statistics $F_C = F_{.05}(2,8) = \mathbf{4.46}$ (Source : F- distribution table)

For Years: Tabulated F Statistics $F_R = F_{.05}(4,8) = \mathbf{3.84}$ (Source : F- distribution table)

Decision:

i. The calculated F (2,8) < tabulated F (2,8). Therefore, we accept null hypothesis and conclude that there is not significant difference in ROA for 3 banks in five different years.

ii. The calculated F (4, 8) < tabulated F (4, 8). Therefore, we accept null hypothesis and conclude that there is no significant difference in ROA for five years in three banks.

Comparative analysis:

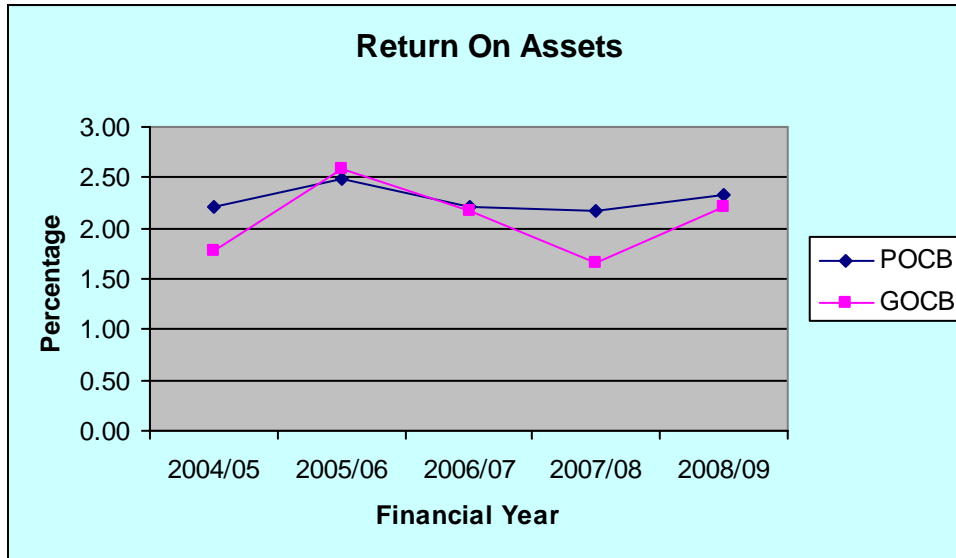
Table 6		
Return on Assets (in percentage)		
Year	AVRG ROA OF POCB	AVRG ROA OF GOCB
2004/05	2.21	1.78
2005/06	2.48	2.58
2006/07	2.20	2.16
2007/08	2.18	1.67
2008/09	2.33	2.22
Mean	2.28	2.08
S.D	0.13	0.36
CV	5.51	17.51
Pearson's Correlation Coefficient, r = 0.88 (Source: APPENDIX 11)		

According the table (4.3b), average ROA of POCBs (2.28%) and GOCBs (2.08) are not much different but their fluctuation rate is quite different. POCBs CV (5.51%) is

less than that of GOCBs (17.51%) which means ROA of POCBs are more uniform than that of GOCBs. Pearson's Correlation Coefficient of 0.88 indicates high correlation of two groups ROA. Moreover, r is less than P.E. so r is insignificant.

Line Graph

(Figure 4.1.2.2 c)



The above figure shows that average ROA of POCBs is generally higher than that of GOCBs but it is false for the year 2005/06. The line of ROA of GOCB goes upward intersecting the ROA line of POCBs in the year. However, POCBs have high consistency as the ration ranges only in between 2 to 3 percent.

Test of Hypothesis (Double Sample Mean T-Test)

Hypothesis-9

Null Hypothesis (H₀): $\mu_1 = \mu_2$ i.e. there is no significance difference in average ROA between POCB and GOCB.

Alternative Hypothesis (H₁): $\mu_1 \neq \mu_2$ i.e. there is significance difference in average ROA between POCB and GOCB

Test Statistics under Null Hypothesis,

$$T_{calculated} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

T calculated $|T_{cal}| = 1.16$ **(Source: APPENDIX 40)**

Degree of Freedom = $n_1+n_2-2=8$

Critical value for 8 d. f. for two tailed test, $T_{tab}=2.306$

Decision: Since $|T_{cal}| < T_{tab}$, Null Hypothesis is accepted. Therefore, there is no significant difference in ROA between POCBs and GOCBs. Their ROA is same.

4.1.2.4 Interest Income on Loan & Advances

Interest income is the major source of income from loan and advances that comprises higher rate of interest income. It shows higher utilization of loan & advances.

Table 7
Interest Income on Loan & Advances (in percentage)

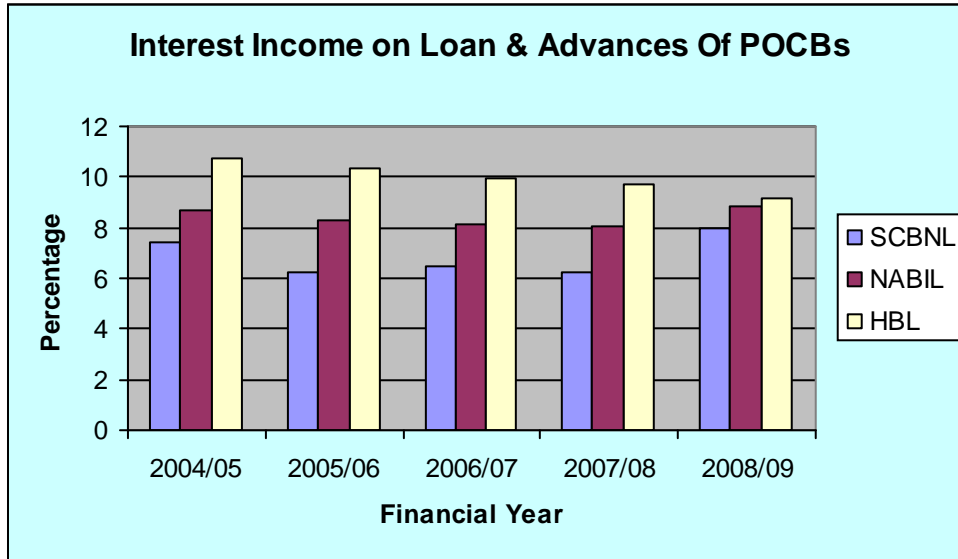
Year	POCB			GOCB		
	SCBNL	NABIL	HBL	ADBL	RBB	NBL
2004/05	7.43	8.7	10.75	12.51	7.78	11.78
2005/06	6.23	8.29	10.32	12.11	8.26	16.47
2006/07	6.49	8.14	9.98	13.42	7.82	13.44
2007/08	6.2	8.04	9.73	9.19	7.88	13.29
2008/09	7.95	8.82	9.18	11.05	8.11	13.75
Mean	6.86	8.40	9.99	11.66	7.97	13.75
S.D	0.79	0.34	0.59	1.62	0.21	1.70
C.V	11.48	4.11	5.94	13.90	2.59	12.38

Source: Annual Reports (2004/05 – 2008/09)

Table 7 shows that, among POCBs HBL (9.99%) have higher average income than other banks. Similarly among GOCBs NBL (13.75%) has higher value than other banks. The average interest on loan & advances of SCBNL & Nabil seems 6.86 & 8.40 and that of ADBL & RBB seems 11.66 & 7.97 percent respectively. It indicates that HBL and NBL are able to get high rate of interest income on Loan & Advances than others. The interest Income on loan & advance of RBB and NABIL are most consistent among related banks, which is depicted by lowest CV of 4.11% and 2.59%. HBL also has less fluctuating interest income (i.e. =5.94). However, SCBNL, ADBL and NBL have more fluctuating

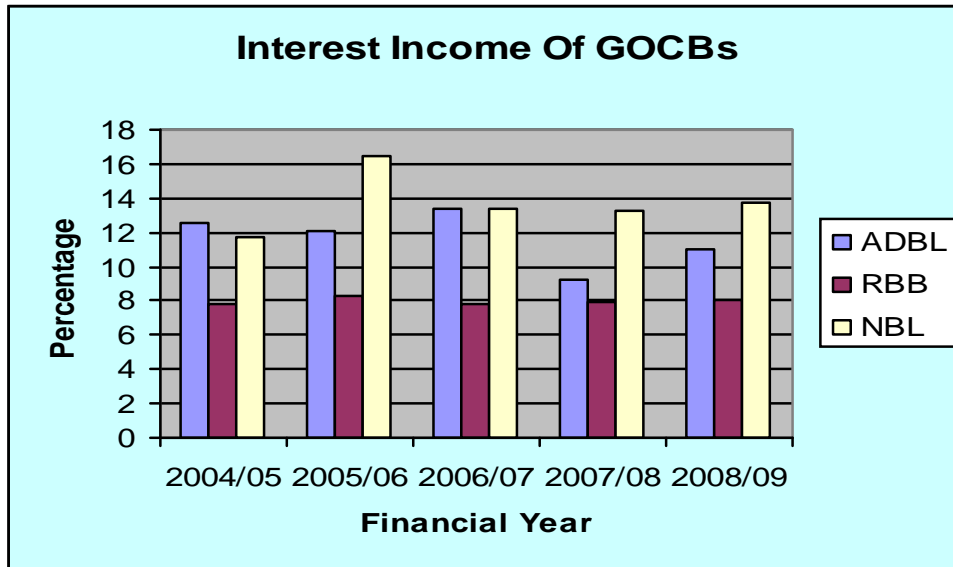
interest income on loan & advances i.e. 11.48, 13.90 & 12.38% respectively. Following diagram makes it clearer.

(Figure 4.1.2.3 a)



The figure 4.1.4b shows although the percentage of interest income on loan and advances of HBL seems decreasing it is the highest in comparison to other banks. SCBNL is in the lowest position and its ratio first slightly declines slightly up to 2007/08 the starts going up. NABIL is in moderate position of the two.

(Figure 4.1.2.3 b)



The diagram shows that NBL is in strongest position among government banks. ADBL is in second position and RBB is in last according to the average ratio. However, RBB has most consistent ratio.

Comparative position

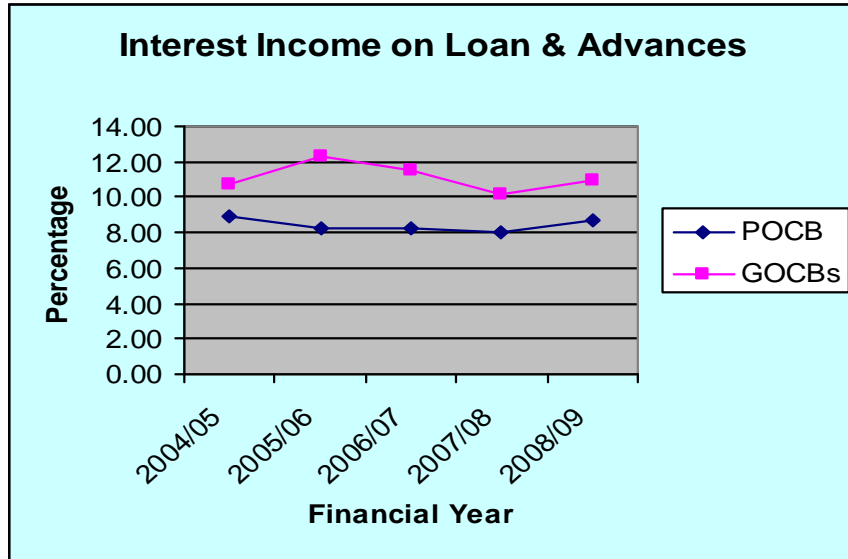
Table 8

Income on Loan and advances (in percentage)		
Year	AVRG income on loan and advances OF POCB	AVRG income on loan and advances OF GOCB
2004/05	8.96	10.69
2005/06	8.28	12.28
2006/07	8.20	11.56
2007/08	7.99	10.12
2008/09	8.65	10.97
Mean	8.42	11.12
S.D	0.39	0.83
CV	4.59	7.45

Table 8 shows average income of POCB is 8.42% and GOCB is 11.12%. As being higher income, GOCB has more effectively utilized their loan and advances than POCB. However, income variation of GOCB is more than of POCB during five years period.

The Trend line below makes it clearer.

(Figure 4.1.2.3 c)



The above figure shows the comparative interest income of POCBs and GOCBs trend for the five years. GOCBs have higher ratio in each year.

Test of Hypothesis (Double Sample Mean T-Test)

Hypothesis-10

Null Hypothesis (H_0): $\mu_1 = \mu_2$ i.e. there is no significance difference in average interest income on loan and advances between POCB and GOCB.

Alternative Hypothesis (H_1): $\mu_1 \neq \mu_2$ i.e. there is significance difference in average interest income on loan and advances between POCB and GOCB.

Test Statistics under Null Hypothesis,

$$T \text{ calculated} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

T calculated $|T_{cal}| = 6.62$ **(Source: APPENDIX: 34)**

Degree of Freedom $= n_1 + n_2 - 2 = 8$

Critical value for 8 d. f. for two tailed test, $T_{tab}=2.306$

Decision: Since $|T_{cal}| > T_{tab}$, Null Hypothesis is rejected. Therefore, there is significant difference in interest income on loan and advances between POCBs and GOCBs.

4.1.2.4 Operating Ratio

The operating ratio indicates on operating efficiency based on total assets. It determines the operational efficiency.

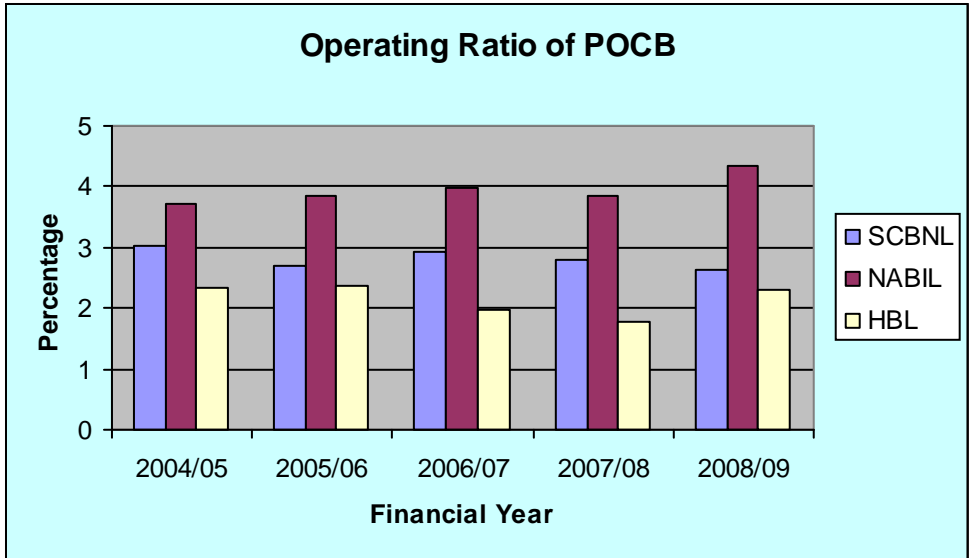
Table 9
Operation Ratio (in percentage)

Year	POCB			GOCB		
	SCBNL	NABIL	HBL	ADBL	RBB	NBL
2004/05	3.03	3.73	2.34	7.07	2.9	5.18
2005/06	2.69	3.86	2.36	10.25	4.33	6.32
2006/07	2.94	3.97	1.98	9.28	4.03	5.67
2007/08	2.78	3.86	1.79	7.72	3.83	5.66
2008/09	2.64	4.34	2.31	8.76	3.9	5.74
Mean	2.82	3.95	2.16	8.62	3.80	5.71
S.D	0.17	0.23	0.26	1.26	0.54	0.41
C.V	5.87	5.89	12.04	14.59	14.15	7.10

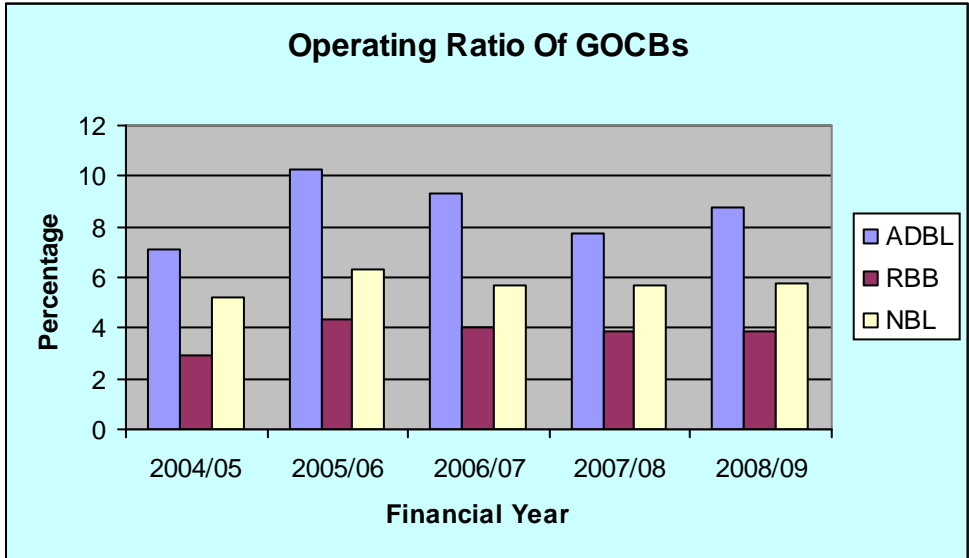
Source: Annual Reports (2004/05 - 2008/09)

Table 9 shows that the average operating ratio of SCBNL, Nabil, HBL, ADBL, RBB & NBL are 2.82, 3.95, 2.16, 8.62, 3.80 & 5.71 percent respectively. It indicates that ADBL and NBL incur higher operating expenses on total assets that are far above than that of others. SCBNL and HBL have lower level in expenses operating ratio. NABIL and RBB have the operating ratio at moderate level in comparison to others. On the basis of CV, SCBNL and Nabil seems more consistent than other banks. However, ADBL, HBL and RBB has much more inconsistent operating ratio. Figure 4.5 has been shown below to give its clear picture.

(Figure 4.1.2.4 a)



(Figure 4.1.2.4 b)



Comparative Analysis

Table 10

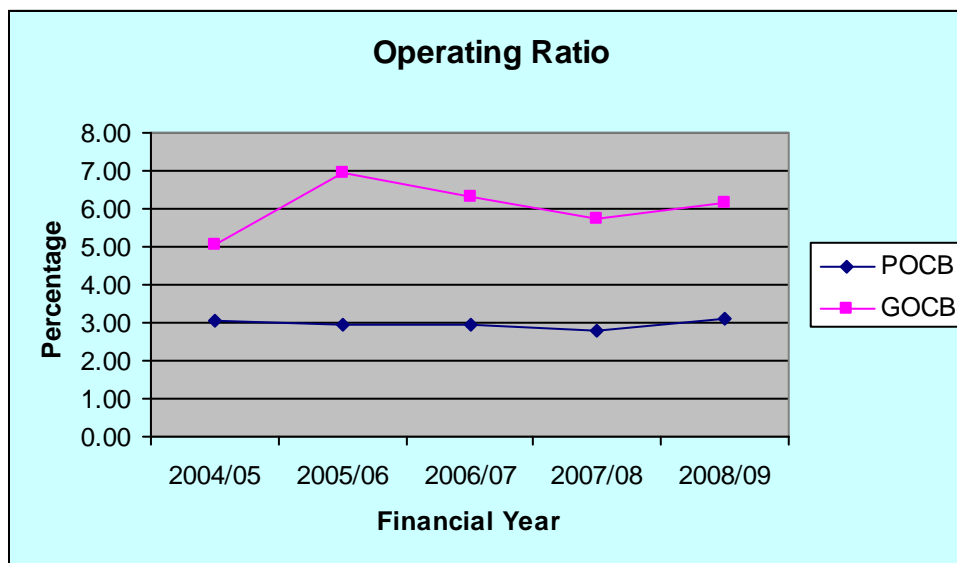
Operation Ratio(percentage)		
Year	AVRG OR OF POCB	AVRG OR OF GOCB
2004/05	3.03	5.05
2005/06	2.97	6.97
2006/07	2.96	6.33
2007/08	2.81	5.74

2008/09	3.10	6.13
Mean	2.97	6.04
S.D	0.11	0.71
CV	3.61	11.77

Table 10 shows that operating ratio of average operating ratio of POCB and GOC B are 2.97 and 6.04 percent respectively. Operating ratio of POCB is more consistent than that of GOCB.

Line Graph

(Figure 4.1.2.4 c)



The line graph above shows that POCB's operating ratio is lower but more consistent than GOCB.

Test of Hypothesis (Double Sample Mean T-Test)

Hypothesis-11

Null Hypothesis (H_0): $\mu_1 = \mu_2$ i.e. there is no significant difference in average operating ratio between POCB and GOCB.

Alternative Hypothesis (H_1): $\mu_1 \neq \mu_2$ i.e. there is significant difference in average Operating ratio between POCB and GOCB

Test Statistics under Null Hypothesis,

$$T_{calculated} = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

T calculated $|T_{cal}| = 9.54$ (Source: APPENDIX 42)

Degree of Freedom = $n_1 + n_2 - 2 = 8$

Critical value for 8 d. f. for two tailed test, $T_{tab} = 2.306$

Decision: Since $|T_{cal}| > T_{tab}$, Null Hypothesis is rejected. Alternative hypothesis is accepted. Therefore, there is significant difference in Operating ratio between POCBs and GOCBs.

4.1.3 Activity Ratio Analysis

The activity ratios measure the effectiveness of assets utilization, reflecting the management efficiency to used available resources. The banks used the funds of creditors and owners in various profit generating assets like loan & advances, investments etc. So, the activity ratios are employed to evaluate the efficiency of the banks in terms of utilizing its assets.

4.1.3.1 Credit Deposit Ratio:

Banks accepts deposit and lends them by charging a higher rate of interest to the borrowers than they pay to the depositors thereby banks make profit. The credit deposit ratio confesses the extent to which the banks are successful to mobilize the outsider fund (i.e. total deposit) in loans & advances for the purpose of profit-generation. Comparative CD ratio of selected loading banks has been tabulated below:

Table 11
Credit Deposit Ratio (in percentage)

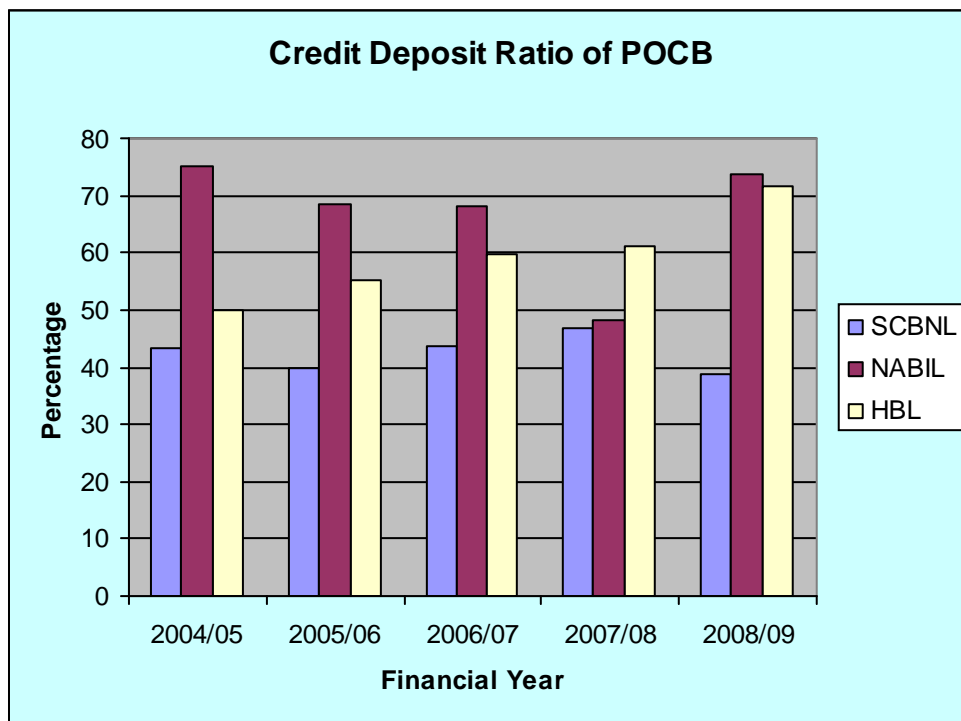
Year	POCB			GOCB		
	SCBNL	NABIL	HBL	ADBL	RBB	NBL
2004/05	43.49	75.05	50.07	115.01	62.77	46.94
2005/06	39.92	68.63	55.27	112.42	50.32	34.72
2006/07	43.78	68.13	59.57	106.24	49.1	35.26

2007/08	46.95	48.18	61.23	112.44	47.26	37.69
2008/09	38.7	73.87	71.49	108.93	46.42	43.28
Mean	42.57	66.77	59.53	111.01	51.17	39.58
S.D	3.30	10.84	7.96	3.43	6.66	5.33
C.V	7.75	16.23	13.38	3.09	13.01	13.47

Source: Annual Reports (2004/05 - 2008/09)

Using scientific calculator for computation, Table 11 shows the average credit deposit ratio of NBL(111.01%) is very high in comparison to other banks with a high degree of consistency i.e. only 3.09 percent indicating the most successful to mobilize the deposit. The average credit deposit ratio of SCBNL, Nabil, HBL, RBB and NBL are 42.57%, 66.67, 59.53, 51.17 and 39.58 percent respectively. NABIL (16.23%) has the greatest variability whereas ADBL (3.09%) has the lowest. RBB and NBL has comparatively higher CV and SCBNL has the moderately able to utilize the deposit for profit generating activities. The figure below makes it more obvious.

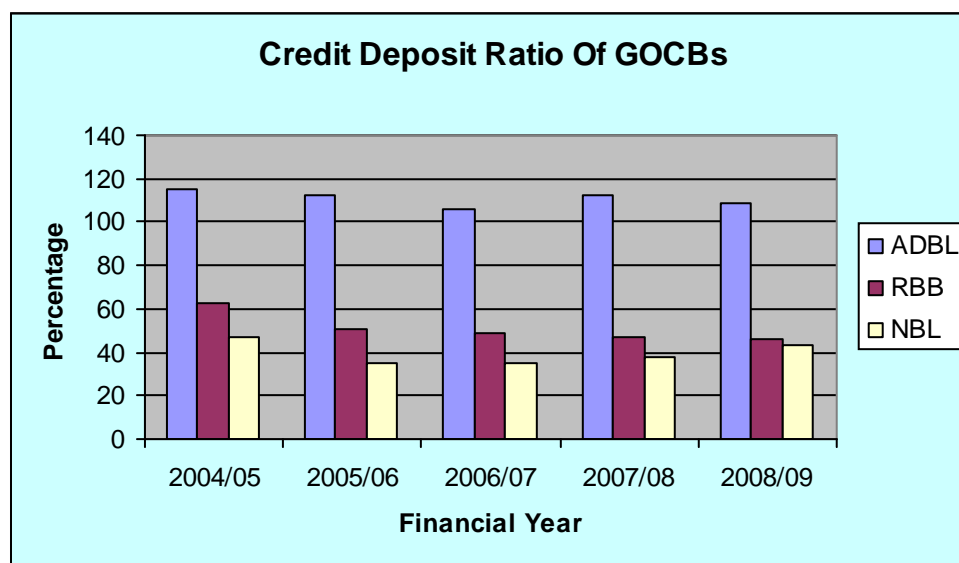
Figure 4.1.3.1(a)



The above diagram shows that NABIL has the highest ratio except in the year 2007/08. HBL has shown good sign of utilization of deposit as it is increasing year after

year and covers second position among three. In addition, SCBNL has the least and irregular up and downs throughout the study period.

Figure 4.1.3.1(b)



Above figure shows, the fund utilized as credit out of total deposit by the banks. ADBL has provided the loan more than its deposit because its credit deposit ratio is always greater than 100 percent. RBB's ratio falls in the line of 40 percent to 60 percent. In addition, NBL always has the least ratio.

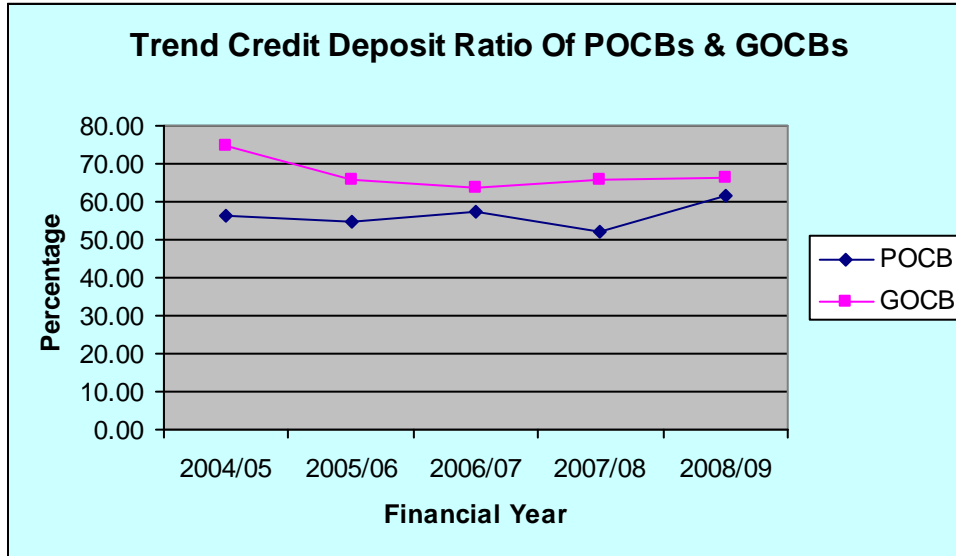
Table 12

Credit Deposit Ratio(percentage)		
Year	AVRG CD OF POCB	AVRG CD OF GOCB
2004/05	56.20	74.91
2005/06	54.61	65.82
2006/07	57.16	63.53
2007/08	52.12	65.80
2008/09	61.35	66.21
Mean	56.29	67.25
S.D	3.41	4.41
CV	6.07	6.55

The table shows that GOCBs are more successful to utilize the deposit than that of POCBs.

Line Graph

Figure 4.1.3.1(c)



The above diagram shows that GOCBs are always better than POCBs in utilizing the deposit. The average may seem high due to high ratio on ADBL.

Test of Hypothesis (Double Sample Mean T-Test)

Hypothesis-12

Null Hypothesis (Ho): $\mu_1 = \mu_2$ i.e. there is no significance difference in average CD ratio between POCB and GOCB.

Alternative Hypothesis (H1): $\mu_1 \neq \mu_2$ i.e. there is significance difference in average CD ratio between POCB and GOCB

Test Statistics under Null Hypothesis,

$$T_{calculated} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

T calculated $|T_{cal}| = 4.40$ **(Source: APPENDIX 41)**

Degree of Freedom = $n_1 + n_2 - 2 = 8$

Critical value for 8 d. f. for two tailed test, $T_{tab} = 2.306$

Decision: Since $|T_{cal}| > T_{tab}$, Null Hypothesis is rejected. Alternative hypothesis is accepted. Therefore, there is significant difference in CD ratio between POCBs and GOCBs.

4.1.4 Bankruptcy/Solvency/Capital-Structure Analysis

A bank should have strong short term as well as long term financial position. The long-term financial position of the banks is judged by the bankruptcy, average, or capital structure ratio. It measures the extent of the bank's total debt burden. It reflects the bank's ability to meet its short term as well as long-term obligation.

To measure bank's capacity of borrowing is means of capital accumulation i.e. over extension of credit & borrowing power, which determines the long-term solvency or bankruptcy of the banks. Several ratios are calculated as follows:

4.1.4.1 Capital Adequacy Ratio

Capital Adequacy ratio shows whether the commercial banks are maintaining sufficient amount of shareholders fund (net worth) in comparison to total amount of their deposits. Extremely high or low ratio is inappropriate in terms of lowered return or lowered solvency respectively. For this, several capital adequacy ratios are calculated.

4.1.4.1.1 Core Capital

Table 13
Core Capital Adequacy Ratio (in percentage)

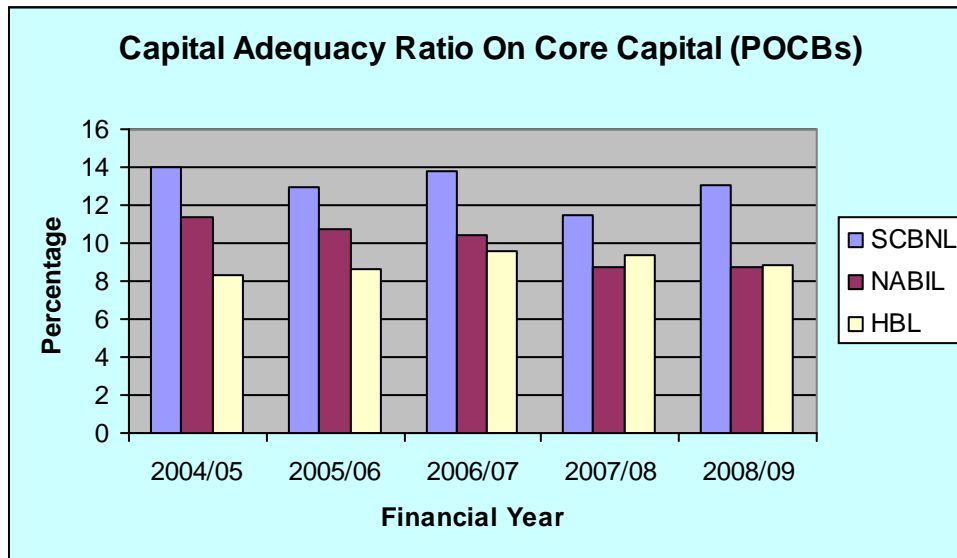
Year	POCB			GOCB		
	SCBNL	NABIL	HBL	ADBL	RBB	NBL
2004/05	13.99	11.35	8.33	-15.5	-34.12	-25.06
2005/06	12.99	10.78	8.65	-2.08	-56.25	-40.44
2006/07	13.77	10.4	9.61	2.68	-44.4	-37.97
2007/08	11.52	8.75	9.36	6.68	-38.3	-27.55

2008/09	13.05	8.74	8.81	11.04	-25.53	-13.94
Mean	13.06	10.00	8.95	0.56	-39.72	-28.99
S.D.	0.97	1.20	0.52	10.21	11.51	10.67
C.V.	7.41	11.98	5.85	1809.62	-28.98	-36.82

Source: Annual Reports (2004/05 - 2008/09)

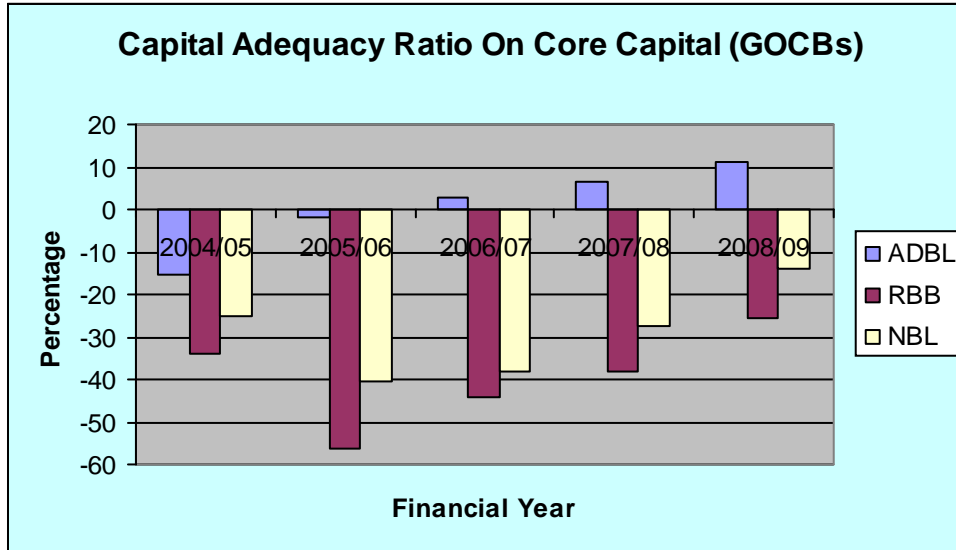
Table 13 shows the average core capital ratio of SCBNL (13.06%) is higher than other banks. In addition, the RBB has the lowest. It means, SCBNL has been giving highest and RBB is giving lowest contribution to maintain core capital. The average core capital of Nabil HBL, ADBL and NBL are 10, 8.95, 0.56 & -28.99 percent respectively. On the basis of C.V. it can be said that core capital of HBL is more consistent than that of others. ADBL shows less constancy of core capital due to higher fluctuation. SCBNL also has the lower level but others are not moderate level. Figure below makes it more obvious.

(Figure 4.1.4.1.1(a))



The above diagram shows that SCBNL has the highest but irregular ratio in the study period. NABIL is in the second position with decreasing ratio. HBL's ratio is the lowest but increasing up to the year 2006/07 declining thereafter.

(Figure 4.1.4.1.1(b))



The above diagram shows that government banks are maintaining very low amount of their own capital in comparison to the deposit they accepted. ADBL has made considerable improvement in the study period making the ratio positive from the year 2007/08. Other banks also have done better after the year 2006/07 but their ratio is negative in the whole study period.

Table 14

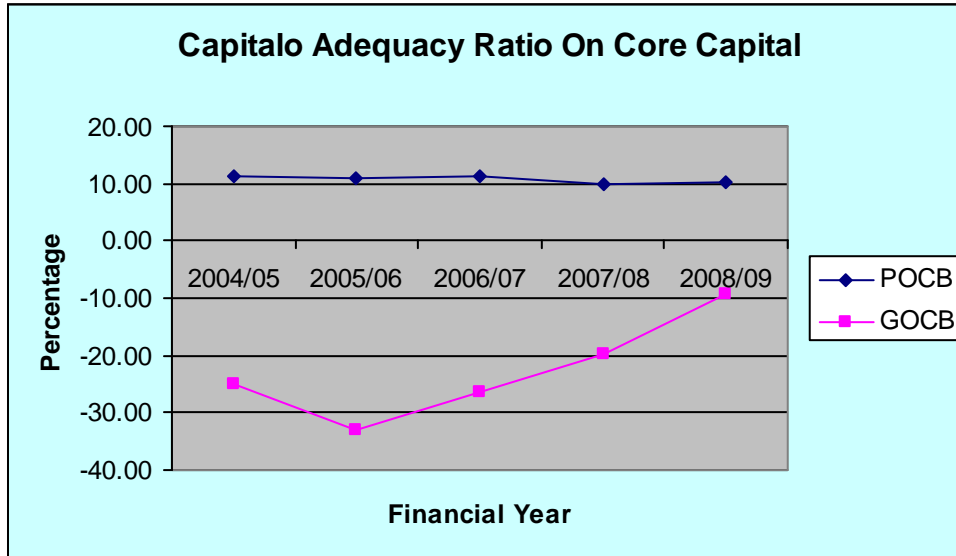
Core Capital Ratio(percentage)		
Year	AVRG CORE CAPITAL OF POCB	AVRG CORE CAPITAL OF GOCB
2004/05	11.22	-24.89
2005/06	10.81	-32.92
2006/07	11.26	-26.56
2007/08	9.88	-19.72
2008/09	10.20	-9.48
Mean	10.67	-22.72
S.D	0.62	8.77
CV	5.78	-38.63

The above table shows that POCB's average core capital ratio ranges from 9% to 11% averaging a figure of 10.67% but GOCB's average core capital are in negative averaging

about 22.72%. Moreover, the nature of ratio of GOCBs is more fluctuating than that of POCBs.

Line Graph

(Figure 4.1.4.1.1(c))



The above figure shows that private commercial banks have an average of ratio of 10.67 percent and it is consistent but government banks have negative and increasing trend after 2005/06.

Test of Hypothesis (Double Sample Mean T-Test)

Hypothesis-14

Null Hypothesis (Ho):

$\mu_1 = \mu_2$ i.e. there is no significance difference in average Capital Adequacy on core capital between POCB and GOCB.

Alternative Hypothesis (H1):

$\mu_1 \neq \mu_2$ i.e. there is significance difference in average Capital Adequacy on core capital between POCB and GOCB

Test Statistics under Null Hypothesis,

$$T \text{ calculated} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

T calculated $|T_{cal}| = 8.49$ (Source: APPENDIX 43)

Degree of Freedom = $n_1 + n_2 - 2 = 8$

Critical value for 8 d. f. for two tailed test, $T_{tab} = 2.306$

Decision: Since $|T_{cal}| > T_{tab}$, Null Hypothesis is rejected. Alternative hypothesis is accepted. Therefore, there is significant difference in Capital Adequacy on core capital between POCBs and GOCBs.

4.1.4.1.2 Supplementary Capital

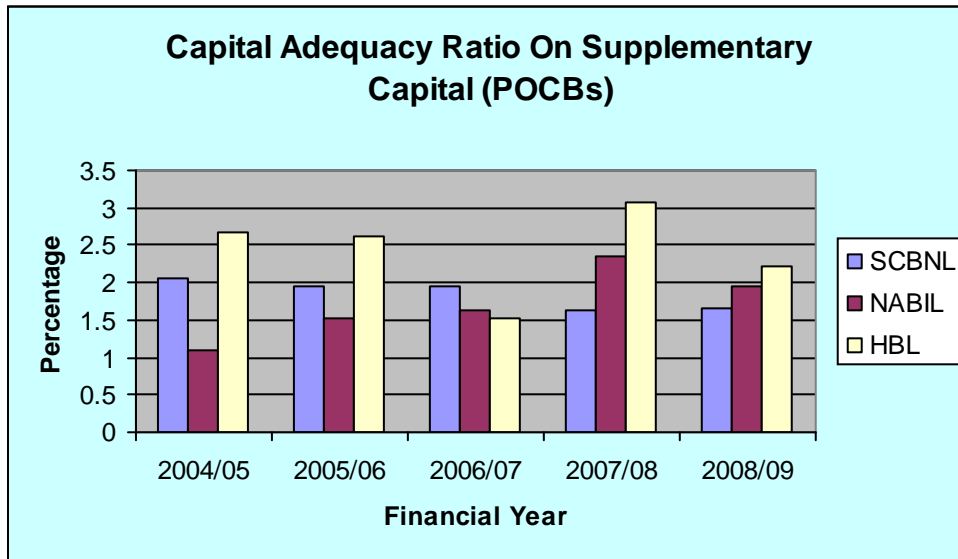
Table 15
Supplementary Capital Adequacy Ratio (in percentage)

Year	POCB			GOCB		
	SCBNL	NABIL	HBL	ADBL	RBB	NBL
2004/05	2.07	1.09	2.68	9.74	0.36	-4.47
2005/06	1.94	1.52	2.62	0	0.71	-2.65
2006/07	1.94	1.64	1.51	2.16	0.87	-0.86
2007/08	1.63	2.35	3.06	4.72	0.98	0
2008/09	1.65	1.96	2.21	4.65	1.24	0
Mean	1.85	1.71	2.42	4.25	0.83	-1.60
S.D	0.20	0.47	0.59	3.64	0.33	1.94
C.V	10.59	27.67	24.39	85.53	39.29	-121.36

Source: Annual Reports (2004/05 - 2008/09)

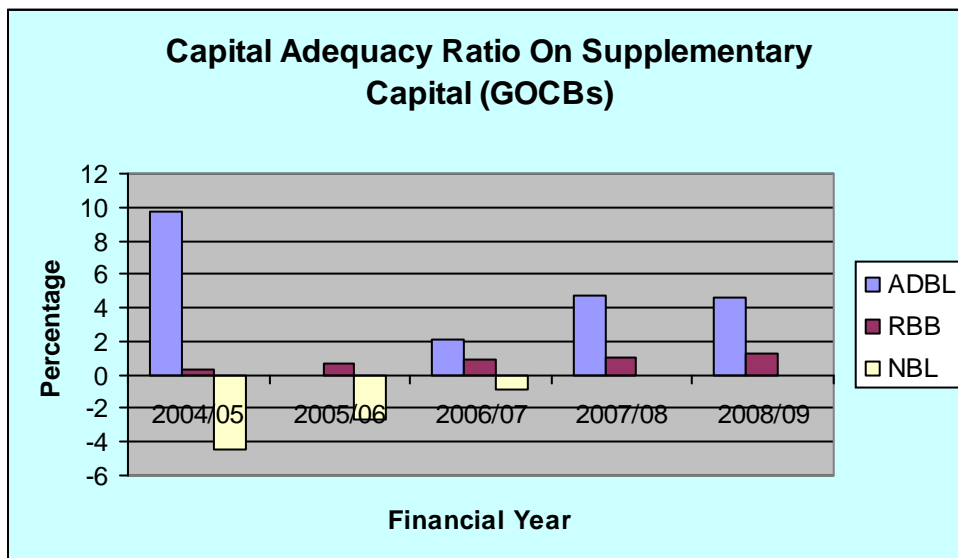
Table 15 shows the average supplementary capital Adequacy ratio of SCBNL, NABIL, HBL, ADBL, RBB and NBL are 1.85, 1.71, 2.42, 4.25, 0.83 and -1.60 respectively. Similarly On the basis of CV, SCBNL has the most consistent & NBL has most fluctuating ratios. It has been clearly depicted in the chart below.

(Figure 4.1.4.1.2(a))



HBL has highest ratio except the year 2006/07 in which year SCBNL has highest ratio. NABIL's ratio is increasing to the year 2007/08 and starts decline. SCBNL and NABIL has fluctuating ratio.

(Figure 4.1.4.1.2(b))



Government banks condition seems very poor. ADBL has very high ratio whereas RBB has very low. Moreover, NBL has the negative ratio.

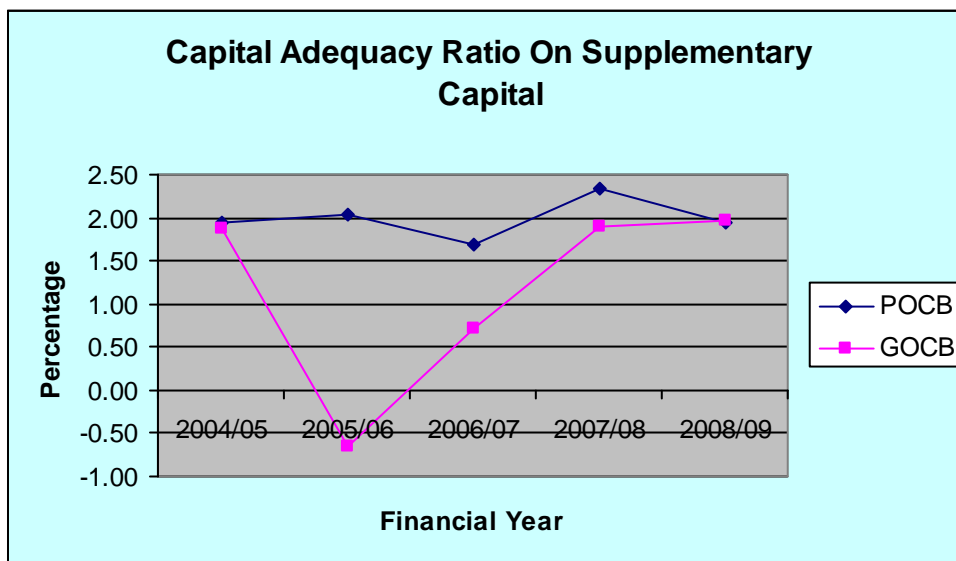
Table 16

Supplementary Capital Ratio(percentage)			
Year	AVRG SUPPLEMENTARY CAPITAL OF POCB	AVRG SUPPLEMENTARY CAPITAL OF GOCB	
2004/05	1.95	1.88	
2005/06	2.03	-0.65	
2006/07	1.70	0.72	
2007/08	2.35	1.90	
2008/09	1.94	1.96	
Mean	1.99	1.16	
S.D	0.23	1.14	
CV	11.75	97.64	

The average supplementary capital of POCBs is 1.99 only whereas GOCBs have 1.16. Although there is not considerable difference in average, the CV of ratio is quite different. GOCBs ratios are more fluctuating.

Line Graph

(Figure 4.1.4.1.2(c))



The diagram shows that average ratio of private banks around 2 percent but government commercial banks have very fluctuating average even negative in the year 2005/06.

Test of Hypothesis (Double Sample Mean T-Test)

Hypothesis-15

Null Hypothesis (H₀): $\mu_1 = \mu_2$ i.e. there is no significance difference in average Capital Adequacy on supplementary capital between POCB and GOCB.

Alternative Hypothesis (H₁): $\mu_1 \neq \mu_2$ i.e. there is significance difference in average Capital Adequacy on supplementary capital between POCB and GOCB

Test Statistics under Null Hypothesis,

$$T_{calculated} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

T calculated $|T_{cal}| = 1.60$ (Source: APPENDIX 45)

Degree of Freedom = $n_1 + n_2 - 2 = 8$

Critical value for 8 d. f. for two tailed test, T_{tab} = 2.306

Decision: Since $|T_{cal}| < T_{tab}$, Null Hypothesis is Accepted. Therefore, there is not significant difference in Capital Adequacy on supplementary capital between POCBs and GOCBs.

4.1.4.1.3 Total Capital Fund

Table 17
Total Capital Adequacy Ratio (in percentage)

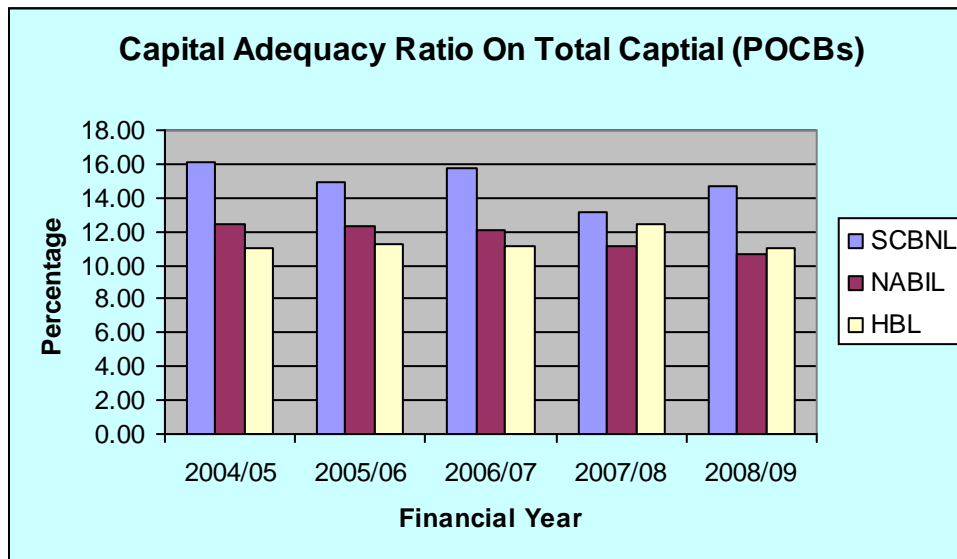
Year	POCB			GOCB		
	SCBNL	NABIL	HBL	ADBL	RBB	NBL
2004/05	16.06	12.44	11.01	-5.76	-33.76	-29.53
2005/06	14.93	12.31	11.26	-2.08	-55.54	-43.09
2006/07	15.71	12.04	11.13	4.84	-43.53	-38.83

2007/08	13.15	11.10	12.42	11.40	-37.31	-27.55
2008/09	14.70	10.70	11.02	15.69	-24.29	-13.94
Mean	14.91	11.72	11.37	4.82	-38.89	-30.59
S.D	1.13	0.77	0.60	8.96	11.63	11.31
C.V	7.58	6.60	5.25	185.93	-29.90	-36.98

Source: Annual Reports (2004/05 - 2008/09)

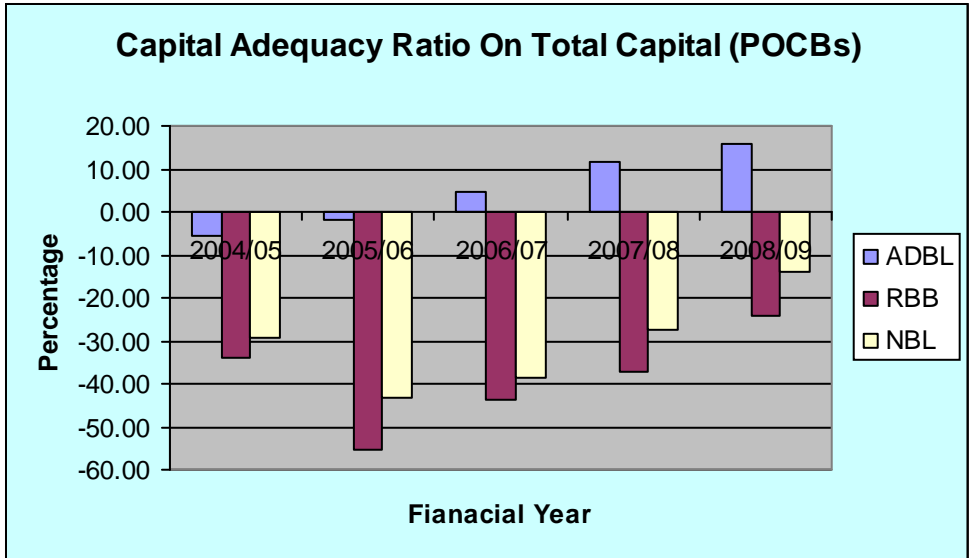
By computation, Table 17 shows that SCBNL (14.91%) has the highest and RBB (-38.89%) has the lowest total capital base in comparison to total deposit. Based on CV SCBNL, Nabil & HBL have similar consistency over total capital fund. However, GOCBs are more fluctuating. Figure 4.9 makes it more obvious.

(Figure 4.1.4.1.3(a))



The above diagram vividly shows that SCBNL has the highest ratio i.e. maintained highest capital in relation to deposit. In spite of decreasing ratio, NABIL is in second ratio. HBL is in third position.

(Figure 4.1.4.1.3(b))



The diagram 4.1.4.1.3 b shows that except ADBL other banks have negative ratio throughout the study period.

Comparative Analysis

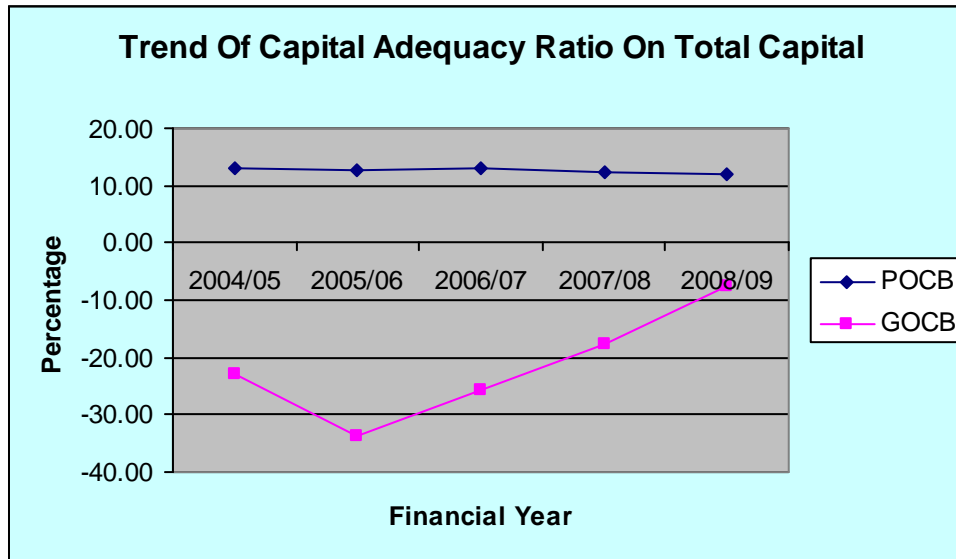
Table 18

Capital Adequacy Ratio (Total Capital Fund) (percentage)		
Year	AVRG CAPITAL ADEQUACY OF POCB	AVRG CAPITAL ADEQUACY OF GOCB
2004/05	13.17	-23.02
2005/06	12.83	-33.57
2006/07	12.96	-25.84
2007/08	12.22	-17.82
2008/09	12.14	-7.51
Mean	12.67	-21.55
S.D	0.46	9.70
CV	3.62	-44.98

Above table shows that capital adequacy ratio is above the NRB directives (i.e. 10%) on total capital fund of POCB is great higher than of GOCB and the ratio of GOCBs are more fluctuating than that of POCBs.

Line Graph

(Figure 4.1.4.1.3(c))



According to the above figure, capital adequacy ratio of private banks on total capital is almost constant around 12 to 13 percent. However, government commercial banks have increasing trend but still negative in the last year of study period.

Test of Hypothesis (Double Sample Mean T-Test)

Hypothesis-16

Null Hypothesis (Ho): $\mu_1 = \mu_2$ i.e. there is no significance difference in average Capital Adequacy on Total capital between POCB and GOCB.

Alternative Hypothesis (H1): $\mu_1 \neq \mu_2$ i.e. there is significance difference in average Capital Adequacy on Total capital between POCB and GOCB

Test Statistics under Null Hypothesis,

$$T \text{ calculated} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

T calculated $|T_{cal}| = 7.88$ (Source: APPENDIX 46)

Degree of Freedom = $n_1 + n_2 - 2 = 8$

Critical value for 8 d. f. for two tailed test, $T_{tab} = 2.306$

Decision: Since $|T_{cal}| > T_{tab}$, Null Hypothesis is rejected. Alternative hypothesis is accepted. Therefore, there is significant difference in Capital Adequacy on Total capital between POCBs and GOCBs.

4.1.4.2. Interest Expenses to Total Deposit Ratio

Interest expenses to total deposit Ratio is analyzed to find out how the banks were successful to generate cheaper fund.

Table 19
Interest Expenses to Total Deposit Ratio (in percentage)

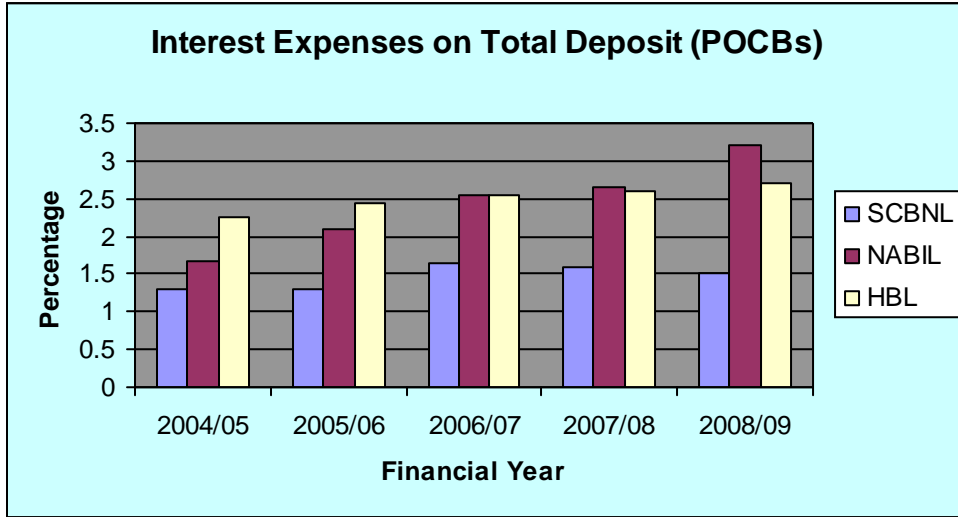
Year	POCB			GOCB		
	SCBNL	NABIL	HBL	ADBL	RBB	NBL
2004/05	1.31	1.68	2.26	4.83	2.13	2.01
2005/06	1.31	2.09	2.45	4.78	1.68	2.06
2006/07	1.65	2.54	2.55	4.9	1.79	1.9
2007/08	1.59	2.64	2.59	3.18	1.69	1.8
2008/09	1.5	3.22	2.7	3.27	1.48	1.7
Mean	1.47	2.43	2.51	4.19	1.75	1.89
S.D	0.16	0.58	0.17	0.88	0.24	0.15
C.V	10.68	23.94	6.61	21.10	13.59	7.81

Source: Annual Reports (2004/05 - 2008/09)

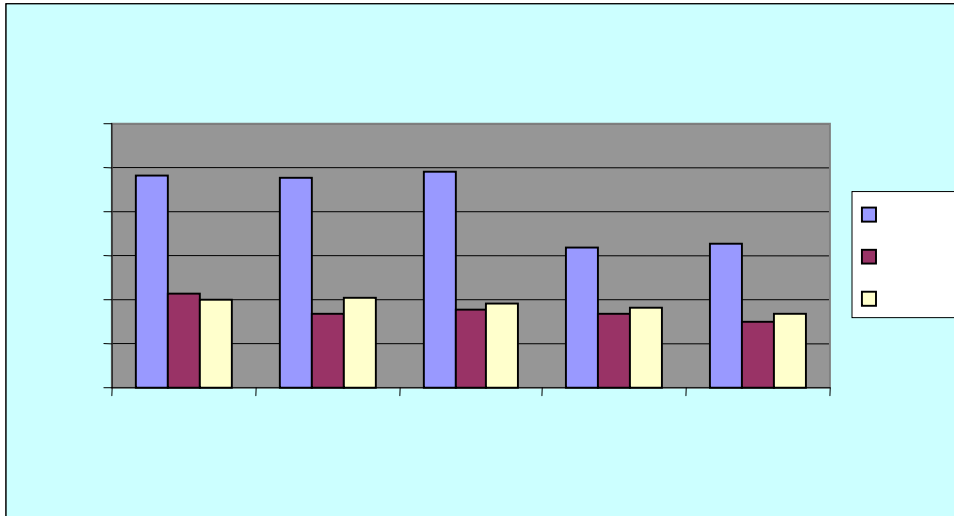
Table 19 shows that the average of ratio of interest expenses to total deposit of SCBNL, NABIL, HBL, ADBL, RBB & NBL are 1.47, 2.43, 2.51, 4.19, 1.75 & 1.89 percent respectively. SCBNL has the lowest ratio. It means SCBNL is able to generate cheaper fund than other banks. ADBL has the highest ratio implying the use of most expensive ratio. Others are in middle. On the basis of CV HBL's ratio is more constants that others

banks. CVs of other banks SCBNL, NABIL, ADBL, RBB and NBL are 10.68, 23.94, 21.10, 13.59 & 7.81 respectively. Figure 4.10 makes it more obvious.

(Figure 4.1.4.2.a)



(Figure 4.1.4.2.b)



Comparative analysis

Table 20

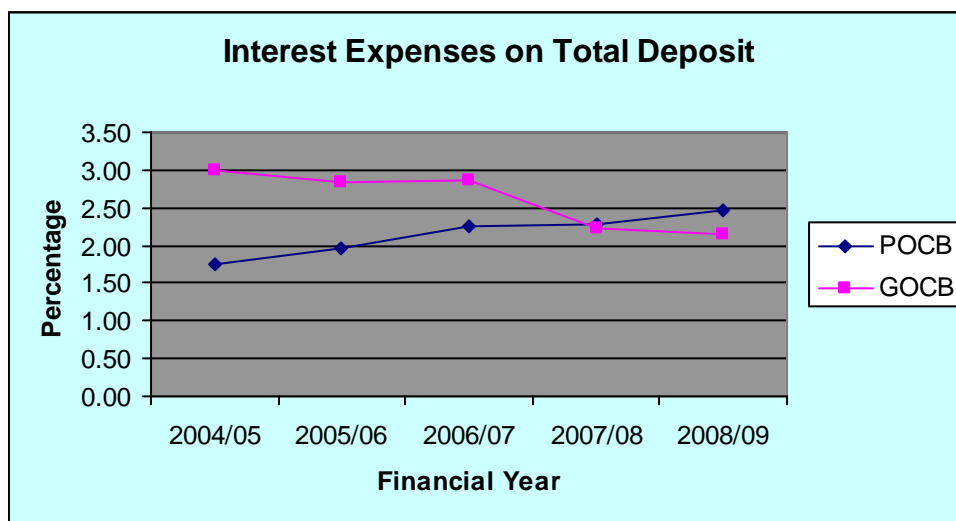
Interest Expenses to Total Deposit Ratio (Percentage)		
Year	AVRG Interest Expenses To Total Deposit Ratio(POCB)	AVRG Interest Expenses To Total Deposit Ratio(GOCB)
2004/05	1.75	2.99

2005/06	1.95	2.84
2006/07	2.25	2.86
2007/08	2.27	2.22
2008/09	2.47	2.15
Mean	2.14	2.61
S.D	0.29	0.39
CV	13.40	15.10

On the Table 20, we can see that the mean interest expenses to total deposit ratio of POCB and GOCB are 2.14 & 2.61 respectively. POCB are more efficient to utilize cheaper debt with lower CV (Consistently) than GOCB.

Line Graph

(Figure 4.1.4.2.c)



Above diagram shows that ratio of interest paid by the banks to total deposit of POCB and GOCB cross each other in the year 2007/08. Before 2007/08 GOCB has higher ratio whereas after the year POCB has higher ratio.

Test of Hypothesis (Double Sample Mean T-Test)

Hypothesis-17

Null Hypothesis (H₀):

$\mu_1 = \mu_2$ i.e. there is no significance difference in average interest expenses on total deposit and borrowings between POCB and GOCB.

Alternative Hypothesis (H1): $\mu_1 \neq \mu_2$ i.e. there is significance difference in average interest expenses on total deposit and borrowings between POCB and GOCB

Test Statistics under Null Hypothesis,

$$T_{calculated} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

T calculated $|T_{cal}| = 2.18$ (Source: APPENDIX 36)

Level of significance () = 5%

Degree of Freedom = $n_1 + n_2 - 2 = 8$

Critical value at 5% level of significance for 8 d. f. for two tailed test, $T_{tab} = 2.306$

Decision: Since $|T_{cal}| < T_{tab}$, Null Hypothesis is accepted. Therefore, there is no significant difference in interest expenses on total deposit and borrowings between POCBs and GOCBs. Their interest expenses on total deposit and borrowing is same.

4.1.5 Market Value Analysis

Market value analysis indicates the market value of the banks as compared to the bank value and measure the stock price relative to earnings. In this part, the researcher analyzes and compares the various market related ratio analysis such as EPS, P-E ratio, Cash dividend on share capital & dividend (including bonus) on share capital for better presentation. However, this part lacks the proper comparative analysis as government commercial banks do not have their share listed in Nepal stock exchange and therefore their market value cannot be known.

4.1.5.1 Earning Per Share (EPS)

EPS shows the profitability of the banks on per share basis. It shows the earning available to each shareholder out of the total earning. It is the major stake concerning banks shareholders.

Table 21
Earning Per Share (EPS)(Rs.)

Year	POCB			GOCB		
	SCBNL	NABIL	HBL	ADBL	RBB	NBL
2004/05	143.14	105.49	47.91	-4.69	341.3	455
2005/06	175.84	129.21	59.24	21.76	413.05	317
2006/07	167.37	137.08	60.66	65.14	419.65	59.66
2007/08	131.92	108.31	62.74	32.21	446.13	62.89
2008/09	109.99	106.76	61.9	50.91	527.44	235.09
Mean	145.65	117.37	58.49	33.07	429.51	225.93
S.D	26.69	14.70	6.06	26.93	67.11	169.62
C.V	18.33	12.53	10.36	81.45	15.62	75.08

Source: Annual Reports (2004/05 - 2008/09)

Table 21 shows that average EPS of RBB and NBL are far higher value than other banks i.e. Rs. 29.51 and 225.93 respectively. The average EPS of SCBNL, Nabil, HBL and ADBL are 145.65, 117.37, 58.49 & 33.07 rupees respectively. Based on HBL and NABIL are more consistent than others. Although NBL has highest average EPS its' rate of fluctuation is the highest.

(Figure 4.1.5.1. a)

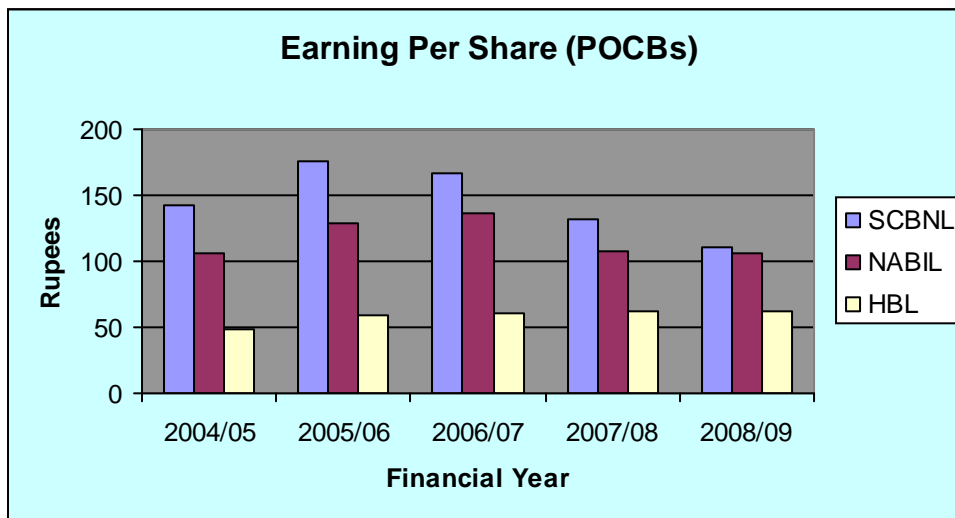
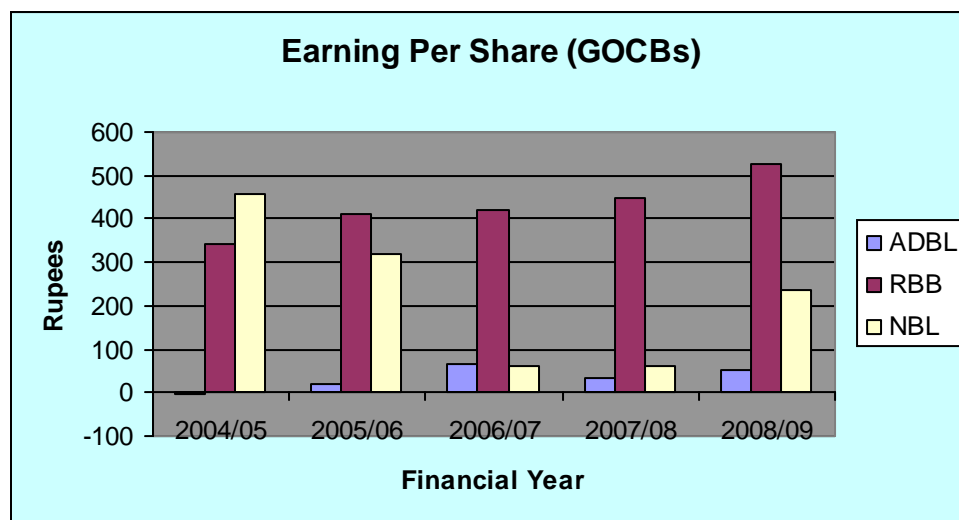


Figure 4.1.5.1a shows the earning made by one share of banks in the study period. In spite of decreasing trend of EPS after the year 2005/06, SCBNL seems the best as it has always highest per share earnings. NABIL in second position and HBL has very low EPS in comparison to other banks.

(Figure 4.1.5.1b)



The diagram above presents the very poor condition of ADBL among government banks. Its EPS is very low and most fluctuating with negative in 2004/05. RBB has highest and increasing EPS and seems the best but NBL has decreasing and highly variation in EPS.

Comparative Analysis

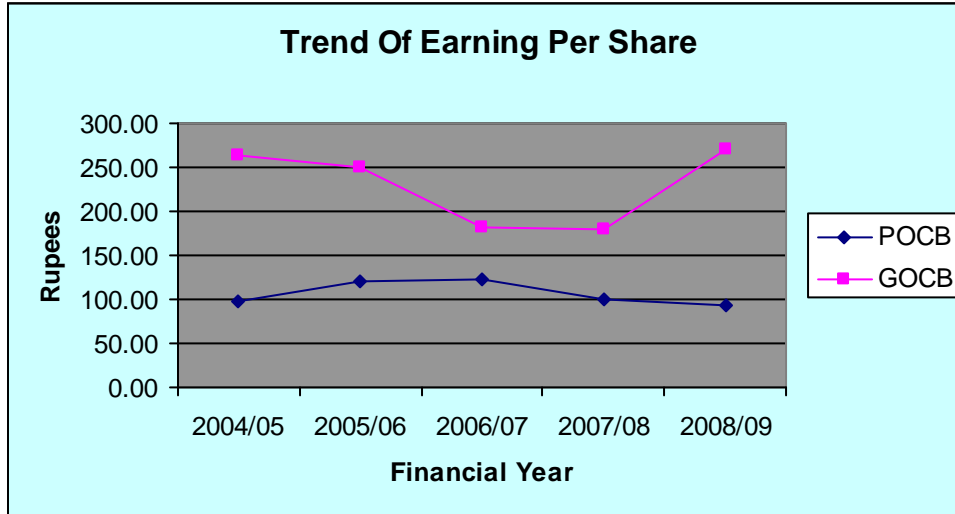
Table 22

EPS		
Year	AVRG EPS of POCB	AVRG EPS of GOCB
2004/05	98.85	263.87
2005/06	121.43	250.60
2006/07	121.70	181.48
2007/08	100.99	180.41
2008/09	92.88	271.15
Mean	107.17	229.50
S.D	13.47	44.93
CV	12.57	19.58

Above Table shows, that GOCBs have more EPS than POCBs throughout study period but consistency rate is lower than that of POCBs.

Line graph

(Table 4.1.5.1c)



. The diagram 4.1.5.1c shows that average EPS of GOCB is higher than POCB for the whole study period. It is due to high EPS of RBB.

Test of Hypothesis (Double Sample Mean T-Test)

Hypothesis-18

Null Hypothesis (Ho): $\mu_1 = \mu_2$ i.e. there is no significance difference in average EPS between POCB and GOCB.

Alternative Hypothesis (H1): $\mu_1 \neq \mu_2$ i.e. there is significance difference in average EPS between POCB and GOCB

Test Statistics under Null Hypothesis,

$$T_{calculated} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

T calculated $|T_{cal}| = 5.83$ **(Source: APPENDIX 29)**

Level of significance () = 5%

Degree of Freedom = $n_1 + n_2 - 2 = 8$

Critical value at 5% level of significance for 8 d. f. for two tailed test, $T_{tab} = 2.306$

Decision: Since $|T_{cal}| > T_{tab}$, Null Hypothesis is rejected. Therefore, there is significant difference in EPS between POCBs and GOCBs

4.1.5.2 Price Earning Ratio (P/E ratio)

Price Earning ratio is used to assess the banks performance as expected by the investors. Higher the ratio the better it is for the owners.

RBB and NBL have not issued shares in the market yet. ADBL's share is issued for subscription but has not been allotted and listed in the NEPSE yet. So their market price per share is not known and hence P/E ratio cannot be calculated. Therefore, here the P/E ratio of the banks under the group POCBs i.e. SCBNL, NABIL and HBL is analyzed.

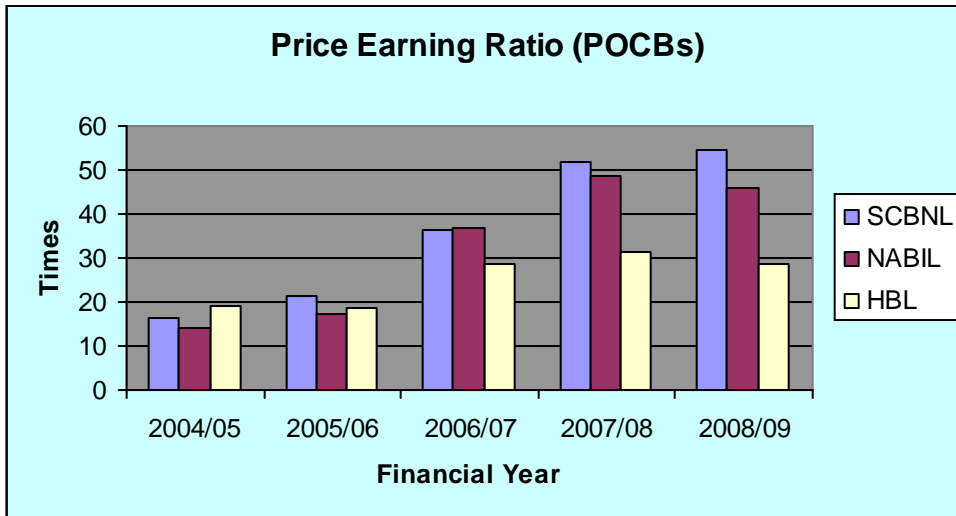
(Table 23)

Price Earning Ratio (Times)				
Year	SCBNL	NABIL	HBL	Yearly Average
2004/05	16.38	14.27	19.2	16.62
2005/06	21.47	17.34	18.57	19.13
2006/07	36.25	36.84	28.69	33.93
2007/08	51.77	48.7	31.56	44.01
2008/09	54.64	45.89	28.43	42.99
Mean	36.10	32.61	25.29	31.33
S.D	17.26	15.99	5.98	12.93
C.V.	47.82	49.04	23.64	41.27

Table 23 depicts that the average P/E ratio of all banks are in increasing pattern. However, the HBL has not followed this trend completely. The average P/E ratio of SCBNL, NABIL and HBL are 36.10 and 32.61 & 25.29 times respectively. Based on CV, Nabil has higher inconsistency (i.e. CV=49.04%) due to higher increasing trend. SCBNL follows the same pattern with CV of 47.82%. HBL has the lowest CV i.e. 23.64%. As such, HBL has more consistent P/C ratio.

Figure 4.1.5.2a shows that P/E ratio of all banks is in increasing trend, except HBL in 2006/07. Nabil has immensely increasing nature; SCBNL is second to it.

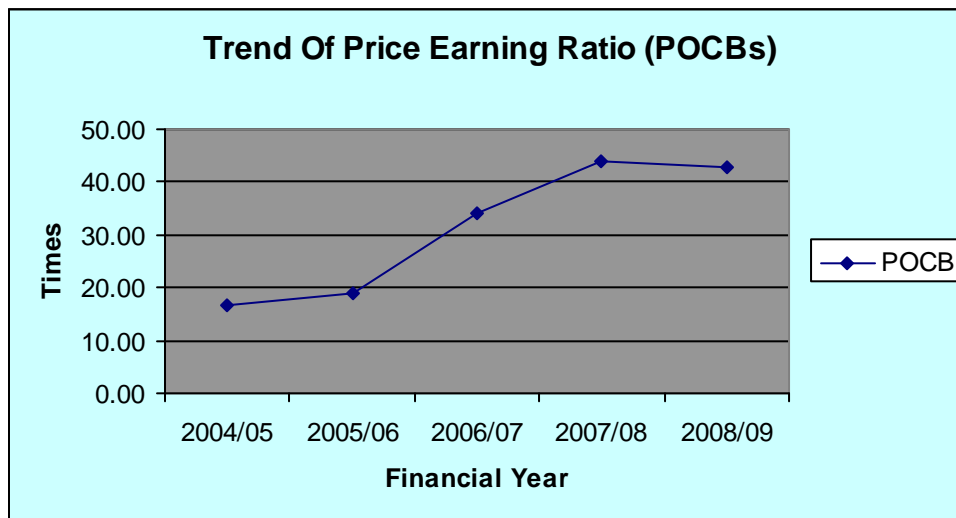
(Figure 4.1.5.2 a)



The above diagram clearly interprets the relation of market price and earning of share. SCBNL is followed by NABIL in increasing trend of EPS. However, HBL seems poor as it has lowest and varying EPS.

Line Graph Showing Average EPS

(Figure 4.1.5.2 b)



The picture above shows that average EPS of POCB is increasing upto the year 2007/08 and slightly decline in the year 2008/09.

Test of Hypothesis (Two-way ANOVA)

Hypothesis 19: (Among POCBs in five different years)

Set up hypothesis:

- Null Hypothesis (H₀):
- i) $\mu_{\text{SCNBL}} = \mu_{\text{NABIL}} = \mu_{\text{HBL}}$ i.e. there is no significant different in P/E ratio among three different banks for five different years. (P/E of three banks is same.)
 - ix) $\mu_{4/5} = \mu_{5/6} = \mu_{6/7} = \mu_{7/8} = \mu_{8/9}$ i.e. there is no significant different in P/E in five years for three banks.(P/E of five years is same)

- Alternative Hypothesis (H₁):
- i) $\mu_{\text{SCNBL}} \neq \mu_{\text{NABIL}} \neq \mu_{\text{HBL}}$ i.e. there is significant different in CRR among three different banks for five different years. (P/E of three banks is not same.)
 - ix) $\mu_{4/5} \neq \mu_{5/6} \neq \mu_{6/7} \neq \mu_{7/8} \neq \mu_{8/9}$ i.e. there is significant different in P/E in five years for three banks.(P/E of five years is not same)

Test Statistics:

Under H₀, the test statistic is,

$$F_C = \text{MSC} / \text{MSE} \quad \text{with d.f. } [(c-1), (c-1)(r-1)]$$

$$F_R = \text{MSR} / \text{MSE} \quad \text{with d.f. } [(r-1), (c-1)(r-1)]$$

Level of significance = 5%

For banks: Calculated F statistics, $F_C = F_{.05}(2,8) = 3.46$ (Source: APPENDIX 7)

For years: Calculated F statistics, $F_R = F_{.05}(4,8) = 11.42$ (Source: APPENDIX 7)

Area of Critical Region:

The tabulated value of F at 5% level of significance

For banks: Tabulated F Statistics $F_C = F_{.05}(2,8) = 4.46$ (Source : F- distribution table)

For Years: Tabulated F Statistics $F_R = F_{.05}(4,8) = 3.84$ (Source : F- distribution table)

Decision:

- i. The calculated F (2, 8) < tabulated F (2, 8). Therefore, we accept null hypothesis and conclude that there is no significant difference in P/E for 3 banks in five different years.
- ii. The calculated F (4, 8) > tabulated F (4, 8). Therefore, we reject null hypothesis and conclude that there is significant difference in P/E for five years in three banks.

4.1.5.3 Cash Dividend on Share Capital

It measures the market value or profitability of the banks on dividend per equity share. In general higher the ratio, better it is and vice versa. Generally, two competent affects this ratio:

1. Amount of earning distributed as dividend.
2. No of equity common shares

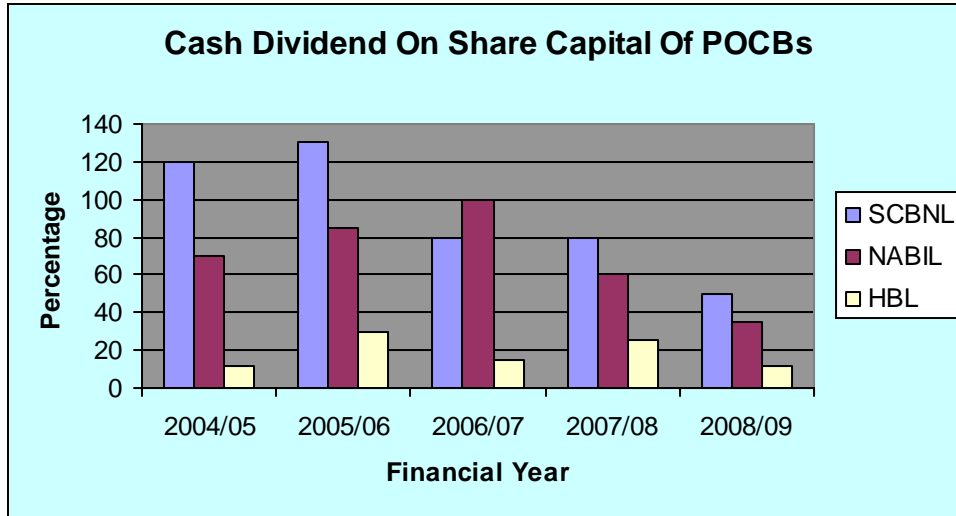
Government owned banks neither have issued shares nor have distributed any cash dividend to their shareholders. So the percentage of cash dividend on share capital of only three banks under private ownership group has been calculated.

(Table 24)

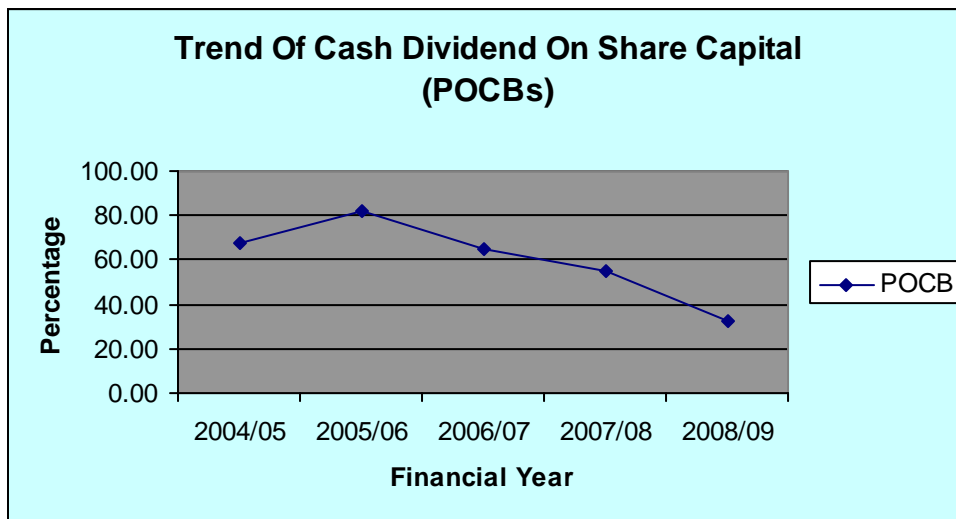
Cash Dividend on Share Capital (Percentage)				
Year	SCBNL	NABIL	HBL	Yearly Average
2004/05	120	70	11.58	67.19
2005/06	130	85	30	81.67
2006/07	80	100	15	65.00
2007/08	80	60	25	55.00
2008/09	50	35	12	32.33
Mean	92.00	70.00	18.72	60.24
S.D	32.71	24.75	8.32	18.28
C.V.	35.56	35.36	44.43	30.34

Table 24 shows that the mean cash dividend ratio of SCBNL is far higher than other banks i.e. 92 percent. NABIL provides the second largest dividend percent to its shareholders and HBL provides lowest i.e. 18.72 percent. On the base of CV, the shareholders of SCBNL (35.56%) and NABIL (35.36%) have almost same uniformity. However, HBL has higher variance on the percentage. The figure below makes it more obvious.

(Figure 4.1.5.3 a)



(Figure 4.1.5.3 b)



The diagram above shows the decreasing trend of average cash dividend on share capital ratio of the commercial banks after the year 2005/06.

4.1.5.4. Dividend (including bonus) on Share Capital

The government owned commercial banks have distributed neither dividend nor bonus. Therefore, this part excludes the GOCBs and focuses the analysis only to POCBs.

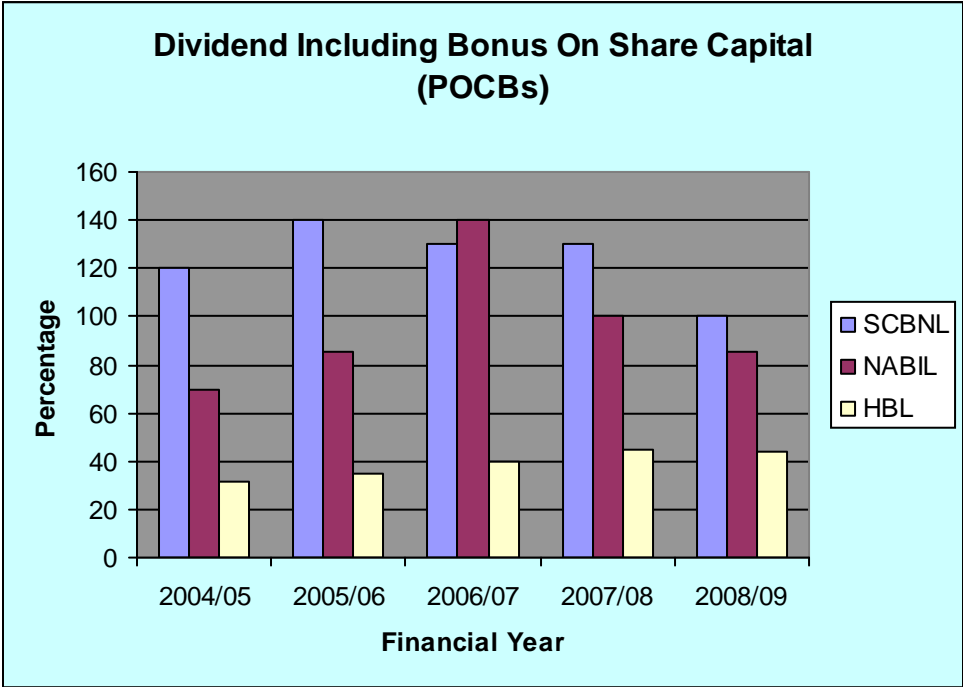
(Table 25)

Year	SCBNL	NABIL	HBL	Yearly Average
2004/05	120	70	31.58	73.86
2005/06	140	85	35	86.67
2006/07	130	140	40	103.33

2007/08	130	100	45	91.67
2008/09	100	85	43.56	76.19
Mean	124.00	96.00	39.03	86.34
S.D	15.17	26.79	5.68	12.00
C.V.	12.23	27.90	14.54	13.90

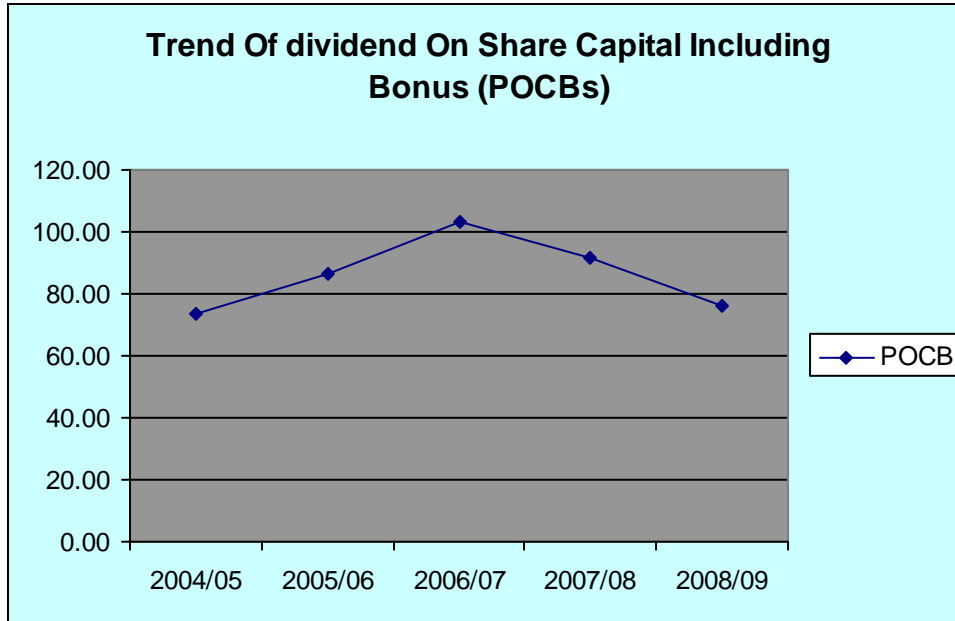
Table 25 shows the average of such ratio of SCBNL allows higher value than other banks i.e. 124%. The average of such ratio of Nabil & HBL is 96 & 29.03 percent respectively. It indicates that shareholder of SCBNL are more satisfied. In addition to this SCBNL is the most consistent in providing dividend. Besides, CV of Nabil & HBL is 27.90 & 12.13% respectively. Following chart reflects it more clearly.

(Figure 4.1.5.4 a)



The above diagram shows that SCBNL and NABIL pays very high total dividend to their shareholders but the trend is not in uniform rate. HBL provides very low percentage of total dividend but is in uniform trend.

(Figure 4.1.5.4 b)



The average dividend rate of POCB increases up to the year 2006/07 but it starts to decrease thereafter.

Test of Hypothesis (Two-way ANOVA)

Hypothesis 20: (Among POCBs in five different years)

Set up hypothesis:

- Null Hypothesis (Ho):
- i) $\mu_{SCNBL} = \mu_{NABIL} = \mu_{HBL}$ i.e. there is no significant different in Total dividend on share capital among three different banks for five different years. (Total dividend on share capital of three banks is same.)
 - x) $\mu_{4/5} = \mu_{5/6} = \mu_{6/7} = \mu_{7/8} = \mu_{8/9}$ i.e. there is no significant different in CRR in five years for three banks.(CRR of five years is same)

- Alternative Hypothesis (H1):
- i) $\mu_{SCNBL} \neq \mu_{NABIL} \neq \mu_{HBL}$ i.e. there is significant different in Total dividend on share capital among three different banks for five different years. (CRR of three banks is not same.)
 - x) $\mu_{4/5} \neq \mu_{5/6} \neq \mu_{6/7} \neq \mu_{7/8} \neq \mu_{8/9}$ i.e. there is significant different in Total dividend on share capital in five

years for three banks.(Total dividend on share capital of five years is not same)

Test Statistics:

Under Ho, the test statistic is,

$$F_C = MSC / MSE \quad \text{with d.f. } [(c-1),(c-1)(r-1)]$$

$$F_R = MSR / MSE \quad \text{with d.f. } [(r-1),(c-1)(r-1)]$$

Level of significance = 5%

For banks: Calculated F statistics, $F_C = F_{.05}(2,8) = 34.24$ (Source: APPENDIX 8)

For years: Calculated F statistics, $F_R = F_{.05}(4,8) = 1.58$ (Source: APPENDIX 8)

Area of Critical Region:

The tabulated value of F at 5% level of significance

For banks: Tabulated F Statistics $F_C = F_{.05}(2,8) = 4.46$ (Source : F- distribution table)

For Years: Tabulated F Statistics $F_R = F_{.05}(4,8) = 3.84$ (Source : F- distribution table)

Decision:

i. The calculated F (2, 8) > tabulated F (2,8). Therefore, we accept null hypothesis and conclude that there is significant difference in Total dividend on share capital for 3 banks in five different years.

ii. The calculated F (4, 8) < tabulated F (4, 8). Therefore, we accept null hypothesis and conclude that there is no significant difference in Total dividend on share capital for five years in three banks.

4.1.6 Other Relevant Ratios

To make more analytical & better permeation of comparative performance analysis it is also necessary to compute following relevant ratios.

4.1.6.1 Staff Expenses to Total Operating Ratio

This ratio shows the portion of staff expenses on total operating expenses.

Table 26
Staff Expenses to Total Operating Ratio (percentage)

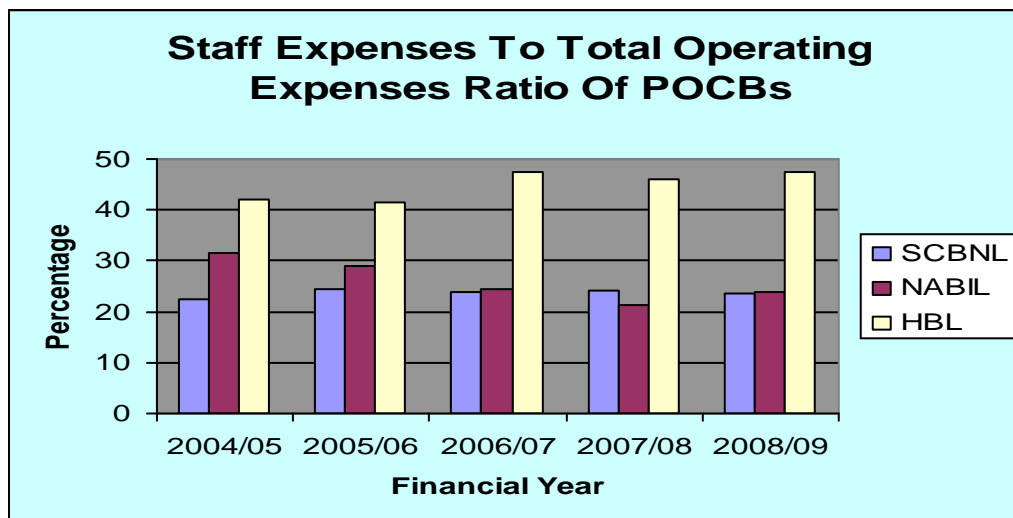
Year	POCB			GOCB		
	SCBNL	NABIL	HBL	ADBL	RBB	NBL
2004/05	22.53	31.5	41.95	28.8	39.55	53.56

2005/06	24.29	28.93	41.57	49.05	37.05	47.02
2006/07	23.76	24.41	47.4	36.89	35.56	50.52
2007/08	24.28	21.17	45.91	54.36	37.04	56.61
2008/09	23.58	23.96	47.54	54.81	46.54	60.11
Mean	23.69	25.99	44.87	44.78	39.15	53.56
S.D	0.72	4.15	2.92	11.49	4.37	5.10
C.V	3.04	15.96	6.50	25.66	11.17	9.53

Source: Annual Reports (2004/05 - 2008/09)

Table 26 shows that the NBL (53.56%) has the highest average ratio whereas SCBNL (23.69%) has the lowest. It means HBL has been paying more benefit allowance staff expense. The average of such ratio of Nabil, HBL, and ADBL & RBB is 25.99, 44.87, 44.78 & 39.15 percent respectively. The CV of SCBNL, Nabil, HBL, ADBL, and RBB & NBL is 3.04, 15.96, 6.50, 25.66, 11.17 & 9.53 percent respectively. Based on CV it can be said that the ratio of SCBNL is more consistent than other banks due to lower CV. figure 4.15 makes it more obvious.

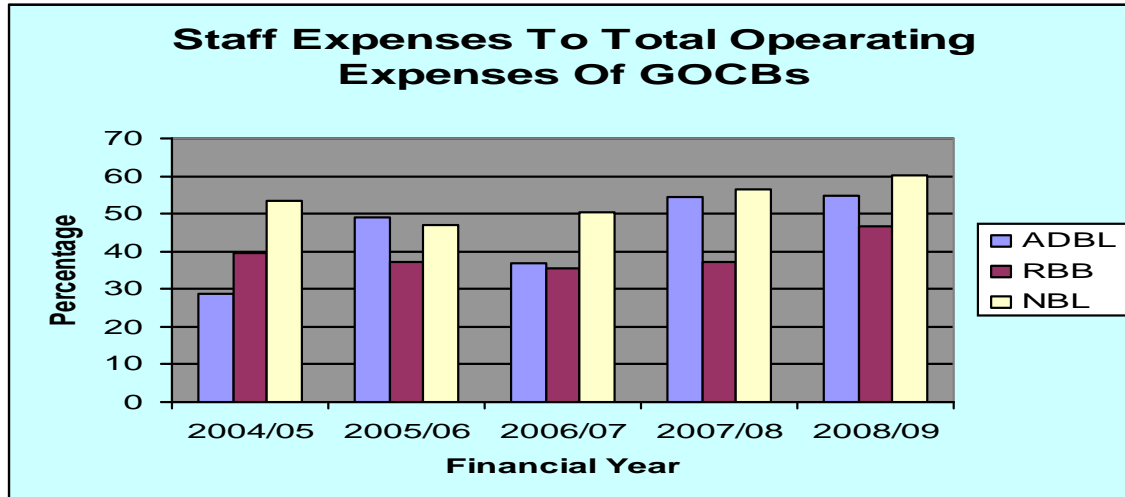
Figure 4.1.6.1(a)



The above diagram shows that HBL has the highest ratio. HBL's out of total operating expenses 40 to 50 percent is covered by staff expenses but other two banks have

economized the expenses on staff as ratio of SCBNL's is only 20 plus and NABIL's is between 20 to 30 percentage.

Figure 4.1.6.1(b)



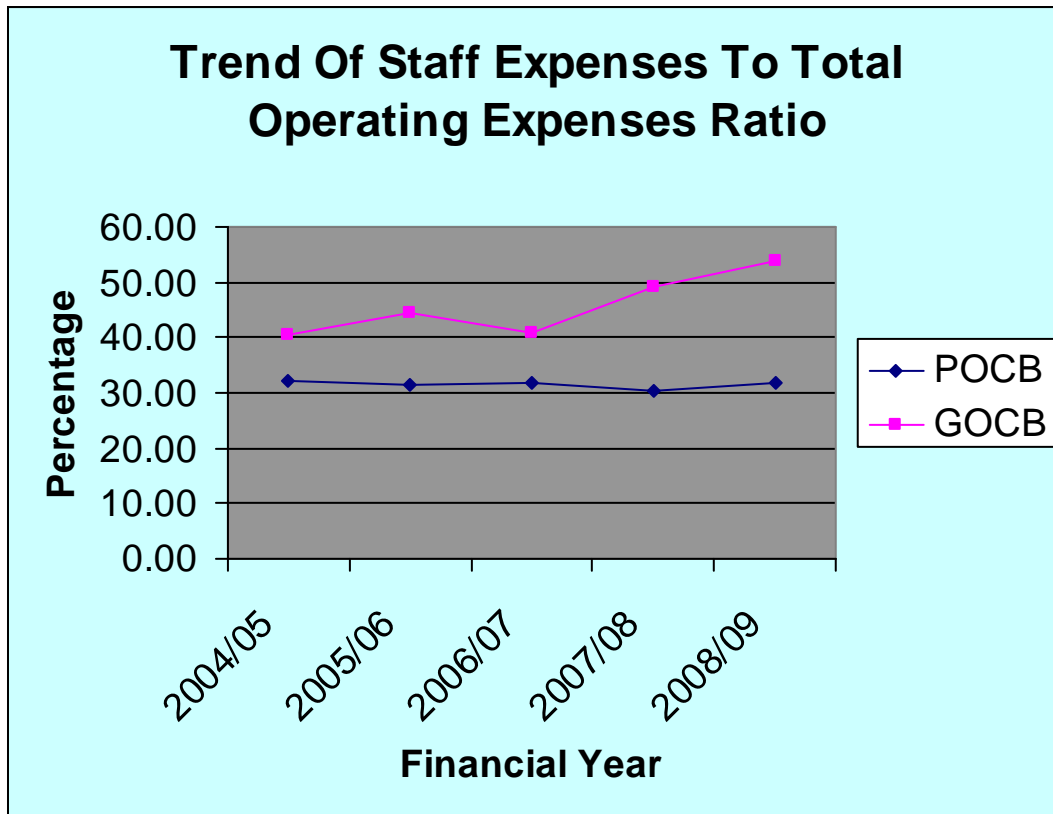
The above figure shows the measurable condition of GOCBs on the matter staff expenses. They have very high percentage of staff expenses on total operating expenses. This shows that government banks have excessive expenditure on staffs in comparison to their contribution to the bank.

Table 27

Staff expenses to Total Operating ratio (Percentage)		
Year	AVRG of POCB	AVRG of GOCB
2004/05	31.99	40.64
2005/06	31.60	44.37
2006/07	31.86	40.99
2007/08	30.45	49.34
2008/09	31.69	53.82
Mean	31.52	45.83
S.D	0.61	5.67
CV	1.95	12.37

The private banks have been providing the benefits around the level of 31 percent maintaining average of 31.52 percent with very low CV i.e. 1.95 percent only whereas, GOCBs has maintained compensation to their staff around average of 45.83% with some degree of more variance of 12.37%.

Figure 4.1.6.1(c)



The above figure compares the expenses on staff as a percentage of total operating expenses between POCBs and GOCBs. Although the number of staff in the private banks is very few in comparison to government banks, the expenses ratio is very high. It shows overstaffing and low average earning per employee in the GOCBs.

Test of Hypothesis (Double Sample Mean T-Test)

Hypothesis-21

Null Hypothesis (H₀):

$\mu_1 = \mu_2$ i.e. there is no significance difference in average staff expenses to total operating expenses ratio between POCB and GOCB.

Alternative Hypothesis (H1): $\mu_1 \neq \mu_2$ i.e. there is significance difference in average staff expenses to total operating expenses ratio between POCB and GOCB

Test Statistics under Null Hypothesis,

$$T_{calculated} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

T calculated $|T_{cal}| = 5.61$ (Source: APPENDIX 35)

Level of significance () = 5%

Degree of Freedom = $n_1 + n_2 - 2 = 8$

Critical value at 5% level of significance for 8 d. f. for two tailed test, $T_{tab} = 2.306$

Decision: Since $|T_{cal}| > T_{tab}$, Null Hypothesis is rejected. Therefore, there is significant difference in staff expenses to total operating ratio between POCBs and GOCBs

4.1.6.2 Staff Bonus to Total Staff Expenses

This ratio shows the extra incentives given to employees in addition to regular payment. It measures the motivational level of staff.

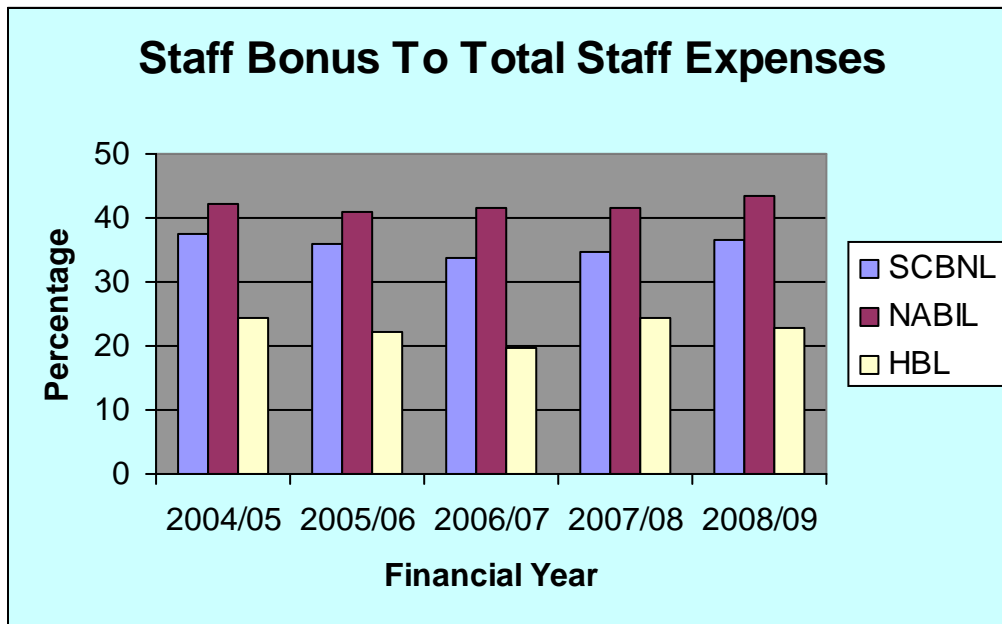
Table 28
Staff bonus to Total Staffing expenses (percentage)

Year	POCB			GOCB		
	SCBNL	NABIL	HBL	ADBL	RBB	NBL
2004/05	37.38	42.2	24.53	0	0	16.26
2005/06	35.83	40.86	22.28	3.91	14.05	11.31
2006/07	33.71	41.43	19.78	7.32	16.97	2.02
2007/08	34.63	41.42	24.51	3.24	15.97	2.33
2008/09	36.7	43.5	22.81	5.12	12.38	5.79
Mean	35.65	41.88	22.78	3.92	11.87	7.54
S.D	1.49	1.02	1.96	2.68	6.87	6.14
C.V	4.19	2.44	8.59	68.52	57.85	81.45

Source: Annual Reports (2004/05 - 2008/09)

Table 28 shows the average staff bonus to total staff expenses of NABIL is higher value on the last five year than other banks i.e. 41.88%. The average of such ratios of SCBNL, HBL, ADBL, and RBB & NBL is 35.65, 22.78, 3.92, 11.87 & 7.54 percent respectively. But HBL has less satisfactory in comparison with each other. On the basis of CV, the ratio of all private banks are less fluctuating, especially of SCBNL i.e. 5.38% but government banks have very fluctuating ratio as CV of ADBL, RBB & NBL is 68.52, 57.85 & 81.45 percent respectively. This is shown in the figure below:

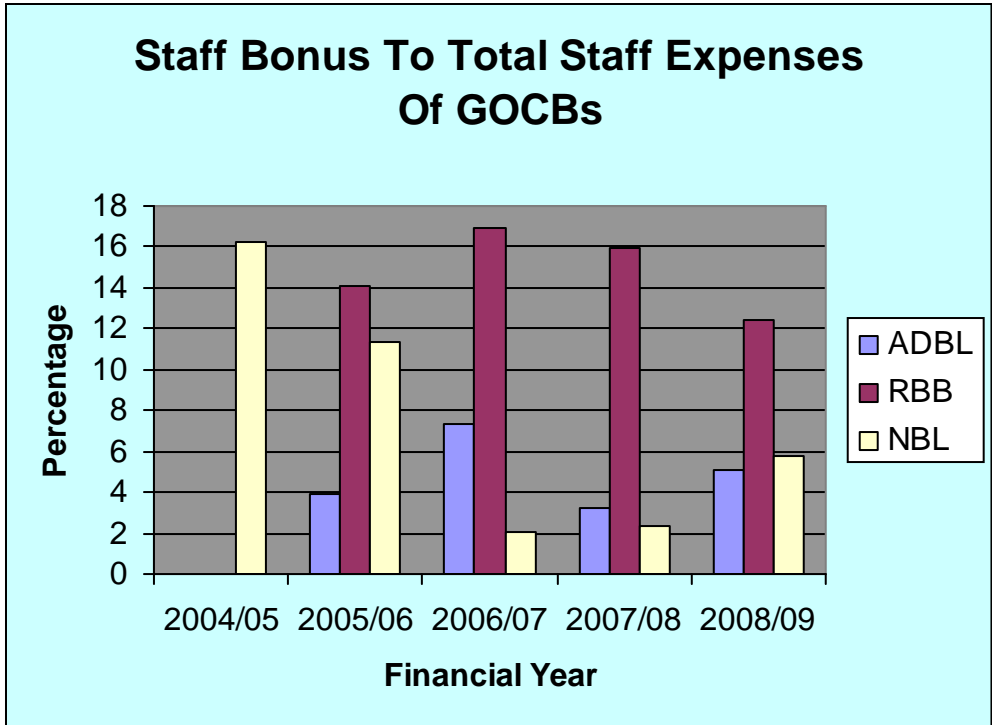
Figure 4.1.6.1(a)



The above figure shows that NABIL's more than 40 percent of staff expenses is covered by bonus to staffs. It paid the highest percent staff bonus, SCBNL is just behind NABIL, and HBL pays the lowest among the private banks.

Figure

4.1.6.1(b)



The above diagram shows that ADBL and RBB doesn't pay any bonus in the year 2004/05 but NBL pays about 16 percent of total staff expenses. RBB pays the highest percent bonus in the remaining four year. NBL's bonus to staff after first year of the study is very low. ADBL also pays the bonus after first year but the percent of bonus on total staff expenses is very low.

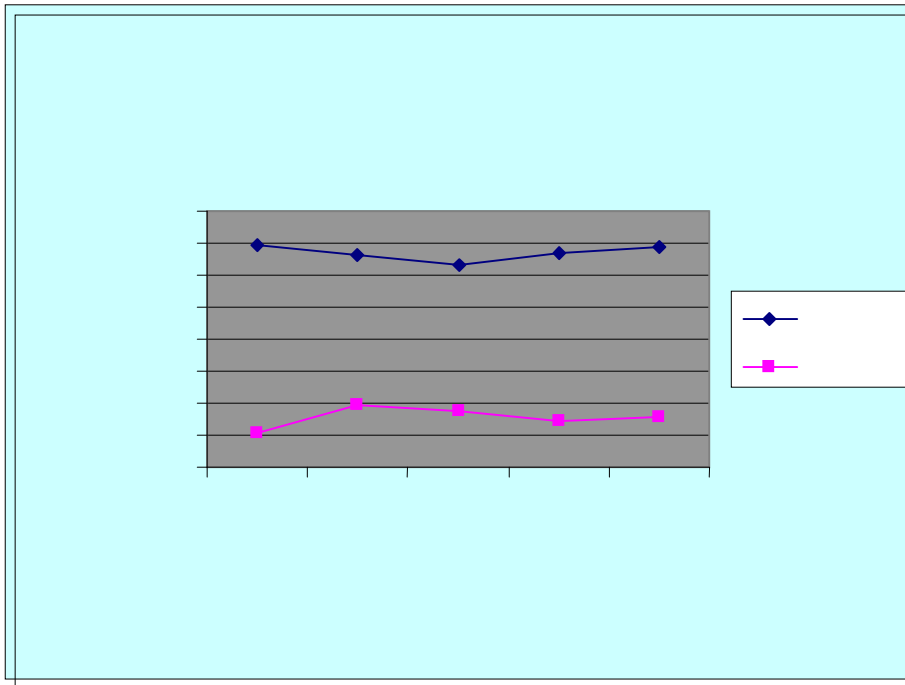
Comparative Analysis

Table 29

Staff Bonus to Total Staff Expenses (Percentage)		
Year	AVRG of POCB	AVRG of GOCB
2004/05	34.70	5.42
2005/06	32.99	9.76
2006/07	31.64	8.77
2007/08	33.52	7.18
2008/09	34.34	7.76
Mean	33.44	7.78
S.D	1.21	1.64
CV	1.95	21.14

The above table show that the private owned commercial banks pay very high bonus to their employee in comparison to government owned commercial banks with very low variation. The respective mean staff bonus to total staff expenses ratio of 33.44 % & 7.78 % prove the above fact. Moreover, the POCBs have very high consistency i.e. only 1.95 %.

Figure 4.1.6.1(c)



The diagram 4.1.6.1(c) shows that the average staff bonus to total staff expenses of POCB is always far higher than that of GOCB.

Test of Hypothesis (Double Sample Mean T-Test)

Hypothesis-22

Null Hypothesis (H₀):

$\mu_1 = \mu_2$ i.e. there is no significance difference in average staff bonus to total staffing expenses ratio between POCB and GOCB.

Alternative Hypothesis (H₁):

$\mu_1 \neq \mu_2$ i.e. there is significance difference in average staff bonus to total staffing expenses between POCB and GOCB

Test Statistics under Null Hypothesis,

$$T_{calculated} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

T calculated $|T_{cal}| = 28.11$ (Source: APPENDIX 38)

Level of significance () = 5%

Degree of Freedom = $n_1 + n_2 - 2 = 8$

Critical value at 5% level of significance for 8 d. f. for two tailed test, $T_{tab} = 2.306$

Decision: Since $|T_{cal}| > T_{tab}$, Null Hypothesis is rejected. Therefore, there is significant difference in staff bonus to total staffing expenses ratio between POCBs and GOCBs

4.1.6.3 Weighted Average Interest Rate Spread

The banks provide interest on the deposit they accept from their customers and charge interest on the loan they grant but the rate of interest on deposit and loan is different. This differential amount is main source of income for the banks. In addition, this differential status is represented by weighted average interest rate spread.

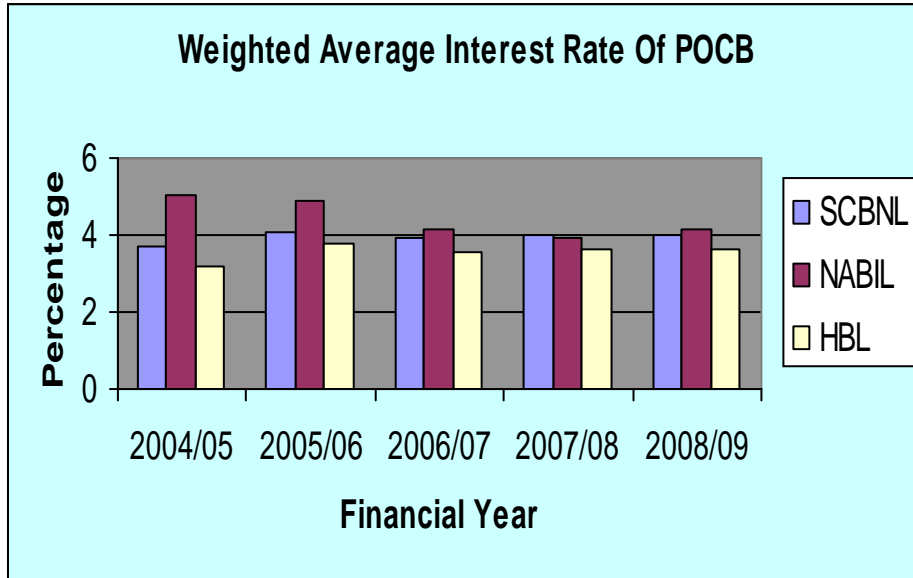
Table 30
Weighted average interest rate spread (percentage)

Year	POCB			GOCB		
	SCBNL	NABIL	HBL	ADBL	RBB	NBL
2004/05	3.7	5.01	3.19	6.73	4.91	4.4
2005/06	4.1	4.9	3.8	5.85	5.81	3.16
2006/07	3.95	4.15	3.57	5.88	4.55	4.51
2007/08	4.01	3.94	3.66	5.82	4.5	4.82
2008/09	3.98	4.16	3.66	5.75	4.45	6.45
Mean	3.95	4.43	3.58	6.01	4.84	4.67
S.D	0.15	0.49	0.23	0.41	0.57	1.18
C.V	3.79	10.99	6.46	6.79	11.76	25.28

Source: Annual Reports (2004/05 - 2008/09)

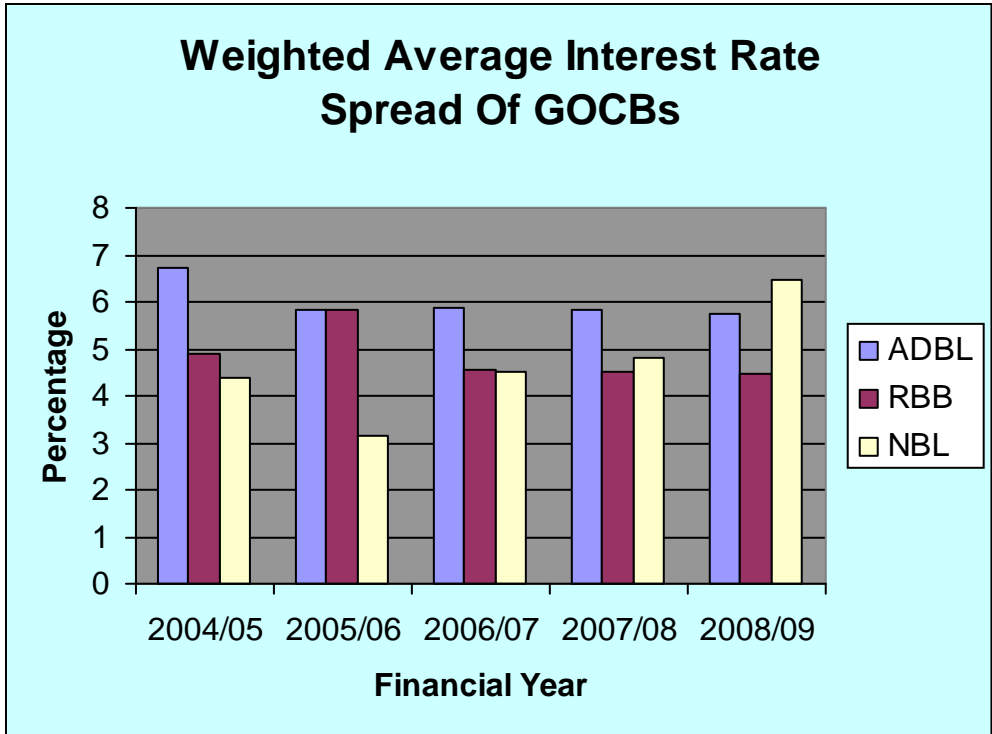
The above table shows the weighted average interest rate of the banks for the study period. ADBL (6.01%) has the highest ratio. Similarly, other banks SCBNL, NABIL, HBL, RBB and NBL have 3.95, 4.43, 3.58, 4.84 & 4.67 respectively. In general, GOCBs have more changeable ratio in comparison to POCBs. NBL has the highest i.e. 25.28% and SCBNL (3.79%) has the least. NABIL, HBL, ADBL & RBB have 10.99, 6.46, 6.79 & 11.76 percent of variation respectively.

(Figure 4.1.6.3 a)



The figure above shows that NABIL has the highest and most fluctuating average interest rate spread. SCBNL is in second position and HBL is in third.

(Figure 4.1.6.3 b)



In the government banks arena, mixed result is seen but the spread is up to 6.73 percent (ADBL's), which is very high. ADBL's high spread remains almost constant after the year 2005/06. So is the case of RBB after the year 2006/07. NBL has increasing interest spread after 2005/06 and reaches to highest in the year 2008/09.

Comparative analysis

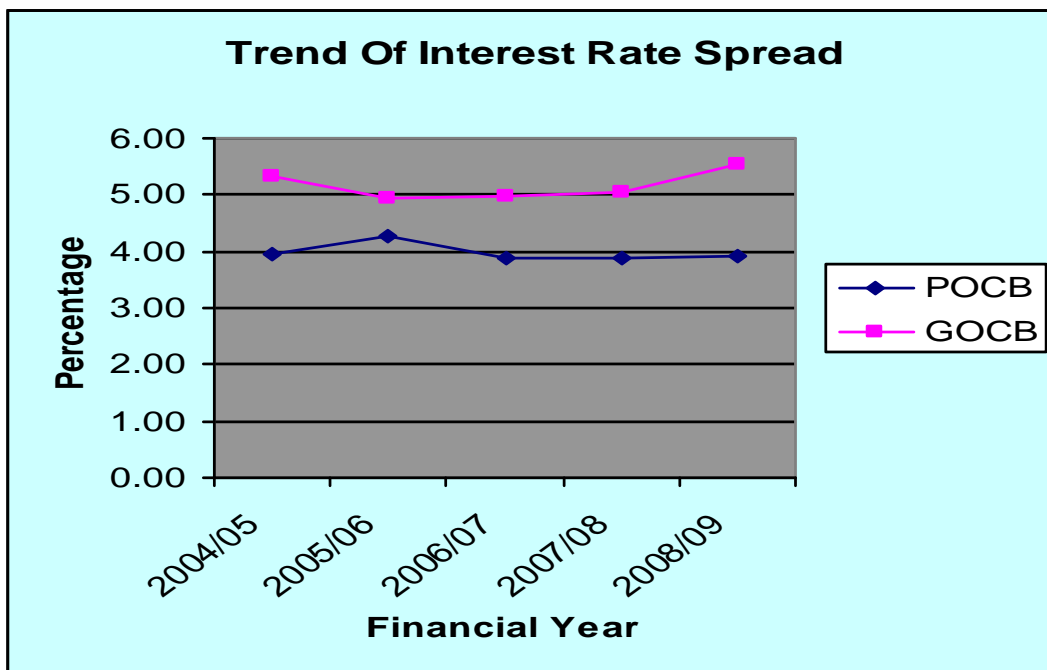
Table 31

Weighted average interest rate spread (percentage)		
Year	AVRG of POCB	AVRG of GOCB
2004/05	3.97	5.35
2005/06	4.27	4.94
2006/07	3.89	4.98
2007/08	3.87	5.05
2008/09	3.93	5.55
Mean	3.99	5.17
S.D	0.16	0.26
CV	4.06	5.11

The above comparison table shows that the average weighted average interest rate of POCB moves around the figure of 4 percent throughout the period of five years whereas the figure of GOCBs moves around 5 percent. It means the GOCBs have more difference on the rate of purchase and sell of fund than that of POCBs.

The diagram below makes it more obvious.

Line Graph



(Figure 4.1.6.3 c)

The figure clearly shows that government banks have more average differential interest rate always higher than 5 percent. So, it can be said that GOCBs have more earning margin from trading of fund. However, POCBs spread moves around 4 percent. This is very good for GOCBs in the sense that they are able to generate higher direct profit than that of POCBs.

Test of Hypothesis (Double Sample Mean T-Test)

Hypothesis-22

Null Hypothesis (H₀): $\mu_1 = \mu_2$ i.e. there is no significance difference in average interest rate spread between POCB and GOCB.

Alternative Hypothesis (H₁): $\mu_1 \neq \mu_2$ i.e. there is significance difference in average interest rate spread between POCB and GOCB

Test Statistics under Null Hypothesis,

$$T_{calculated} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

T calculated $|T_{cal}| = 8.56$ (Source: APPENDIX 48)

Level of significance () = 5%

Degree of Freedom = $n_1 + n_2 - 2 = 8$

Critical value at 5% level of significance for 8 d. f. for two tailed test, $T_{tab} = 2.306$

Decision: Since $|T_{cal}| > T_{tab}$, Null Hypothesis is rejected. Therefore, there is significant difference in interest rate spread between POCBs and GOCBs

4.1.6.4 Exchange Gain to Total Income

The liberation policy of government has allowed the commercial banks to determine the foreign exchange rate for them in addition they frequently has to deal with the transactions of foreign exchange. On this course, the fluctuation of exchange rate results in gain and loss. Favorable change gives gain but the opposite gives loss to the banks.

Table 32
Exchange gain to total income (%)

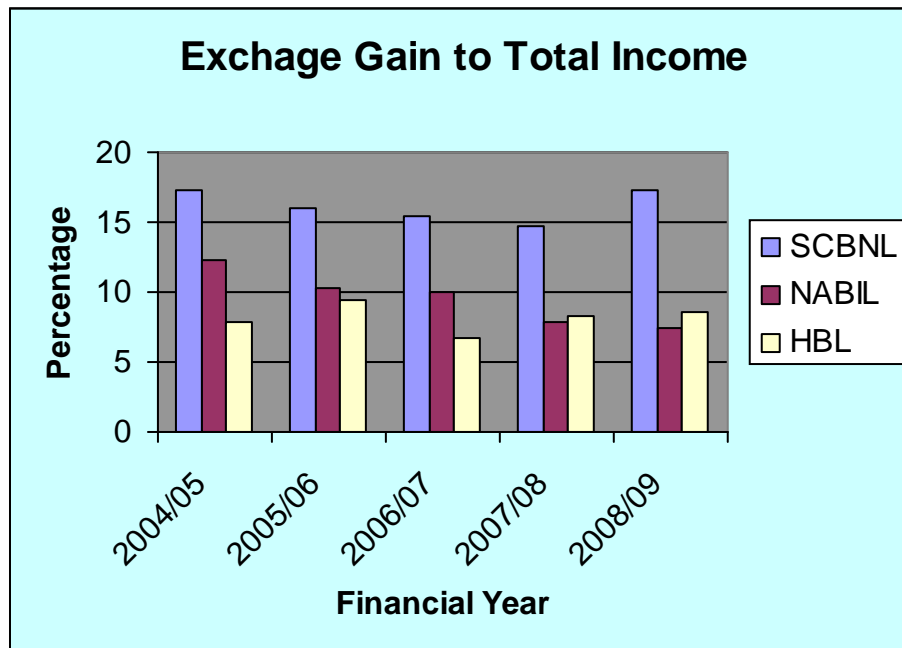
Year	POCB			GOCB		
	SCBNL	NABIL	HBL	ADBL	RBB	NBL
2004/05	17.32	12.24	7.8	0.03	0.39	0.03
2005/06	15.95	10.31	9.42	0.07	1.72	2.81
2006/07	15.44	10.02	6.71	-0.21	-0.32	-2
2007/08	14.75	7.81	8.27	0.15	-0.7	4.26

2008/09	17.25	7.47	8.51	0.33	0	2.26
Mean	16.14	9.57	8.14	0.07	0.22	1.47
S.D	1.13	1.96	0.99	0.20	0.93	2.47
C.V	6.98	20.49	12.21	265.09	426.96	167.51

Source: Annual Reports (2004/05 - 2008/09)

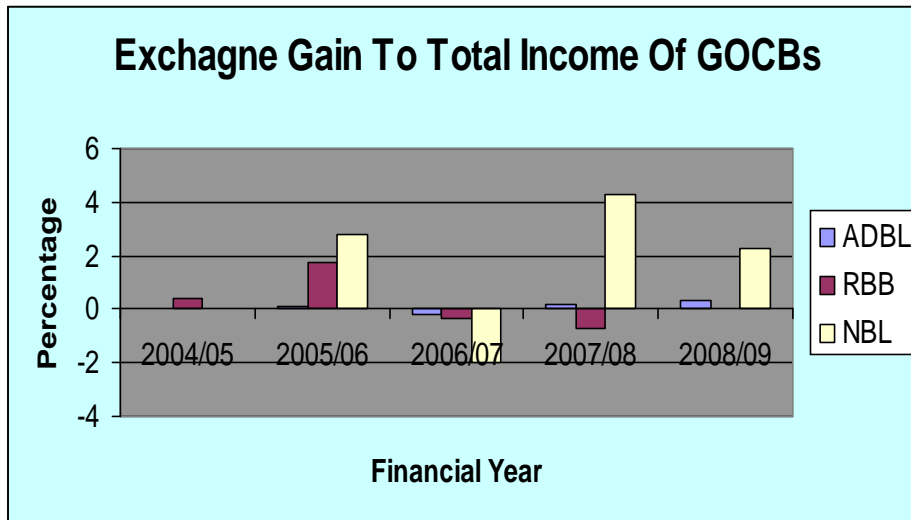
Table 32 shows that the average exchange gain of SCBNL, Nabil, HBL, NABIL, RBB and NBL is 16.14, 9.57, 8.14, 0.07, 0.22 & 1.47 respectively. It indicates that SCBNL is in highest position in foreign exchange gain whereas ADBL is in the lowest level due to far lower average in comparison with other banks. Besides the annual exchange gain of ADBL, RBB & NBL is very scattered. Therefore, on the basis of CV, it seems that SCBNL's ratio is most consistent. HBL is next to it whereas RBB has most fluctuating because it has lower CV among all banks. This is demonstrated in the diagram below:

(Figure 4.1.6.4(a))



The above diagram shows the exchange gain to total income of private banks. SCBNL's more than 15 percent of income come from exchange gain. Therefore, SCBNL is the most efficient in managing the foreign currency. NABIL is second but after the year, 2007/08 HBL is a head of NABIL in this matter.

(Figure 4.1.6.4(b))



Government banks position seems very poor in regard of exchange income. They have very fluctuating result from exchange gain. They gain very low percent sometimes suffer loss also. Their management in regard of foreign currency seems very poor.

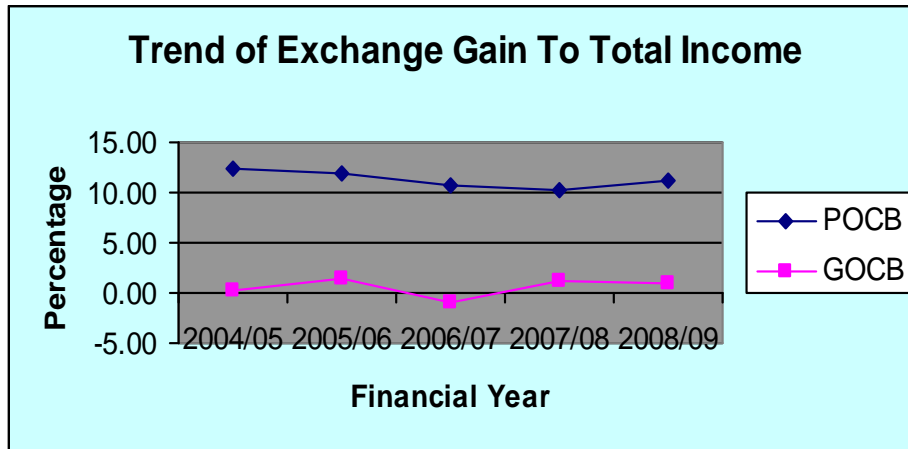
Comparative analysis

Table 33

Year	Exchange gain to total income (%)	
	AVRG of POCB	AVRG of GOCB
2004/05	12.45	0.15
2005/06	11.89	1.53
2006/07	10.72	-0.84
2007/08	10.28	1.24
2008/09	11.08	0.86
Mean	11.28	0.59
S.D	0.88	0.95
CV	7.81	162.03

The above table shows that the mean exchange gain of POCBs and GOCBs are 11.28 & 0.59 respectively. The POCBs seems very weak in terms of average gain and fluctuation of the rate both. GOCBs variation rate of the gain ratio is considerably higher than that of POCBs.

(Figure 4.1.6.4(c))



Above figure shows, that private banks average exchange gain is decreasing to the year 2007/08 and then increases for the year 2008/09 but ratio never lowers than 10 percent. However, government banks have very low and highly fluctuating ratio. They sometimes experience loss also.

Test of Hypothesis (Double Sample Mean T-Test)

Hypothesis-23

Null Hypothesis (H₀): $\mu_1 = \mu_2$ i.e. there is no significance difference in average exchange gain between POCB and GOCB.

Alternative Hypothesis (H₁): $\mu_1 \neq \mu_2$ i.e. there is significance difference in average exchange gain between POCB and GOCB

Test Statistics under Null Hypothesis,

$$T_{calculated} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

T calculated $|T_{cal}| = 18.42$ **(Source: APPENDIX 37)**

Level of significance () = 5%

Degree of Freedom = $n_1 + n_2 - 2 = 8$

Critical value at 5% level of significance for 8 d. f. for two tailed test, $T_{tab} = 2.306$

Decision: Since $|T_{cal}| > T_{tab}$, Null Hypothesis is rejected. Therefore, there is significant difference in exchange income between POCBs and GOCBs

4.1.7 Non-Performing Assets (NPA)

NPA is mostly considered as the banks efficiency indicator of assets utilization and efficient lending & recovery. At present practices, NPA is the major concern for measuring the banking performance.

Table 34
Non-performing Assets (NPA) (%)

Year	POCB			GOCB		
	SCBNL	NABIL	HBL	ADBL	RBB	NBL
2004/05	2.69	1.32	7.44	19.81	50.7	49.64
2005/06	2.13	1.38	6.6	20.59	37.09	18.18
2006/07	1.83	1.12	3.61	17.96	28.63	13.49
2007/08	0.92	0.74	2.36	10.77	21.43	12.38
2008/09	0.66	0.8	2.16	9.71	15.68	4.94
Mean	1.65	1.07	4.43	15.77	30.71	19.73
S.D	0.85	0.29	2.44	5.15	13.75	17.38
C.V	51.35	27.31	55.10	32.66	44.79	88.12

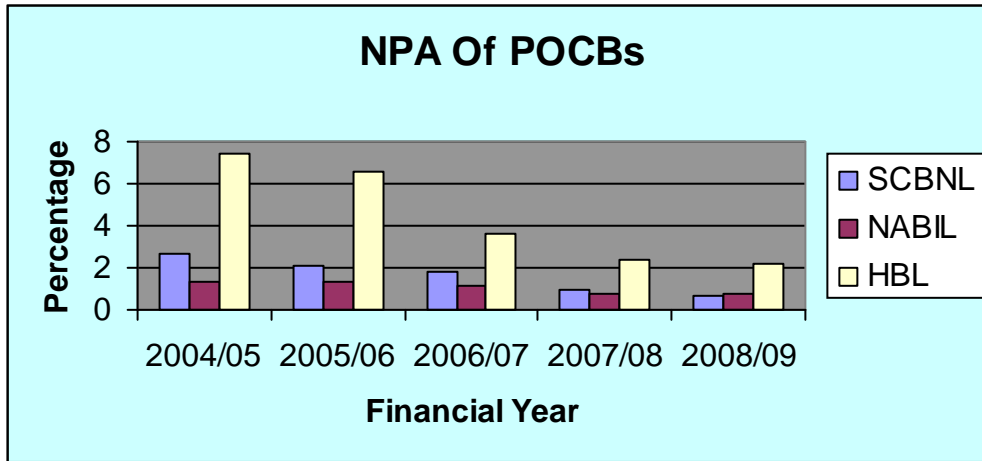
Source: Annual Reports (2004/05 - 2008/09)

Table 34 shows that the average NPA of NABIL & SCBNL is comparatively lower than other banks i.e. 1.07 % & 1.65 % respectively. This is very good signing it means, it is more efficient to utilize its assets and loan recovery. The average NPA of HBL, ADBL, RBB & NBL is 4.43, 15.77, 30.71 & 19.73 respectively. This shows that ADBL, RBB & NBL Have considerable level of NPA & HBL has moderate.

The CV of SCBNL, NABIL, HBL, ADBL, RBB & NBL are 51.35, 27.31, 55.10, 32.66, 44.79 & 88.13 percent respectively. On the basic of CV NPA ratio of NBL is most fluctuating due to highest CB. SCBNL and HBL have the similar level of consistency. However, CV of Nabil is most consistent because of lowest CV. Thought it is due to

harsh decline on the NPA ratio, which is good enough. Following Figure 4.1.7 a makes it more obvious.

(Figure 4.1.7.a)



Despite of decreasing NPA of all private banks, HBL has very high and SCBNL and NABIL have very low percent of NPA.

(Figure 4.1.7.b)

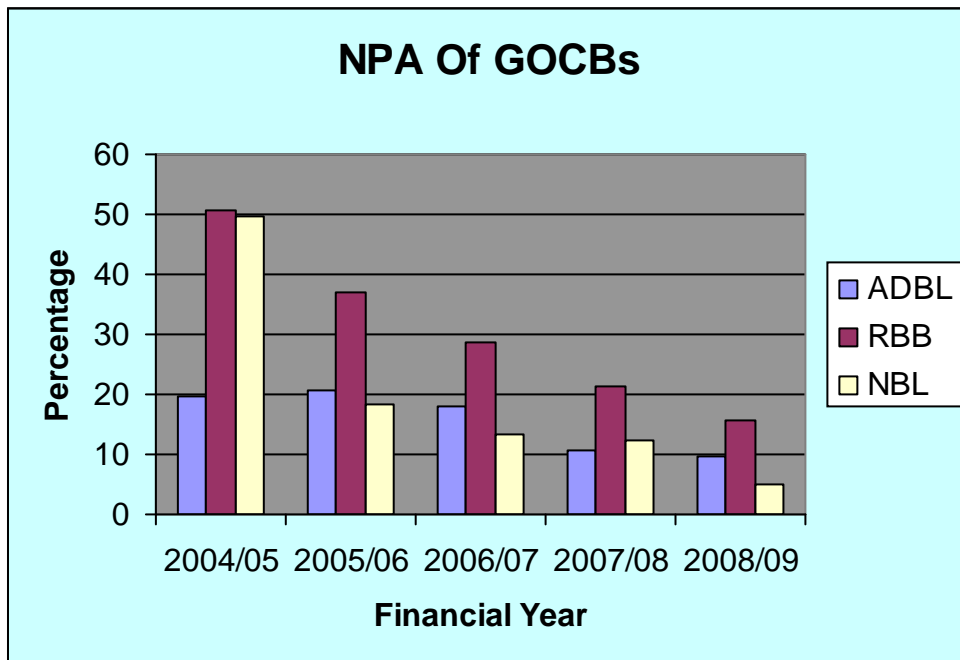


Figure 4.19 helps to concluded that NPA has decreasing nature for all banks. Off course, it is a good sign to the banks for the point of view on non-banking assets. The less is NPA, the more is banks efficiency to utilize assets & manage loans.

Comparative analysis

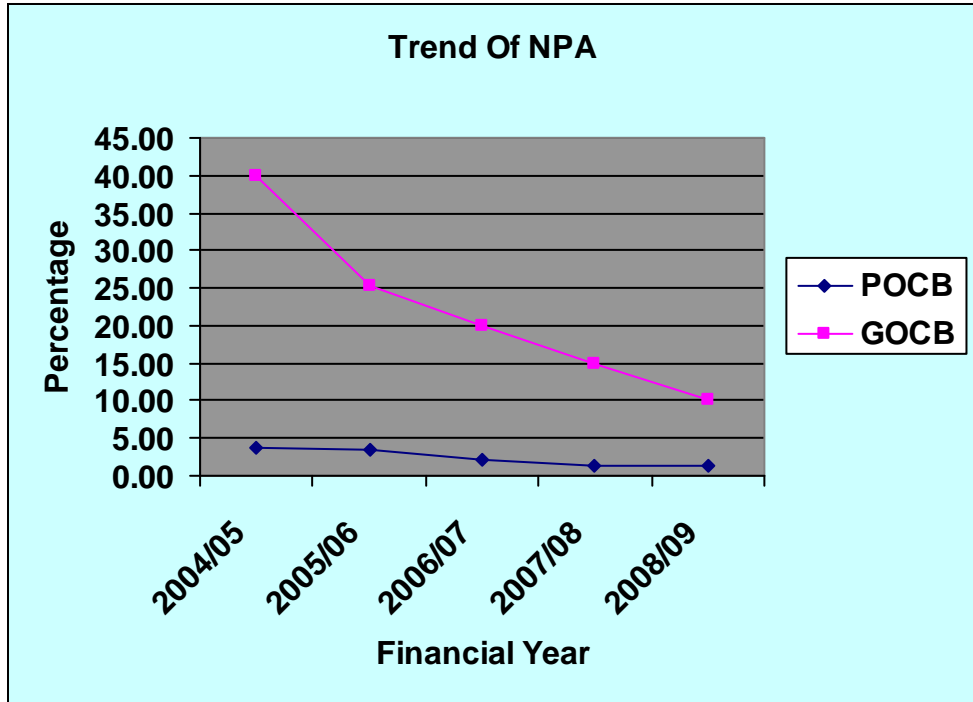
Table 35

Non-performing assets (NPA) (%)		
Year	AVRG of POCB	AVRG of GOCB
2004/05	3.82	40.05
2005/06	3.37	25.29
2006/07	2.19	20.03
2007/08	1.34	14.86
2008/09	1.21	10.11
Mean	2.38	22.07
S.D	1.18	11.54
CV	49.36	52.30

According to above table there is great variance in NPA between GOCBs and POCBs. The declining trend with average of 2.38 is the indication of very good improvement in credit utilization and collection of POCBs. Although the trend is declining, there is still a very high ratio of NPA of GOCBs i.e. 22.07%. No vast difference of CV indicates the similar level of fluctuation of the NPA of both groups.

Line graph

(Figure 4.1.7.c)



The above figure shows that GOCB has done huge improvement in NPA as it is sharply decreasing whereas POCB's NPA is slightly decreasing. This trend exists also because GOCB has very high NPA in the beginning but POCBs have already very low almost less than 4 percent.

Test of Hypothesis (Double Sample Mean T-Test)

Hypothesis-24

Null Hypothesis (Ho): $\mu_1 = \mu_2$ i.e. there is no significance difference in average NPA between POCB and GOCB.

Alternative Hypothesis (H1): $\mu_1 \neq \mu_2$ i.e. there is significance difference in average NPA between POCB and GOCB

Test Statistics under Null Hypothesis,

$$T \text{ calculated} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

T calculated $|T_{cal}| = 3.79$ (Source: APPENDIX 47)

Level of significance () = 5%

Degree of Freedom = $n_1 + n_2 - 2 = 8$

Critical value at 5% level of significance for 8 d. f. for two tailed test, $T_{tab}=2.306$

Decision: Since $|T_{cal}| > T_{tab}$, Null Hypothesis is rejected. Therefore, there is significant difference in NPA between POCBs and GOCBs

4.2. Statistical Tools

4.2.1 Correlation Analysis

Correlation analysis is the statistical tool that we can use to describe the degree of relationship between two or more variables. Its value are limited between the range (+1) & (-1). Thus if the variable were perfectly positively correlated the returns on these would move up together. In case of negatively correlated opposite would happen and risk can be culminated completely but perfect negative correlation almost never found in the real world. In this, research this tool in used to predict the total deposit, loan & advances, investments, NPA, net profit, MVPS, EPS & DPS. Under this study, Karl Pearson's coefficient of correlation is used.

4.2.1.1. Correlation between Total Deposit and Loan & Advances

Deposit is the man tool for mobilizing the banking performance. Likewise, loan & advances are the key part to mobilize the collected deposits. The coefficient of correlation between deposits and Loan & Advances measures the degree of relationship between these two variables. For this study, deposit is taken as independent variable (x) and loan & advances are dependent variables (y). The purpose of computing 'r' between these two variables is to justify whether deposit are significantly used as loans & advances in proper way or not. Here, the coefficient of determination (r^2) is used to find by what percent the relation is explained by dependent variable.

Correlation Analysis between Total Deposit and Loan & Advance (Table 36)

Characteristics	SCBNL	NABIL	HBL	ADBL	RBB	NBL
R	0.9312	0.9902	0.9731	1.0000	0.9993	0.4626
R ²	0.9650	0.9951	0.9865	1.0000	0.9997	0.6801
S.E.	0.0594	0.0087	0.0237	0.0000	0.0006	0.3515

P.E. (r)	0.0401	0.0059	0.0160	0.0000	0.0004	0.2371
6 P.E.	0.2406	0.0354	0.0960	0.0000	0.0025	1.4226
Test of Significance	Significant	Significant	Significant	Significant	Significant	Nothing

(Source: APPENDIX 12)

The Coefficient of Correlation for ADBL is exactly one, NABIL and RBB is almost equal to one and SCBNL and HBL is near to one, which indicates there is proportional relationship between the Deposit's and Loan & Advances for those banks. So all banks' deposits and loan & advances are nearly perfectly positively correlated except NBL as those banks' correlation coefficient is near to +1 and NBL's in only 0.6426. While testing of 6 PE (r) for all sample banks found to be "significant" as the r-value for all the banks are greater than 6PE (r) value but NBL's value of r is neither greater than 6 P.E. nor less than P.E. so nothing can be said about the significance of the relation between deposits and loan & advances for NBL. It shows that the loan & Advance depends upon the deposits and all sample banks are successful in mobilizing the deposit to loan & advances efficiently except NBL.

4.2.1.2 Correlation between Total Deposit & Investment

Investment is also a major part of banks to mobilize deposits. By investing in different profitable area like share & debentures government securities, banks maximize the profit. Therefore, it is important to study the relation between the deposit and investment. For this analysis, total deposit is taken as independent variable (x) and investment as dependent (y) variable. Generally, the correlation between total deposit and investment is positive as they move together.

Characteristics	SCBNL	NABIL	HBL	ADBL	RBB	NBL
R	0.9509	0.9469	-0.3313	1.0000	0.9162	-0.0620
R²	0.9751	0.9731		1.0000	0.9572	#NUM!
S.E.	0.0429	0.0462	0.3981	0.0000	0.0718	0.4455
P.E. (r)	0.0289	0.0312	0.2685	0.0000	0.0484	0.3005
6 P.E.	0.1735	0.1870	1.6112	0.0000	0.2905	1.8029
Test of Significance	Significant	Significant	Not Significant	Significant	Significant	Not Significant

(Source: APPENDIX 13)

Table 37 shows that the coefficient of correlation of SCBNL, NABIL, HBL, ADBL, RBB and NBL are 0.9509, 0.9469, -0.3313, 1, 0.9162 and -0.0620 respectively. Correlation for ADBL is perfectly positive which indicates that investment is totally dependant upon deposits. Changes on deposits cause equal and unidirectional change in investment. Correlation coefficient for the banks SCBNL, NABIL and RBB are near to +1 which explains that the variables are highly positively correlated and more than 95 percent change in investment is explained by deposit as value of r^2 is more than 95 percent for those banks. Moreover, the relation of deposits and investment for those banks is insignificant since $r > 6PE (r)$. However, the correlation coefficient for NBL is almost near to zero so the variables are almost uncorrelated so the investment does not depend on the deposit. In addition the relation is "insignificant" as $r < P.E.$ Lastly, the correlation of HBL says that the variable are poorly negatively correlated which is contradictory in case of the variables investment and deposits and further r is less than $P.E.$ which explains that the relation is insignificant.

4.2.1.3 Correlation between Non-Performing Assets (NPA)Ratio and Net Profit Margin

NPA consist those loans & advances, which are not performing well and likely to be turned as bad loan. It has direct impact on income and profitability. Therefore, here the degree of relation between NPA & Net profit ratio is studied by taking NPA as independent Variable (x) and net profit as dependent variable (y). Generally, the NPM and NPA move in opposite direction.

Correlation Analysis between Total NPA and Net Profit Margin (Table 38)

Characteristics	SCBNL	NABIL	HBL	ADBL	RBB	NBL
R	-0.4039	0.9845	-0.8540	-0.4722	0.0243	0.7707
R ²		0.9922			0.1557	0.8779
S.E.	0.3743	0.0138	0.1211	0.3475	0.4470	0.1816
P.E. (r)	0.2524	0.0093	0.0817	0.2344	0.3015	0.1225
6 P.E.	1.5146	0.0558	0.4899	1.4062	1.8088	0.7349
Test of Significance	Not Significant	Significant	Not Significant	Not Significant	Not Significant	Significant

(Source: APPENDIX 14)

As shown in the table 38, the correlation between NPA & Net profit is negative for the banks SCBNL, HBL & ADBL that shows that net profit margin is dependent on NPA but the dependency degree is different. The dependant level of SCBNL and ADBL is

moderate but high for HBL. Testing of significance shows the relation is "insignificant" as value of r is less than P.E. However, contradiction is seen in case of NABIL as variables are very highly positively correlated and the relation is significant. Almost, same situation is seen in case of NBL. To sum up, the relation between NPA & Net profit is negative & insignificant except some contradiction.

4.2.1.4 Correlation between EPS and MVPS

EPS is the profitability of a firm from the profit point of view of ordinary shareholders. It is the profit available to the equity shareholders on per share basis. On the other hand, MVPS measures per stock in the market on demand-supply basis. The profitability of firms (EPS) has impact on MVPS. This is analyzed as shown in Table 4.2.1.4, taking EPS as independent variable (x) and MVPS as dependent variable (y).

Correlation Analysis between Total EPS and MVPS (Table 39)

Characteristics	SCBNL	NABIL	HBL
R	-0.3636	0.0804	0.8298
R ²		0.2836	0.9110
S.E.	0.3881	0.4443	0.1392
P.E. (r)	0.2618	0.2997	0.0939
6 P.E.	1.5706	1.7982	0.5635
Significant Test	Not Significant	Not Significant	Significant

(Source: APPENDIX 15)

The coefficient of correlation of all HBL is strong i.e. 0.8299. This indicates proportional relationship between EPS & MVPS. However, coefficient of SCBNL and NABIL is negative and near zero respectively and the testing of significance empirically proves this relationship is not significant. Therefore, the market price of the SCBNL and NABIL changes due to factors other than the earning made by them.

4.2.1.5 Correlation between DPS and MVPS

Dividend is the earning or profit distributed to shareholders by a company. It may be in cash, shares & securities or a combination of these. How much the bank is paying or distributing to its shareholder have some effect on its market price. Taking DPS as

independent variable (X) and MPS as dependent variable (Y), the correlation coefficient has been examined as in Table 40 below:

Correlation Analysis between Total DPS and MVPS (Table 40)

Characteristics	SCBNL	NABIL	HBL
R	-0.1499	0.6595	0.9744
R²		0.8121	0.9871
S.E.	0.4372	0.2527	0.0226
P.E. (r)	0.2949	0.1705	0.0152
6 P.E.	1.7692	1.0227	0.0915
Significant Test	Not Significant	Nothing	Significant

(Source: APPENDIX 16)

The coefficient of correlation is strongly positive i.e. near to + 1 for HBL. This indicates positive relation between DPS & MPS. EPS and MVPS are moderately positively correlated for NABIL and negatively poorly for SCBNL. The case of SCBNL seems contradictory one. The empirical test of significance of correlation with the help of probable error shows that the relation is significant for HBL, unexplainable for NBIL whereas, it is insignificant for SCBNL.

4.2.2 Regression / Trend Analysis

The regression is used to determine the statistical relationship between two or more variable and to make predication of one variable based on the others. The regression analysis is either simple regression or multiple regressions. When we take only one independent variable and predict the value of the dependent variable through the appropriate regression line, the analysis is known as Simple Regression Analysis. If the analysis is performed by the use of two of more independent variable, it is Multiple Regression Analysis. The statistical model of under summary has been extracted from computer-based EXCEL program. The availability of the data has been taken for the recent five years.

4.2.2.1 Simple Regression Analysis of Net Profit on Total Deposit

The focal point of this analysis is to determine the relation between net profit and total deposit. Obviously, it seems that, as total deposit increases, the net profit of the bank

needs to increase. Therefore, in this analysis, net profit is considered as dependent variable and total deposit as independent variable as shown in the table below:

(Table 41)

Simple Regression Analysis of Net Profit on Total Deposits (i.e. $Y = a + bX$)							
S.N.	Characteristics	SCBNL	NABIL	HBL	ADBL	RBB	NBL
1	Regression Constant (a)	(19,962,539)	230,012,564	(697,655,880)	(4,077,180,137)	(9,197,319,479)	4,914,127,951
2	Regression Coefficient (b)	0.0289	0.0194	0.0415	0.1494	37.6810	(0.1009)
3	Standard Error (S.E.)	0.0012	0.0041	0.0062	0.0326	6.7903	0.0925
4	Coefficient of Determination (R^2)	0.9952	0.8813	0.9378	0.8751	0.9112	0.2837
5	F Statistics (Calculated)	625.0859	22.2641	45.2692	21.0255	30.7939	1.1883
6	T Statistics (Calculated)	25.0017	4.7185	6.7282	4.5854	5.5492	(1.0901)
7	F Statistics (Tabulated)	10.1280	10.1280	10.1280	10.1280	10.1280	10.1280
8	T Statistics (Tabulated)	3.1824	3.1824	3.1824	3.1824	3.1824	3.1824
9	Significance of relation (F)	Significant	Significant	Significant	Significant	Significant	In Significant
10	Significance of relation (T)	Significant	Significant	Significant	Significant	Significant	In Significant
11	Probability of Higher F Value	0.0001	0.0180	0.0067	0.0195	0.0115	0.3554

Source: APPENDIX 17

Note: * Independent Variable = Total Deposit (X)

* Dependent Variable = Net Profit (Y)

* T-test & F-test is taken at 5 % level of significance

Table 41 exhibits the simple regression or trend line equation i.e. $Y = a + bX$ of net profit based on the total deposit. The negative constant (a) value of all banks, except NABIL & NBL shows that, in case of the total deposit being zero, net loss would occur. However, NABIL and NBL would gain if deposit were zero.

The regression coefficient (b) of net profit for all the sampled banks are positive except NBL (i.e.-0.1009), which determines that the increase in total deposit ultimately increases net profit for each sampled bank but NBL's profit and deposit move in opposite direction as deposit increases deposit decreases. The coefficient is very high in case of RBB i.e.

37.6810, which indicates that, one rupee increase in total deposit leads to an average about 37.6810 rupees increase in net profit; holding other variables constant. The slope of regression line for other banks SCBNL, NABIL, HBL and ADBL is 0.0289, 0.0194, 0.0415 and 0.1494 respectively. The standard error of estimate takes into account the dispersion or variation in actual and estimated dependent value of regression equation or line.

The coefficient of determination (R²) is very high of all banks except NBL. SCBNL, NABIL, HBL, ADBL, RBB and NBL have respective coefficient of determination of 0.9952, 0.8813, 0.9378, 0.8751, 0.9112 and 0.2837. Coefficient of determination indicates the percentage of variation on net profit explained by total deposit. The variation on net profit of all banks is explained, to high extent, by total deposit except NBL.

The test of 't' static value compared with tabulated value at 5% level of significance & 3 degree of freedom (d.f.) brings to the conclusion of significant relationship. Here five banks'(SCBNL, NABIL, HBL, ADBL, RBB) T-value (calculated) > T-value (tabulated). This condition rejects the null hypothesis of no relationship between two variables. Alternative hypothesis is accepted which explains that there is high correlation between net profit and total deposit for the banks. Moreover, the relationship is significant. However, the correlation between net profit and total deposit for NBL is insignificant. Calculation and comparison of F- statistics draws the same relation for linearity of regression line as T-statistics.

The probability of higher F value is very low in case of banks except NBL. A low value ensures the more usefulness of independent variable for predicting dependant variable.

4.2.2.2 Simple Regression Analysis of Market Value per Share (MVPS) on Earning Per Share (EPS)

Table 42

Simple Regression Analysis of Market Value Per Share on Earning Per Share (i.e. $Y = a + bX$)				
S.N.	Characteristics	SCBNL	NABIL	HBL
1	Regression Constant (a)	8648	2,652	(2,196)
2	Regression Coefficient (b)	-25.2358	9.7261	63.1988
3	Standard Error (S.E.)	37.3249	69.6051	24.5346

4	Coefficient of Determination (R²)	0.1322	0.0065	0.6886
5	F Statistics (Calculated)	0.4571	0.0195	6.6353
6	T Statistics (Calculated)	(0.6761)	0.1397	2.5759
7	F Statistics (Tabulated)	10.1280	10.1280	10.1280
8	T Statistics (Tabulated)	3.1824	3.1824	3.1824
9	Significance of relation (F)	In Significant	In Significant	In Significant
10	Significance of relation (T)	In Significant	In Significant	In Significant
11	Probability of Higher F Value	0.5474	0.8977	0.0821

(Source: APPENDIX 18)

- Note:**
- * Independent Variable = Total Deposit (X)
 - * Dependent Variable = Net Profit (Y)
 - * T-test & F-test is taken at 5 % level of significance

Table 42 depicts the simple regression equation $Y = a + bX$ of MVPS based on EPS. Here, MVPS is dependent variable and EPS is independent variable. The value of constant (a) for SCBNL, NABIL and HBL is 8648, 2652 and -2196 respectively, which signifies that the respective MVPS would be 8648, 2652 and -2196 for the banks if EPS is equal to zero. The regression coefficient (b) of SCBNL, NABIL and HBL is -25.2358, 9.7261 and 63.1988 respectively. These coefficients show by how much percentage the value of MVPS is changed given that one percent change in the value of EPS. The change impact is huge in SCBNL's and HBL's stock price. As the coefficient for SCBNL is negative increase in EPS would decrease the value of MVPS. Here, one percent EPS increase would 25.2358 percent decrease in value of SCBNL's MVPS. Besides, NABIL's & HBL's one percent increase in EPS would increase MVPS by 9.7261 and 63.1988 respectively.

The coefficient of determination (R²) of SCBNL, NABIL and HBL is 0.1322, 0.0065 and 0.6886 respectively. Thus, the variations on MVPS are explained by EPS to a very low extent for SCBNL and NABIL but moderate for HBL. The test of 't' static and f-statistics for linearity of regression line at 5% level of significance with 3 d.f. gives conclusion that there is not significant relationship between MVPS & EPS for all banks. Here null

hypothesis of no relationship is accepted for all banks as calculated t and f value is lower than tabulated value.

4.2.2.3 Multiple Regression Analysis of Net Profit(Y) on Total Deposit(X1), Total Investment(X2) and Loan & Advances(X3)

(Table 43)

Multiple Regression Analysis of Net Profit on Total Deposit, Total Investment and Loan & Advances (i.e. $Y = a + b_1X_1 + b_2X_2 + b_3X_3$)

S.N.	Banks	Constant (a)	Regression Coefficient			S.E. of Estimate	R	R ²	F - value (calculated)	Sig. F
			b ₁	b ₂	b ₃					
1	SCBNL	-7793463.74 {10497790.97} [-0.7424]	0.029 {0.0051} [5.772]	0.0046 {0.005} [0.9214]	-0.0078 {0.0062} [-1.2651]	4829437	0.9999	0.9998	1968.83	0.0166
2	NABIL	275802710.79 {111638812.46} [2.4705]	-0.0398 {0.0478} [-0.8339]	0.0266 {0.0541} [0.491]	0.0705 {0.0494} [1.4270]	71782200	0.9823	0.9649	9.1569	0.2372
3	HBL	-237112589.39 {418396227.64} [-0.5667]	-0.0227 {0.0499} [-0.4559]	0.0282 {0.0315} [0.8965]	0.0604 {0.0472} [1.2806]	50811419	0.9889	0.9779	14.7391	0.1886
4	ADBL	-6627592612 {2093757321} [-3.1654]	0.3543 {0.1089} [3.2545]	-0.0776 {0.1575} [-0.4929]	-0.1330 {0.0603} [-2.2067]	139720798	0.9896	0.9793	15.8013	0.1824
5	RBB	-1255852845 {2563845497} [-0.4898]	0.1135 {0.1532} [0.7409]	0.0283 {0.0511} [0.5539]	-0.1879 {0.2898} [-0.6485]	106017975	0.9783	0.9571	7.4414	0.2617
6	NBL	9056012349 {2018516709} [4.4865]	-0.1554 {0.0338} [-4.6007]	-0.2461 {0.1090} [-2.2571]	0.1238 {0.0470} [2.6344]	231424644	0.9883	0.9768	14.0087	0.1934

(Source: APPENDIX 19)

Note:

- * Independent Variables = Total Deposit (X₁), Total Investment (X₂) and Loan & Advances (X₃)
- * Dependent Variable = Net Profit (Y)
- * Values in { } represent Standard Error (S.E.) of coefficients.
- * Values in [] represent Calculated t -values.

Above multiple regression equation $Y = a + b_1X_1 + b_2X_2 + b_3X_3$ comprises of net profit as dependent variable and total deposit, total investment and loan & advances as independent variables; with their beta coefficient b₁, b₂ & b₃ and the constant 'a'. Deposit, investment and loan & advances normally have positive bearings on the net profit. As per the table, the constants of SCBNL, HBL, ADBL and RBB are negative whereas that of NABIL and NBL are positive. This indicates the position of net profit in absence of aforementioned independent variables. The regression coefficients of total

deposit are positive for SCBNL, ADBL and RBB and negative for NABIL, HBL and NBL. Beta coefficients of investment for SCBNL NABIL, HBL and RBB are positive whereas negative for rest banks. The loan & advances beta coefficient of SCBNL, ADBL and RBB are negative and it is positive for rest banks. These beta coefficients shows by how much net profit fluctuates, when the corresponding independent variable increase or decrease by one unit.

The values in { } represents S.E. of coefficient and the values in [] represents calculated t-values. The tabulated t-value at 5% level of significance with one d.f. is 12.7062. The relationship between net profit and all independent variable is insignificant due to t (calculated) < t (tabulated). The F-value at 5% significance with (3,1) d.f. is 215.7073. Thus, comparing with F-calculated value, the relation of dependent variable with independent variable simultaneously is strongly significant for SCBNL as F (calculated) > F (Tabulated) but it is insignificant for all other banks being acceptance of null hypothesis of no relationship between dependant and independent variable due to calculated f value less than tabulated f value.

4.2.2.4 Multiple Regression Analysis of MVPS on EPS & DPS

Table 44
Multiple Regression Analysis of MVPS on EPS & DPS (ie. $Y = a + b_1X_1 + b_2X_2$)

S.N.	Banks	Constant (a)	Regression Coefficient		S.E. of Estimate e	R	R ²	F – value (calculated)	Sig. F
			b ₁	b ₂					
1	SCBN L	4531.34 {10078.77 } [0.4496]	-63.59 {84.75} [-0.7503]	78.25 {149.16} [0.5246]	2287.93	0.487 0	0.237 2	0.3109	0.762 8
2	NABIL	7307.63 {5420.71} [1.3481]	-96.83 {61.41} [-1.5767]	81.78 {33.70} [2.4265]	1262.12	0.864 9	0.748 1	2.97	0.251 9
3	HBL	-1518.34 {738.32} [-2.0565]	-3.288 {23.8492 6} [-0.1379]	82.2653 {25.4652 } [3.2305]	146.052	0.974 6	0.949 9	18.9708	0.050 1

(Source: APPENDIX 20)

Note * Independent Variables = EPS (X₁) & DPS (X₂)

:

- * Dependent Variable = MVPS (Y)
- * Values in { } represent Standard Error (S.E.) of coefficients.
- * Values in [] represent Calculated t –values.

In above regression/ trend line equation $Y = a + b_1X_1 + b_2X_2$; MVPS is considered as dependent variable (Y) and EPS & DPS are independent variables (X1, X2); 'a' is constant and b1 & b2 are regression coefficient of variables X1 & X2 respectively. When EPS & DPS fluctuates, it directly affects MVPS. As per the table, constants for SCBNL, NABIL and HBL are 4531.34, 7307.63 and -1518.34 respectively. They show the value of MVPS when EPS & DPS both became zero. The beta coefficients of EPS are negative for all banks. It means, EPS movement is affecting MVPS fluctuation in opposite direction. It is highest for NABIL i.e. -96.83 for NABIL and low for HBL i.e. -3.288. The beta coefficient of DPS is positive for all banks indicating direct relationship of MVPS with DPS.

Values in { } represents Standard Error (S.E.) of coefficient and values in [] represents calculated t-value. The tabulated t-value at 5% level of significance with one d.f. is 12.7062. The relationship of EPS with MVPS is insignificant for all banks as t (calculated) < t (tabulated). The relation between DPS & MVPS is also insignificant for all banks. Besides, the F-value at 5% significance with (3,1) d.f. is 215.7073. Considering the calculated F-value, it can be concluded that there is insignificant relationship between dependent variables & independent variables simultaneously. As such, the regression equation does not provide significant explanation of variation in stock price.

4.3 Major Findings

The main findings of the study are carried out based on the analysis of financial data of the selected banks; which are as follows:

1. Liquidity Analysis

- i. The analysis of liquidity (CRR) indicates better liquidity managed by POGBs. However, NABIL and HBL have not exactly touched the NRB directive level of 6.5 percent but GOGBs have maintained abundant liquidity. The high liquidity of GOGBs enables them to meet short-term liabilities easily but on the other hand, high liquidity may affect the profitability. Two way anova shows that there is no

significant difference in CRR among banks and years for POCBs. There is significant different in CRR among government banks but no significant difference among five years. The t- test result shows that there is significant different in average CRR between private and government banks.

2. Profitability Analysis

- i. The analysis of Net Profit Margin indicates satisfactory in comparison over the five years period to each other among all banks except ADBL. Comparing POCBs and GOCBs, GOCBs have weak performance due to very low and most fluctuating margin of ADBL. NBL also has comparatively low margin. Two-way ANOVA shows no significant different in NPM among the banks and years for POCBs but in case of GOCBs NPM difference is significant among the banks and no significant difference among years. Similarly, t-test shows that the difference is significant between private and government banks.
- ii. The analysis of ROA indicates POCBs have higher ratio than GOCBs i.e. POCBs are effectively using the total fund supplied by the owners and creditors than GOCBs. The position of HBL and NBL seems weaker than other banks in their respective block. Two-way ANOVA shows that private banks have significantly different ROA among themselves but difference is insignificant among years. Similarly, both among banks and among years the difference in ROA is not significant i.e. same ROA for government banks. T-test concludes no significant difference between POCBs and GOCBs.
- iii. Analyzing Interest Income on Loan and Advances indicates that GOCBs side is heavier than POCBs. Despite of slight higher variations, GOCBs earned high rate of interest income on loan and advances over the study period. It means they had high utilization of loan and advances. Among all, HBL is earning highest & more stable. HBL in POCBs block and NBL in GOCBs block have the strongest position. T-test results significant difference in income between POCBs and GOCBs.
- iv. The analysis of Operating ratio indicates POCBs are more successful to minimize the operating expenses. GOCBs position is weaker because of very high ratio of ADBL and NBL. T-test shows significant different result.

3. Activity Ratio Analysis

i. The analysis of Credit Deposit Ratio indicates GOCBs have higher value over the study period and in average too. It means utilization of deposit contributes larger part of net profit for GOCBs than for POCBs. It also means other sources of income are more for private banks than government banks. SCBNL has the least and ADBL has the most efficient in using the deposit for income generation than other banks in their respective blocks. CD ratio is significantly different between POCBs and GOCBs according to T-test result.

4. Solvency Analysis

- i. The analysis of Capital Adequacy Ratio indicates average ratio of POCBs near to NRB directives requirements but GOCBs are extreme danger position, as their average is negative according to core capital concept. All the banks had lower capital adequacy ratio in terms of core capital except SCBNL. SCBNL is successful on maintaining capital adequacy ratio as per the directives of central bank. However, Nabil and HBL have not significant differences as per the NRB directives of 6% in core concept and total 10% in total concept. In addition, all private banks have met NRB requirement in total capital concept. Therefore, they are safe from the solvency point of view. Government banks have extremely violated the NRB rule. RBB and NBL has negative ratio as they have negative shareholder equity. ADBL has positive but negligible ratio. Off course, it is inappropriate and government banks are very poor from the viewpoint of solvency. The POCBs have met NRB directives in total capital. T-test shows significant difference in capital adequacy in core and total concept but now significant difference in supplementary capital concept between private and government blocks.
- ii. The analysis of Interest Expenses to Total Deposit Ratio indicates there is not much difference in the ratio between POCBs and GOCBs. However, POCBs are more able to obtain cheaper fund than GOCBs. Among private banks, SCBNL and RBB among private banks have ability to generate cheaper fund than other banks. Rest have moderate ratio. Among all, ADBL has comparatively higher ratio. It means, ADBL use most costly fund.

5. Market Value Analysis

- i. The analysis of Earning per Share (EPS) indicates that despite of lower consistency, GOCBs have extremely higher rupees per share earning than POCBs.

They hold first and second position respectively. Analyzing all banks, ADBL has low but RBB and NBL have first and second highest EPS. SCBNL and NABIL have first and second highest profitability on per share basis among private banks. EPS is significantly different between POCBs and GOCBs as per T-test.

- ii. The analysis of P/E ratio indicates all banks SCBNL, Nabil and HBL have very competitive value. This shows they all had better P/E ratio. Among them, SCBNL has the highest and HBL has the lowest. SCBNL and NABIL have P/E ratio higher than yearly average of 31.33. Two-way anova shows no significant difference in P/E among banks but the difference is significant among the years.
- iii. The analysis of Cash Dividend on Share Capital indicates SCBNL has distinctly higher value and it has been providing greater cash dividend on share capital to its shareholders. Nabil has moderate value whereas HBL has the least value.
- iv. The analysis of Dividend including bonus of Share Capital indicates that SCBNL had been providing over the hundred percent dividends including bonus on share capital. NABIL provides near hundred percent total bonuses whereas HBL had least on an average. Total dividend on share capital is significantly different among private banks but same among the years.

6. Other Relevant Ratios

- i. The analysis of Staff Expenses to Total Operating Ratio indicates GOCBs have contributed more staff expenses in total operating expenses than POCBs in average. This may be due to the overstaffing in the GOCBs. In addition, POCBs staff expenses are almost certain as they have very low CV. Among POCBs SCBNL has the least and RBB among GOCB has the least staff expenses as percentage of total operating expenses. T-test shows significant different staff expenses to total operating ratio between private and government banks.
- ii. The analysis of Staff Bonus to Total Staff Expenses indicates POCBs provide considerably higher bonus to staff than GOCBs. The high bonus ratio of POCBs implies high motivation status of POCBs employees. NABIL, among POCBs and RBB, among GOCBs provides the highest bonus to employees. The difference between POCBs and GOCBs in this ratio is significant.
- iii. Analyzing Weighted Average Interest Rate Spread, the found is that GOCBs have more spread rate than POCBs. It means the differential rate between interest charged on loan and interest paid on deposit is higher for GOCBs than POCBs. It

shows government banks earn high direct income than private banks. Null hypothesis of no significant difference between POCBs and GOCBs is rejected here.

- iv. The analysis of Exchange Income/Gain indicates POCBs have very higher fluctuation gain than GOCBs with very high consistency. SCBNL has higher average value than other banks. Similarly, NBL has the highest value among GOCBs. The GOCBs have negligible gain from exchange income. T-test rejects the hypothesis that there is no significant difference in exchange gain ratio between POCBs and GOCBs.

7. Non-Performing Assets (NPA)

- i. The analysis of NPA indicates improving performance of government banks. GOCBs NPA is decreasing considerably over the study period. However, they still have an average of 22.07 percent NPA that is very higher than that of POCBs and that implies bad lending and recovery policy. POCBs have very low and more consistent NPA, which indicates their sound lending & recovery policy. Among POCBs, NABIL is the best and ADBL is best among GOCBs. T-test shows that the difference in NPA between private and government banks is significant.

8. Correlation Analysis

- i. The correlation analysis between Total Deposit and Loan & Advances results in a strongly significant relationship between the variables for all banks.
- ii. The correlation between Total Deposit and Investment comes out varied outcome. It is significant to SCBNL, NABIL, ADBL and RBB whereas HBL & NBL have insignificant relationships.
- iii. The correlation between NPA & Net Profit is insignificant for all banks except NABIL and NBL. It validates the negative impact of NPA on the bank's profitability.
- iv. The correlation analysis of EPS & MVPS comes out significant relationship for HBL and insignificant for SCBNL and NABIL. It shows, HBL's has direct and other two banks have negative reflection on their stock price.
- v. The correlation between DPS & MVPS is significant to HBL insignificant to SCBNL and nothing can be said about NABIL..

9. Regression / Trend Analysis

- i. The simple regression analysis of Net Profit on Total Deposit results positive intercept (except NBL). The regression constant is positive for NABIL and NBL and negative for all rest banks. The F and T test result show that total deposits have significant and direct bearings on net profit except for NBL.
- ii. Simple regression analysis of MVPS on EPS gives positive beta coefficient to NABIL and HBL but negative to SCBNL. EPS has indirect and insignificant bearings on the MVPS for the analyzed private banks.
- iii. The multiple regression analysis of Net Profit on Total Deposit, Total Investment and Loan & Advance shows mixed results. The F test gives strong significant relation for simultaneous effect of all independent variable to dependant variable (net profit) for SCBNL but insignificant for all rest banks. T values also give insignificant relation for all banks for all variables. It means the variation in net profit is caused by joint effect of the three variables total deposit, total investment & loan and advances for SCBNL only. Other banks do not have such relationship.
- iv. The multiple regression analysis of MVPS on EPS & DPS comes out positive EPS beta coefficient and negative DPS beta coefficient for all sampled private banks. The t-values & F test gives insignificant relation among MVPS & EPS and MVPS & DPS. As such, the variation in EPS and DPS does not provide significant explanation of variation in stock price.

**Following Table helps better to understand the relative position of POCBs and GOCBs
Overall Comparative Financial Performance between POCBs and GOCBs**

(Table 45)

Criteria	Private Commercial Banks (POCB)	Government Commercial Banks (GOCB)	Double sample Mean T-Test (Result)(difference between sample mean)
Liquidity (CRR)	Appropriate, Have met NRB directives	Excess liquidity may affect profitability	Significant
Net Profit Margin	Higher, Consistent ,Competitive	Comparatively lower and inconsistent	Significant
Return On Assets	Higher and more consistent	Lower and more variable	Not Significant
Interest income on Loan and Advances	Lower with less variability	Higher with higher variability	Significant
Operating Ratio	Lower with more consistency	Higher with more variability	Significant
Credit Deposit Ratio	Lower, less utilization of deposit	Higher, Efficient utilization of Deposit	Significant
Capital Adequacy(Core)	Appropriate	Negative, inappropriate, lower solvency	Significant
Capital Adequacy(Supplementary)	Higher	Lower	Not significant

Capital Adequacy(Total)	Appropriate, Have met NRB directives	Negative, Very weak solvency, Hard to safeguard depositors' interest	Significant
Interest Expenses to Total Deposit	Lower, able to get cheaper fund	Higher, use of comparatively expensive fund	Not significant
Earning Per Share	Low	Very High but higher variability	Significant
PE ratio	Average of 31.33 times, Two-way anova analysis-no significant difference among three banks but significant different in five years.	-	
Cash Dividend on Share Capital	Average of Rs. 60.24	-	
Total Dividend on Share Capital	Average of Rs 86.34,two-way ANOVA analysis- significant difference among banks but no significant difference among the years.	-	
Staff Expenses to Total Operating	Lower	Higher	Significant
Staff Bonus to Total Staff Expenses	Very high, Strong base for motivation	Very low, Employee may be demotivated	Significant
Weighted Average Interest Rate Spread	Lower	Higher	Significant
Exchange Gain to Total Income	Considerable more than eleven percent	Negligible, Only loss is prevented	Significant
Non Performing Assets	Lower, Decreasing, HBL has highest	Drastically Improving , Still very high	Significant
Correlation between Total Deposit and Loan & Advances	Highly Positively Correlated, Significant relation	Highly Positively Correlated, Significant relation except NBL	
Correlation Between Total Deposit and Investment	Highly Positively correlated, significant relation except HBL	Highly Positively Correlated, Significant relation except NBL	
Correlation between NPA and Net Profit	High Positive significant-NABIL High Negative insignificant-HBL , Low negative insignificant-SCBNL	Moderate negative insignificant-ADBL, very low positive insignificant-RBB, High Positive Significant-NBL	
Correlation Between EPS and MVPS	Low Negative Insignificant-SCBNL, Negligible Positive Insignificant-NABIL, High Positive Significant-HBL	-	
Correlation Between DPS and MVPS	Low Negative Insignificant-SCBNL, Moderate Positive Nothing-NABIL, High Positive Significant-HBL	-	
Regression of Net Profit on Total Deposit	Positive beta, negative constant except NABIL, High Positive Correlation, Significant Relation	Positive Beta, Negative constant, High Positive Correlation, Significant Relation EXCEPT NBL	
Regression of MVPS on EPS	Positive constant except HBL, Positive beta except SCBNL, Low positive correlation except HBL, insignificant relation to all	-	
Multiple Regression of Net Profit on Total Deposit, Total Investment and Loan & Advances	Mixed Results- Negative Constant except NABIL, Negative deposit beta except SCBNL, Positive Investment Beta, Positive Loan and Advances beta except SCBNL, High Positive correlation, Insignificant relation except SCBNL	Mixed Results- Negative Constant and Positive deposit beta except NBL, Negative Investment beta except RBB, Negative Loan & advances beta except NBL, High Positive Correlation, Insignificant relation	

Multiple Regression
of MVPS on EPS
and DPS

Positive constant except HBL,
Negative EPS beta, Positive DPS beta,
High positive correlation except -
SCBNL, Insignificant simultaneous
and one by one relation.

CHAPTER - V

SUMMARY, CONCLUSIONS & RECOMMENDATIONS

5.1 Summary

This chapter attempts to summarize, give conclusive and suggestive end to the whole study. As essence to the study, the conclusion and suggestion would be of great help for the concerned parties. This chapter is divided into different parts namely summary, conclusions and recommendations.

Commercial banks are the real intermediaries who transfer savings to the borrowers so that the money can be used in the productive sector. As a financial intermediary, commercial banks are giving greater contribution to GDP for economic development. At present, there are 29 commercial banks operating in the country. They are guided & regulated under Company Act 2063, Banking and Financial ACT, 2063 & NRB directives.

Financial analysis shows the relationship between the various component from Balance Sheet and Income statement. The analyzed statements contain such information which is useful for management, shareholders, creditors, investors, depositors, etc. As in other industries, banking industries also need financial analysis for evaluating a bank's performance as compare to the other and also with own past performance.

The research work entitled the "Comparison of financial performance between private and government commercial banks" comprises analysis of three leading private commercial banks: Standard Chartered Bank Ltd., Nabil Bank Ltd. and Himalayan Bank Ltd. And three government commercial banks: Agriculture Development Bank, Rastriya Banijya Bank and Nepal Bank Limited. The research work is conducted to satisfy the queries of research problem specified as the statement of the problem in the introductory

chapter. The researcher consulted mainly the secondary sources such as documents published by concerned banks, information in different websites and also consulted the personalities of the related banks as primary sources. Obviously, it helped the researcher to construct conceptual framework. Then the research work was analyzed and interpreted by financial tools such as cash reserve ratio, net profit margin, return on assets, activity ratios, different solvency and capital structure ratios, market related ratios like earning per share, P-E ratio, NPA, staff expenses related ratios as well as statistical tools such as mean, standard deviation, CV, correlation, regression or trend line, t-tests and F-tests (two-way ANOVA).

As such; the researcher analyzed and presented the 4th chapter, which was the main body of the research work. On the basis of data analysis and presentation, the researcher extracted some major findings. Finally, the researcher reached in the conclusions keeping in the previously set objectives in mind. Ultimately, the researcher will recommend on the research problem to its stakeholders in this chapter.

In order to know the real performance of banks, the researcher observed and analyzed the comparative performance analysis of top three private commercial banks and three government banks for five years period. It is hoped that the comparative performance analysis of top commercial banks will give a rational result and represent the overall banking scenario in terms of performance analysis.

5.2 Conclusions

Private commercial banks have almost maintained the CRR as per NRB directives (i.e. 6.5% of total deposit). Government commercial banks have too much excess CRR (i.e. average of 14.81%). Too much idle cash means government banks are not able to utilize the money. Money in the drawer has limited the source of income. No bank is facing the problem of meeting short term liabilities however among private banks NABIL had problem of meeting short term in the first two years of study (i.e. 2004/05 and 2005/06).

All private banks seem to have very serious concern about CRR as they increased the CRR level after the NRB increased from 5% to 6.5% in the last year of study period.

Government banks have been getting lower net profit (23.05%) out of total income with comparison to private banks. In addition, among government banks, ADBL is in worst position as it has very low percentage of net profit on total income i.e. only 8.49 percent. Government banks seem weaker in total asset utilization also as their ROA is 2.08 percent in comparison to 2.28 percent of private banks. Government banks have shown very good result in collection of interest as percentage of loan & advances. Among government banks NBL earned the most i.e. 13.75 percent on total loan and advances. This may be due to the collection of old bad loan and interest under foreign management after initiation of structural reform program. Government banks comparatively fail to maintain operating expenses in a limit as their average operating ratio is higher i.e. 6.04 percent whereas private banks have only i.e. 2.97 percent. SCBNL did the best as it spent only 2.82 percent on operating activities with high consistency i.e. 5.87 percent CV.

Comparatively, government banks are more successful in utilizing the deposits by charging higher rate of interest to the borrowers than pay to the depositors. Their average Credit Deposit ratio is 67.25% with CV almost similar to private banks (56.29% credit deposit ratio). But, NBL from government side and SCBNL from private side are comparatively unsuccessful i.e. 39.58% & 42.57% respectively.

Private Banks' average shows that they have been maintaining lower capital adequacy ratio as per the directive of central bank (ie.11%) whereas government banks are unsuccessful in this regard. They are totally failure to protect the position of depositors because their own fund is negative and totally dependant on outsiders' i.e. depositors' fund. SCBNL is the most successful to generate cheaper outsider's fund (ie.14.91percentage) whereas RBB is the most unsuccessful (i.e. -38.89%). Private Banks

are able to get cheaper fund than government fund from depositors as their total interest expenses is lower as percentage of total deposit i.e. 2.14 percent in comparison to 2.61 percentage.

Among the banks SCBNL is most successful and ADBL is most unsuccessful to utilize cheaper fund.

From the viewpoint of Earning per Share; government banks are far ahead of private banks. Private Banks earn only Rs. 107.17 per share whereas government banks earn Rs. 229.50 per share. Among government banks RBB did the best. Its EPS is largely higher with comparatively lower CV i.e. average EPS Rs. 429.51 and CV 15.62%. Similarly, SCBNL has been earning most among private banks. HBL and ADBL's shareholders earn comparatively lower amount i.e. Rs. 58.49 Rs. and 33.07 respectively on one share they invested. Government banks are not listed in the security market so their market value related ratios are not calculated. Therefore P\E ratio and dividend related ratios are calculated only for private banks. All three banks show competitive position from the viewpoints of new investor. Comparatively the new investor has to spend more to earn one rupee in SCBNL i.e. Rs. 36.10. It means existing share holders can get Rs. 36.10 for every rupee they forgone to earn. Overall P\E ratio shows increasing trend except slight decrease in the last year that is the effect of increasing market price of bank's share. SCBNL has been providing comparatively higher cash dividend to its shareholder i.e. Rs. 92 per share than other banks in a consistency manner. But HBL's shareholders are unfortunate as they get only Rs. 18.72 per share. The overall trend of cash dividend is decreasing considerably in the last three years of study. This arouses the high concern of shareholders towards the performance of the bank. Total dividend (including stock dividend) follows the cash dividend trend.

Private Banks have been bearing competitive salary and other allowances to total operating expenses in a very high consistent manner. Government banks spend more than private banks for salary and other allowances on total operating expenses but have higher

inconsistency. Although staff expenses to total operating expenses ratio is high for government banks, considering the over staffing in the government offices, per employee expenses is lower in government banks than in private banks. NBL spends the most (i.e.53.56%) and SCBNL spends the least (i.e.23.69%). The private banks provide very high bonus to their employees so their average bonus percentage (i.e. 33.44) percent is very higher than that of government banks (i.e. only 7.74%). It can be concluded that private banks staff are more motivated because they get high bonus. NABIL's staffs are lucky in the matter that they get the highest percent bonus on total staffing expenses i.e. 41.88 percent.

Government banks earn more from borrowing and lending activities than that of private banks as they have been charging comparatively higher interest spread (i.e.5.17%) with great consistency, whereas private banks' weighted spread is lower i.e.3.99 percent. ADBL's spread rate is the highest (ie.6.01%). NABIL also has higher spread rate (i.e.4.43%).

Private Banks are seen to indulge in activities concerning foreign exchange and make profit from variation of foreign exchange rate. The data show they earned an average of 11.28 percent of total income in the study period whereas government banks earned only 0.59. In addition government banks show very high inconsistency too i.e. CV of 162.03% . Among private banks, SCBNL need not to pay more attention to exchange gain concentrate to maintain the gain as it earns the most i.e. 16.14 percent from rate fluctuation whereas NABIL and HBL earned competitive percent i.e. 9.57 and 8.14 percent respectively. Among government banks ADBL earned very low i.e. 0.07 percent. Government banks have suffered loss also in the year 2006/07.

Private and government bank both has been improving their loan recovery performance. Government banks have done dramatic improvement as the average NPA dropped from 40.05% to 10.11% averaging the figure around 22.07 percent in the five year of study period. Similarly Private Banks' NPA also dropped from 3.82% to 1.21% in the same

period. Still government banks average NPA is very high. Among private banks HBL's performance is poor as its NPA is 4.43%, higher than that of other two private banks.

The correlation between Total Deposits and Loan & Advances is strongly positive for all banks. Besides, the relation is significant showing greater relevancy of their relation for all banks. But, Correlation of Total Deposits and Investment is insignificant to HBL & NBL. The correlation of NPA & Net Profit is negative for SCBNL, HBL & ADBL and absolutely insignificant for them. The relation is significant only to NABIL and NBL. Insignificant relation means, decrease in NPA from sound lending & recovery leads to increase in net profits and vice versa. The correlation of MVPS with EPS is significant to only HBL. SCBNL's correlation of MVPS with EPS shows astonishing and paradox results because correlation is negative. It means increase in EPS decrease the MVPS. Correlation between DPS and MVPS shows the same results of correlation between EPS and MVPS.

The regression or trend analysis shows positive significance of Net Profit on Total deposits to all banks except NBL and insignificant to all banks in case of MVPS on EPS. The multiple regression analysis of Net Profit on Total Deposit, Total Investment and Loan & Advances shows negative constant except NABIL and NBL, positive loan & advance beta for NABIL, HBL and NBL and negative for rest. Similarly, the analysis shows positive investment beta except two government banks (ADBL and NBL), positive total deposit beta for SCBNL, ADBL & RBB and negative for rest. T-test at 5 % level of significance proves insignificant relation of all independent variable with dependant variable. F- Test proves simultaneous relation of independent variable with dependant for SCBNL only. The multiple regressions of MVPS on EPS & DPS also have positive constant except HBL. EPS beta coefficient is negative and DPS beta is positive for all private banks. The calculation and analysis of T and F values indicates that the regression equation does not provide significant explanation of variation in stock price. It means EPS and DPS are not cause of change is market price of stock.

T-test results show that private and government banks performance is same in respect of ROA, Capital Adequacy on Supplementary Capital and interest expenses to total deposit but significant different in respect of other financial indicators used in chapter 4 analysis.

5.3 Recommendations

1. Government banks have very high liquidity so they are suggested to manage the CRR within the prescription of NRB and utilize the excess fund in **earning activities** like advancing loan to customers, making investment for introducing new services etc.
2. Net profit is the result of overall business performance. As ADBL has very low and most fluctuating percentage of net profit on total income so ADBL is suggested to improve business performance and have **profit planning** so that competitive and consistent rate of profit could be maintained. Curtailments and control of unnecessary expenses, investment portfolio management, promptness in operation etc could be of great help towards this step.
3. Profit is generated from proper use of the assets. This is reflected on ROA ratio. HBL and ADBL are recommended to effective utilization of total fund (assets) so as to make more profitability. They can expand capacity, introduce new services, start new branches etc. for effective assets utilization.
4. Government banks have performed better in utilizing loan and advances therefore their income on loan and advances ratio is higher so it is recommended to keep on continuing as previous. Private Banks also have satisfactory ratio but SCBNL has the lowest so SCBNL is suggested to revise the policy it is following currently about interest and loan & advances. Fund should be directed towards high interest earning activities, SCBNL can loose the loan policy and charge higher rate.
5. The lower the Operating Ratio, the better it is. Government banks have high ratio thus especially two government banks ADBL and NBL is recommended to control the operating expenses and decrease operating ratio on total assets. Similarly Among

private banks NABIL has the highest ratio so NABIL is suggested to maintain operating ratio comparatively lower. They should cut unnecessary miscellaneous allowances, economize procurement, make effective and economy use of water and electricity etc. for controlling operating ratio.

6. Average credit deposit ratio of government banks seem higher than that of private banks this is due to very high ratio of ADBL. Other two banks (RBB and NBL) have comparatively lower ratio. So, it will be sound effective for them to utilize the deposits for loaning and advancing at reasonable rate of interest to the borrowers as a viewpoint of effective management of assets. Among the private banks SCBNL is also suggested to do as RBB and NBL. It is better to RBB, NBL and SCBNL to loose the credit policy to utilize the deposit as loan and advances.
7. Government banks seems very poor from view point of solvency. If present condition of capital ratio is not improved depositors may stop to believe them. So it is strongly recommended them to improve the net worth and maintain capital adequacy ratio to meet the NRB directives of 11%. They have to perform harder as capital adequacy ratio is negative now. In this regard, private banks position is satisfactory so they are advised to keep the current position up. To make net worth positive they should earn more to recover the loss they suffered previously.
8. The private banks are able to use cheaper fund than government banks in average. This situation of government banks is due to high interest to total deposit ratio of ADBL. So ADBL is suggested to seek the lower interest rate i.e. cheaper fund as deposit like increasing the borrowing from NRB at bank rate.
9. The government banks share is not listed in stock market so market related analysis can't be made. In the light of this inconveniency government banks are advised to make arrangements for listing of securities in the market. EPS of HBL and ADBL so management of the banks should deploy high efforts to increase the earning per share.

NABIL also should pay more attention about shareholder's profitability (EPS). Other banks have to give continuity.

10. Private Banks have competitive P/E ratio. However HBL is behind of all so it should show concern to increase market price.
11. It is recommended to HBL that rate of dividend should increased to make more competitive. And HBL also should show concern to provide Cash Dividend in a consistent manner than total dividend (including bonus) on Share Capital. HBL should follow fixed dividend policy.
12. Staff expenses on total operating expenses high in case of government banks. The fact of lower salary of employee but high staff expenses in government banks indicate overstaffing problem. Therefore they should make policy to hire appropriate number of staff and make effort to control avoidable staff expenses like allowances without hindering motivation level of employee. HBL also show genuine interest on staff expenses case. Government banks may bring the right sizing policy like golden handshake to reduce staff expenses in the future.
13. It is generously recommended to government banks to make comparatively sound contribution towards staff bonus out of total staff expenses at viewpoint of employee satisfaction and their effective utilization. This is must to maintain employee motivation and productivity. HBL also should pay more attention towards staff bonus to be competitive among the three banks in its block.
14. ADBL's interest spread rate is very high. High rate helps directly positively to net income, on the other hand low borrowing rate and high lending rate may discourage both lender and borrowers. So ADBL should think about it. Other banks have competitive interest rate spread so they should keep it up.

15. Government banks have very low even negligible foreign exchange gain. Foreign exchange income will also give contribution to total income. So government banks are advised to manage the exchange of foreign currencies. It will give contribution to total income too. SCBNL has been showing very good performance. Other private banks should also consider their foreign exchange gain policy. Government banks can start remittance services, open accounts in foreign currency, trade the currencies, making customer having global transaction etc. to increase foreign exchange income.
7. NPA is the most sensitive part of banking performance. The effectiveness of loan & recovery is depicted from NPA position. It is key variable for measuring bank's performance. Government and private banks both have showing good performance in decreasing the NPA over the study period. Government banks' performance is remarkable. Still their NPA is very high. So, especially government banks are suggested to keep the current performance improvement rate up so that NPA can be lowered down. There is substantial difference between NPA of private and government banks. Therefore government banks have to do much more to be competitive with private banks by bringing down the NPA rate. Strict loan recovering policy and tight credit policy helps to decrease NPA.

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ALL THE CALCULATIONS HERE ARE MADE BY USING MS-EXCEL PROGRAM.

APPENDIX-1

Test of Hypothesis (Two-way ANOVA)

- Null Hypothesis (Ho):
- i) $\mu_{SCBNL} = \mu_{NABIL} = \mu_{HBL}$. i.e. there is no significant different in CRR among three different banks for five different years. (CRR of three banks is same.)
 - xi) $\mu_{4/5} = \mu_{5/6} = \mu_{6/7} = \mu_{7/8} = \mu_{8/9}$ ie. there is no significant different in CRR in five years for three banks.(CRR of five years is same)

- Alternative Hypothesis (H1):
- i) $\mu_{SCBNL} = \mu_{NABIL} = \mu_{HBL}$. i.e. there is significant different in CRR among three different banks for five different years. (CRR of three banks is not same.)
 - xi) $\mu_{4/5} \neq \mu_{5/6} \neq \mu_{6/7} \neq \mu_{7/8} \neq \mu_{8/9}$ ie. there is significant different in CRR in five years for three banks.(CRR of five years is not same)

Test Statistics: The test is based on significance of CRR among three different banks in five different years. So, we use two-way ANOVA .

Year	SCBNL	NABIL	HBL	Row Total	SCBNL ²	NABIL ²	HBL ²	Row Total
2004/05	8.77	3.83	7.86	20.46	76.91	14.67	61.78	153.36
2005/06	6.86	3.26	5.92	16.04	47.06	10.63	35.05	92.73
2006/07	5.46	6	5.92	17.38	29.81	36	35.05	100.86
2007/08	5.84	8.37	5.13	19.34	34.11	70.06	26.32	130.48
2008/09	8.18	9.03	6.76	23.97	66.91	81.54	45.70	194.15
Column Total	35.11	30.49	31.59	97.19	254.80	212.89	203.89	671.58

Total number of observations, $N = 15$

Grand Total (T) = $\phi T = T_1 + T_2 + T_3$

$$= 35.11 + 30.49 + 31.59$$

$$= 97.19$$

$$\text{Correction Factor (C.F.)} = \frac{T^2}{N} = \frac{(97.19)^2}{15} = 9445.90 / 15 = 629.73$$

Total sum of square (SST) = $\sum fX_i^2 - C.F.$

$$= SCBNL^2 + NABIL^2 + HBL^2 - C.F.$$

$$= 254.80 + 212.89 + 203.89 - 629.73$$

$$= 671.58 - 629.73$$

$$= 41.85$$

Sum of square due to column factor (SSC)

$$= \frac{(35.11)^2}{5} + \frac{(30.49)^2}{5} + \frac{(31.59)^2}{5} - C.F.$$

$$= 632.06 - 629.73$$

$$= 2.33$$

Sum of square due to row factor (SSR)

$$= \frac{(20.46)^2}{3} + \frac{(16.04)^2}{3} + \frac{(17.38)^2}{3} + \frac{(19.34)^2}{3} + \frac{(23.97)^2}{3} - C.F.$$

$$= 642.14 - 629.73$$

$$= 12.46$$

Sum of square due to error (SSE)

$$= TSS - SSC - SSR$$

$$= 41.85 - 2.33 - 12.46$$

$$= 27.06$$

Two-way ANOVA Table

Table 4.1 (b)
Two-Way ANOVA

Source of Variation	d.f.	Sum of Square	Mean Sum of Square	F-Ratio
Among Banks (Due to Column Factor)	$(c-1)=3-1=2$	SSC= 2.33	$MSC = \frac{SSC}{CZ1} = 2.33 / 2 = 1.165$	$F_c = \frac{MSC}{MSE} = 0.3447$

Among Years (Due to Row Factor)	$(r-1)=5-1=4$	SSR= 12.46	$MSR = \frac{SSR}{r-1} = 12.46 / 4 =$ 3.115	$F_r = \frac{MSR}{MSE} =$ 0.9216
Residual (Due to Error)	$(c-1)(r-1)=8$	SSE = 27.06	$MSE = SSE / [(c-1)(r-1)]$ $= 27.06 / 8 = \mathbf{3.38}$	

Level of significance = 5%

For banks: Calculated F statistics $F_C : F_{.05}(2,8) = 0.3447$

For years: Calculated F statistics $F_R : F_{.05}(4,8) = 0.9216$

Area of Critical Region :

The tabulated value of F at 5% level of significance

For banks: Tabulated F Statistics $F_C = F_{.05}(2,8) = \mathbf{4.46}$ (Source : F- distribution table)

For Years: Tabulated F Statistics $F_R = F_{.05}(4,8) = \mathbf{3.84}$ (Source : F- distribution table)

Decision:

i. The calculated F (2,8) < tabulated F (2,8). Therefore, we accept null hypothesis and conclude that there is no significant difference in CRR for 3 banks in five different years.

ii. The calculated F (4,8) < tabulated F (4,8). Therefore, we accept null hypothesis and conclude that there is no significant difference in CRR for five years in three banks

APPENDIX-2

Null Hypothesis (H₀): i) $\mu_{ADBL} = \mu_{RBB} = \mu_{NBL}$. i.e. there is no significant different in CRR among three different banks for five different years. (CRR of three banks is same.)

xii) $\mu_{4/5} = \mu_{5/6} = \mu_{6/7} = \mu_{7/8} = \mu_{8/9}$ ie. there is no significant different in CRR in five years for three banks.(CRR of five years is same)

Alternative Hypothesis (H₁): i) $\mu_{ADBL} \neq \mu_{RBB} \neq \mu_{NBL}$. i.e. there is significant different in CRR among three different banks for five different years. (CRR of three banks is not same.)

xii) $\mu_{4/5}$ $\mu_{5/6}$ $\mu_{6/7}$ $\mu_{7/8}$ $\mu_{8/9}$ ie. there is significant different in CRR in five years for three banks.(CRR of five years is not same)

Test Statistics: The test is based on significance of CRR among three different banks in five different years. So, we use two-way ANOVA .

Year	ADBL	RBB	NBL	Row Total	ADBL ²	RBB ²	NBL ²	Row Total
2004/05	11.15	12.91	17.14	41.2	124.32	166.67	293.78	584.77
2005/06	16.1	10.97	19	46.07	259.21	120.34	361	740.55
2006/07	11.38	11.11	18.24	40.73	129.50	123.43	332.70	585.63
2007/08	11.13	14.14	15.82	41.09	123.88	199.94	250.27	574.09
2008/09	14.81	17.91	20.29	53.01	219.34	320.77	411.68	951.79
Column Total	64.57	67.04	90.49	222.10	856.25	931.15	1649.43	3436.83

Total number of observations, N = 15

Grand Total (T) = $\phi T = T_1 + T_2 + T_3$

$$= 64.57 + 67.04 + 90.49$$

$$= 222.10$$

$$\text{Correction Factor (C.F.)} = \frac{T^2}{N} = \frac{(222.10)^2}{15} = 3288.56$$

Total sum of square (SST) = $\sum f_i X_i^2 - C.F.$

$$= ADBL^2 + RBB^2 + NBL^2 - C.F.$$

$$= 856.25 + 931.15 + 1649.43 - 3288.56$$

$$= 3436.83 - 3288.56$$

$$= 148.27$$

Sum of square due to column factor (SSC)

$$= \frac{(64.57)^2}{5} + \frac{(67.04)^2}{5} + \frac{(90.49)^2}{5} - C.F.$$

$$= 3370.42 - 3288.56$$

$$= 81.86$$

Sum of square due to row factor (SSR)

$$= (41.2)^2 / 3 + (46.07)^2 / 3 + (40.73)^2 / 3 + (41.09)^2 / 3 + (53.01)^2 / 3 - C.F.$$

$$= 3325.76 - 3288.56$$

$$= 37.19$$

Sum of square due to error (SSE)

$$= SST - SSC - SSR$$

$$= 148.27 - 81.86 - 37.19$$

$$= 29.22$$

Two-way ANOVA Table

Table 4.1 (b)
Two-Way ANOVA

Source of Variation	d.f.	Sum of Square	Mean Sum of Square	F-Ratio
Among Banks (Due to Column Factor)	(c-1)=3-1=2	SSC=81.86	$MSC = \frac{SSC}{C \cdot Z1} = 81.86 / 2 = 40.93$	$F_C = \frac{MSC}{MSE} = 11.21$
Among Years (Due to Row Factor)	(r-1)=5-1=4	SSR=37.19	$MSR = \frac{SSR}{r \cdot Z1} = 37.19 / 4 = 9.30$	$F_r = \frac{MSR}{MSE} = 2.55$
Residual (Due to Error)	(c-1)(r-1)=8	SSE = 29.22	$MSE = SSE / [(c-1)(r-1)] = 29.22 / 8 = 3.65$	

Area of Critical Region :

The tabulated value of F at 5% level of significance

For banks: Tabulated F Statistics $F_C = F_{.05}(2,8) = 4.46$ (Source : F- distribution table)

For Years: Tabulated F Statistics $F_R = F_{.05}(4,8) = 3.84$ (Source : F- distribution table)

Decision:

- i. The calculated F (2,8) > tabulated F (2,8). Therefore, we reject null hypothesis and conclude that there is significant difference in CRR for 3 banks in five different years.
- ii. The calculated F (4,8) < tabulated F (4,8). Therefore, we accept null hypothesis and conclude that there is no significant difference in CRR for five years in three banks.

APPENDIX 3
NPM TWO WAY ANOVA FOR POCBS

Years	STND CHRTD	NABIL	HIMLAYAN	Row Total	RT square	RT square/3	S square	
2061/62	34.01	34.33	32.98	101.32	10265.74	3421.91	1156.68	
2062/63	37.06	35.32	35.16	107.54	11564.85	3854.95	1373.44	
2063/64	34.55	32.16	34.9	101.61	10324.59	3441.53	1193.70	
2064/65	34.94	29.58	41.58	106.1	11257.21	3752.40	1220.80	
2065/66	36.84	30.56	39.96	107.36	11526.17	3842.06	1357.19	
Column Total	177.4	161.95	184.58	523.93	54938.57	18312.86	6301.82	5
CT square	31470.76	26227.80	34069.78	91768.34	Correction Factor(T²/n)		18300.18	
CT square/5	6294.15	5245.56	6813.96	18353.67	SST	138.46		
SSC				53.49	SSE	72.29		
MSC	26.7457							
MSR	3.1697							
MSE	9.0362							
					F			
					column(banks)	2.96		
					F row (years)	0.35		

APPENDIX 4
NPM TWO WAY ANOVA FOR GOCBS

Years	ADB	RBB	NEPLBNK	Row Total	RT square	RT square/3	A square	R Sq
2061/62	-1.78	37.69	41	76.91	5915.15	1971.72	3.17	14
2062/63	8.33	37.02	28	73.35	5380.22	1793.41	69.39	13
2063/64	15.76	39.63	9.59	64.98	4222.40	1407.47	248.38	15
2064/65	8.49	38.59	8.53	55.61	3092.47	1030.82	72.08	14
2065/66	15.69	36.47	22.68	74.84	5601.03	1867.01	246.18	13
Column Total	46.49	189.4	109.8	345.69	24211.27	8070.42	639.19	71
CT square	2161.32	35872.36	12056.04	50089.72	Correction Factor(T²/n)		7966.77	
CT square/5	432.26	7174.47	2411.21	10017.94	SST	2997.33		SS
SSC				2051.17	SSE	842.51		
MSC	1025.59							
MSR	25.91							
MSE	105.31							
					F			
					column(banks)	9.74		
					F row (years)	0.25		

APPENDIX 5
ROA TWO WAY ANOVA FOR POCBS

Years	STND	NABIL	HIMLAYAN	Row	RT	RT	S	N
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	CHRTD			Total	square	square/3	square	So
2061/62	2.46	3.06		1.11	6.63	43.96	14.65	6.05
2062/63	2.66	3.23		1.55	7.44	55.35	18.45	7.08
2063/64	2.42	2.72		1.47	6.61	43.69	14.56	5.86
2064/65	2.46	2.32		1.76	6.54	42.77	14.26	6.05
2065/66	2.53	2.55		1.91	6.99	48.86	16.29	6.40
Column Total	12.53	13.88		7.8	34.21	234.63	78.21	31.44
CT square	157.00	192.65		60.84	410.50	Correction Factor(T^2/n)		78.02
CT square/5	31.40	38.53		12.17	82.10	SST	5.04	SS
SSC					4.08	SSE	0.77	
MSC	2.0387							
MSR	0.0475		F					
MSE	0.0960		column(banks)	21.23				
			F row (years)	0.49				

APPENDIX 6

ROA TWO WAY ANOVA FOR GOCBS

Years	ADB	RBB	NEPLBNK	Row Total	RT square	RT square/3	A square	R square
2061/62	-0.2	1.87	3.68	5.35	28.62	9.54	0.04	3
2062/63	1	3.37	3.36	7.73	59.75	19.92	1.00	11
2063/64	2.77	3.14	0.58	6.49	42.12	14.04	7.67	9
2064/65	1.52	2.91	0.57	5	25.00	8.33	2.31	8
2065/66	2.04	2.73	1.88	6.65	44.22	14.74	4.16	7
Column Total	7.13	14.02	10.07	31.22	199.72	66.57	15.18	40
CT square	50.84	196.56	101.40	348.80	Correction Factor(T^2/n)		64.98	
CT square/5	10.17	39.31	20.28	69.76	SST	19.87		SSR
SSC				4.78	SSE	13.49		
MSC	2.39							
MSR	0.40		F					
MSE	1.69		column(banks)	1.42				
			F row (years)	0.24				

APPENDIX 7

P/E ratio TWO WAY ANOVA FOR POCBs

Years	STND CHRTD	NABIL	HIMLAYAN	Row Total	RT square	RT square/3	S square
2061/62	16.38	14.27	19.2	49.85	2485.02	828.34	268.3
2062/63	21.47	17.34	18.57	57.38	3292.46	1097.49	460.9
2063/64	36.25	36.84	28.69	101.78	10359.17	3453.06	1314.0

2064/65	51.77	48.7	31.56	132.03	17431.92	5810.64	2680.1
2065/66	54.64	45.89	28.43	128.96	16630.68	5543.56	2985.5
Column Total	180.51	163.04	126.45	470	50199.26	16733.09	7708.9
CT square	32583.86	26582.04	15989.60	75155.50	Correction Factor(T²/n)		14726.6
CT square/5	6516.77	5316.41	3197.92	15031.10	SST	2662.30	
SSC				304.43	SSE	351.45	
MSC	152.2171						
MSR	501.6048				F		
MSE	43.9307				column(banks)	3.46	
					F row (years)	11.42	

APPENDIX 8

Total dividend on share capital TWO WAY ANOVA FOR POCE

Years	STND CHRTD	NABIL	HIMLAYAN	Row Total	RT square	RT square/3	S square
2061/62	120	70	31.58	221.58	49097.70	16365.90	14400
2062/63	140	85	35	260	67600.00	22533.33	19600
2063/64	130	140	40	310	96100.00	32033.33	16900
2064/65	130	100	45	275	75625.00	25208.33	16900
2065/66	100	85	43.56	228.56	52239.67	17413.22	10000
Column Total	620	480	195.14	1295.14	340662.37	113554.12	77800
CT square	384400.00	230400.00	38079.62	652879.62	Correction Factor(T²/n)		111825
CT square/5	76880.00	46080.00	7615.92	130575.92	SST	22668.93	
SSC				18750.08	SSE	2190.56	
MSC	9375.0413						
MSR	432.0705				F		
MSE	273.8205				column(banks)	34.24	
					F row (years)	1.58	

APPENDIX 9

Calculation of Correlation Coefficient of CRR

F\Y	AVRG POCB (X)	AVRG GOCB(Y)	X2	Y2
2061/62	6.82	13.73	46.51	188.60
2062/63	5.35	15.36	28.59	235.83
2063/64	5.79	13.58	33.56	184.33
2064/65	6.45	13.70	41.56	187.60
2065/66	7.99	17.67	63.84	312.23
Total	32.40	74.03	214.06	1108.59
Correlation Coefficient		0.59		
Standard Error, S.E.(r)		0.293		

Probable Error P.E.(r)		0.197
6 P.E.		1.18

APPENDIX 10

Calculation of Correlation Coefficient of NPM

F\Y	AVRG POCB (X)	AVRG GOCB(Y)	X2	Y2
2061/62	33.77	25.64	1140.64	657.24
2062/63	35.85	24.45	1284.98	597.80
2063/64	33.87	21.66	1147.18	469.16
2064/65	35.37	18.54	1250.80	343.61
2065/66	35.79	24.95	1280.69	622.34
Total	174.64	115.23	6104.29	2690.14
Correlation Coefficient		-0.05		
Standard Error, S.E.(r)		0.446		
Probable Error P.E.(r)		0.301		
6 P.E.		1.81		

APPENDIX 11

Calculation of Correlation Coefficient of ROA

F\Y	AVRG POCB (X)	AVRG GOCB(Y)	X2	Y2
2061/62	2.21	1.78	4.88	3.18
2062/63	2.48	2.58	6.15	6.64
2063/64	2.20	2.16	4.85	4.68
2064/65	2.18	1.67	4.75	2.78
2065/66	2.33	2.22	5.43	4.91
Total	11.40	10.41	26.07	22.19
Correlation Coefficient		0.88		
Standard Error, S.E.(r)		0.099		
Probable Error P.E.(r)		0.066		
6 P.E.		0.40		

Calculation Of Correlation Coefficient of the variables Total Deposit and Loan & Advances

APPENDIX-12

1)

F\Y	SCBNL	
	Total Deposit(x)	Loan & Advances(y)
2061/62	19,363,470	8,143,208
2062/63	23,061,032	8,935,418

NABIL	
Total Deposit	Loan & Advances
14,586,608,707	10,586,170,000
19,347,399,440	12,922,543,000

2063/64	24,647,021	10,502,637
2064/65	29,743,999	13,718,597
2065/66	35,871,721	13,679,757
	Correlation Coefficient	0.9312
	R ²	0.9650
	Standard Error, S.E.(r)	0.0594
	Probable Error P.E.(r)	0.0401
	6 P.E.	0.2406
	Level of Significance	Significant

23,342,285,327	15,545,778,7	
31,915,047,467	21,365,053,3	
37,348,255,840	27,589,933,0	
	Correlation Coefficient	0.9
	R ²	0.9
	Standard Error, S.E.(r)	0.0
	Probable Error P.E.(r)	0.0
	6 P.E.	0.0
	Level of Significance	Significant

2)

FY	HBL	
	Total Deposit	Loan & Advances
2061/62	24,814,012	13,451,168
2062/63	26,490,852	15,761,977
2063/64	30,048,418	17,793,724
2064/65	31,842,789	20,179,613
2065/66	34,681,345	25,519,519
	Correlation Coefficient	0.9731
	R ²	0.9865
	Standard Error, S.E.(r)	0.0237
	Probable Error P.E.(r)	0.0160
	6 P.E.	0.0960
	Level of Significance	Significant

FY	ADBL	
	Total Deposit	Loan & Advances
2061/62	27,223,046,161.96	2,638,255,302.48
2062/63	29,631,817,480.57	4,900,913,542.07
2063/64	32,416,358,357.08	7,252,333,317.12
2064/65	32,553,827,474.54	30,589,428,109.3
2065/66	35,159,610,215.50	32,603,095,641.8
	Correlation Coefficient	1.000
	R ²	1.000
	Standard Error, S.E.(r)	0.000
	Probable Error P.E.(r)	0.000
	6 P.E.	0.000
	Level of Significance	Significant

3)

FY	RBB	
	Total Deposit	Loan & Advances
2061/62	43,016,063,057.26	13,430,931,561.50
2062/63	46,195,481,570.30	14,633,545,395.42
2063/64		

FY	NBL	
	Total Deposit	Loan & Advances
2061/62	35,934,164,000.00	16,866,546,000.00
2062/63	35,829,765,050.00	9,756,162,747.00
2063/64		

	50,464,128,578.30	17,328,731,275.52
2064/65	58,333,116,174.48	21,136,285,388.50
2065/66	68,095,697,104.39	26,154,652,791.23
Correlation Coefficient		0.9993
R ²		0.9997
Standard Error, S.E.(r)		0.0006
Probable Error P.E.(r)		0.0004
6 P.E.		0.0025
Level of Significance		Significant

	39,014,204,359.00	11,058,477,657.00
	41,829,391,063.00	13,251,962,768.00
	45,194,232,465.00	17,614,898,825.00
Correlation Coefficient		0.462
R ²		0.680
Standard Error, S.E.(r)		0.351
Probable Error P.E.(r)		0.237
6 P.E.		1.422
Level of Significance		Nothing

Calculation of Correlation Coefficient of the variables Total Deposit and Investments:

APPENDIX 13

1)

FY	SCBNL	
	Total Deposit(x)	Investment(y)
2061/62	19,363,470	9,702,553
2062/63	23,061,032	12,838,555
2063/64	24,647,021	13,553,233
2064/65	29,743,999	13,902,819
2065/66	35,871,721	20,236,121

NABIL	
Total Deposit	Investment(y)
14,586,608,707	4,275,528,208
19,347,399,440	6,178,533,108
23,342,285,327	8,945,310,567
31,915,047,467	9,939,771,428
37,348,255,840	10,826,379,001

Correlation Coefficient	0.9509
R ²	0.9751
Standard Error, S.E.(r)	0.0429
Probable Error P.E.(r)	0.0289
6 P.E.	0.1735
Level of Significance	Significant

Correlation Coefficient	0.9469
R ²	0.9731
Standard Error, S.E.(r)	0.0462
Probable Error P.E.(r)	0.0312
6 P.E.	0.1870
Level of Significance	Significant

2)

FY	HBL	
	Total Deposit	Investment(y)
2061/62	24,814,012	11,692,342

ADBL	
Total Deposit	Investment(y)
27,223,046,161.96	1,355,832,882.79

2062/63	26,490,852	10,889,031
2063/64	30,048,418	11,822,985
2064/65	31,842,789	13,340,177
2065/66	34,681,345	8,710,691

Correlation Coefficient	-0.3313
R ²	#NUM!
Standard Error,S.E.(r)	0.3981
Probable Error P.E.(r)	0.2685
6 P.E.	1.6112

Level of Significance Not Significant

2	1
9,631,817,480.57	,511,330,021.29
3	3
2,416,358,357.08	,177,460,912.73
32,553,827,474.54	2,881,658,756.59
35,159,610,215.50	4,896,061,772.90

Correlation Coefficient	1.0000
R ²	1.0000
Standard Error,S.E.(r)	0.0000
Probable Error P.E.(r)	0.0000
6 P.E.	0.0000

Level of Significance Significant

3)

FY	RBB	
	Total Deposit	Investment(y)
2061/62	43,016,063,057.26	8,415,882,087.29
2062/63	46,195,481,570.30	11,555,357,804.13
2063/64	50,464,128,578.30	12,650,196,361.67
2064/65	58,333,116,174.48	14,446,377,954.16
2065/66	68,095,697,104.39	15,418,022,055.26

Correlation Coefficient	0.9162
R ²	0.9572
Standard Error,S.E.(r)	0.0718
Probable Error P.E.(r)	0.0484
6 P.E.	0.2905

Level of Significance Significant

FY	NBL	
	Total Deposit	Investment(y)
2061/62	35,934,164,000.00	14,219,757,000.00
2062/63	35,829,765,050.00	14,490,247,108.00
2063/64	39,014,204,359.00	16,072,179,882.00
2064/65	41,829,391,063.00	16,570,755,516.00
2065/66	45,194,232,465.00	13,397,559,686.00

Correlation Coefficient	-0.062
R ²	#NUM!
Standard Error,S.E.(r)	0.445
Probable Error P.E.(r)	0.300
6 P.E.	1.802

Level of Significance Not Significant

Calculation Of Correlation Coefficient of the variables Net Profit Ratio & Non Performing Assets Ratio

APPENDIX 14

1)

SCBNL		
F\Y	NPA(x)	Net Profit(y)
2061/62	2.69	34.01
2062/63	2.13	37.06
2063/64	1.83	34.55
2064/65	0.92	34.94
2065/66	0.66	36.84

NABIL		
F\Y	NPA(x)	Net Profit(y)
2061/62	1.32	34.33
2062/63	1.38	35.32
2063/64	1.12	32.16
2064/65	0.74	29.58
2065/66	0.8	30.56

Correlation Coefficient	-0.4039
R^2	#NUM!
Standard Error,S.E.(r)	0.3743
Probable Error P.E.(r)	0.2524
6 P.E.	1.5146

Level of Significance Not Significant

Correlation Coefficient	0.9845
R^2	0.9922
Standard Error,S.E.(r)	0.0138
Probable Error P.E.(r)	0.0093
6 P.E.	0.0558

Level of Significance Significant

2)

HBL		
F\Y	NPA(x)	Net Profit(y)
2061/62	7.44	32.98
2062/63	6.6	35.16
2063/64	3.61	34.9
2064/65	2.36	41.58
2065/66	2.16	39.96

ADBL		
F\Y	NPA(x)	Net Profit(y)
2061/62	19.81	-1.78
2062/63	20.59	8.33
2063/64	17.96	15.76
2064/65	10.77	8.49
2065/66	9.71	15.69

Correlation Coefficient	-0.8540
R^2	#NUM!
Standard Error,S.E.(r)	0.1211
Probable Error P.E.(r)	0.0817
6 P.E.	0.4899

Level of Significance Not Significant

Correlation Coefficient	-0.4722
R^2	#NUM!
Standard Error,S.E.(r)	0.3475
Probable Error P.E.(r)	0.2344
6 P.E.	1.4062

Level of Significance Not Significant

3)

RBB		
F\Y	NPA(x)	Net Profit(y)

NBL		
F\Y	NPA(x)	Net Profit(y)

2061/62	50.7	37.69
2062/63	37.09	37.02
2063/64	28.63	39.63
2064/65	21.43	38.59
2065/66	15.68	36.47

	49.64	41
	18.18	28
	13.49	9.59
	12.38	8.53
	4.94	22.68

Correlation Coefficient	0.0243
R ²	0.1557
Standard Error, S.E.(r)	0.4470
Probable Error P.E.(r)	0.3015
6 P.E.	1.8088

Level of Significance Not Significant

Correlation Coefficient	0.7707
R ²	0.8779
Standard Error, S.E.(r)	0.1816
Probable Error P.E.(r)	0.1225
6 P.E.	0.7349

Level of Significance Significant

Calculation of Regression Coefficient of Net Profit(Y) on Total Deposit (X)

$(Y=a+bX)$

APPENDIX 17

1)

SCBNL		
FY	Net Profit (Y)	Deposit (X)
2061/62	536,245,000	19,363,470,000
2062/63	658,756,000	23,061,032,000
2063/64	691,668,000	24,647,021,000
2064/65	818,921,000	29,743,999,000
2065/66	1,025,115,000	35,871,721,000
Regression Constant (a)		(19,962,539)
Regression Coefficient (b)		0.0289
Standard Error (S.E.)		0.0012
Coefficient of Determination		0.9952
F Statistics (Calculated)		625.0859
T Statistics (Calculated)		25.0017
F Statistics (Tabulated)		10.1280
T Statistics (Tabulated)		3.1824
Significance of relation (F)		Significant
Significance of relation (T)		Significant
Probability of Higher F Value		0.0001

NABIL		
Net Profit (Y)	Deposit (X)	
520,114,085		
635,262,349		
673,959,698		
746,468,394		
1,031,053,098		
Regression Constant(a)		
RGRN Coeff. (b)		
S.E.		
Coefficient of Determination		
F Statistics (Calculated)		
T Statistics (Calculated)		
F Statistics (Tabulated)		
T Statistics (Tabulated)		
Significance of relation (F)		
Significance of relation (T)		
Probability of higher F		

2)

HBL		
FY	Net Profit (Y)	Deposit (X)
2061/62	308,277,000	24,814,012,000
2062/63	457,458,000	26,490,852,000
2063/64	491,823,000	30,048,418,000
2064/65	635,869,000	31,842,789,000
2065/66	752,835,000	34,681,345,000

ADBL		
Net Profit (Y)	Deposit (X)	
-78,632,817.20		27,223,0
353,524,879.43		29,631,8
1,058,448,590.18		32,416,3
669,239,366.97		32,553,8
1,057,600,440.06		35,159,6

Regression Constant(a)	(697,655,880)
RGRN Coeff. (b)	0.0415
Standard Error (S.E.)	0.0062
Coefficient of Determination	0.9378
F Statistics (Calculated)	45.2692
T Statistics (Calculated)	6.7282
F Statistics (Tabulated)	10.1280
T Statistics (Tabulated)	3.1824
Significance of relation (F)	Significant
Significance of relation (T)	Significant
Probability of higher F	0.0067

Regression Constant(a)	(4
RGRN Coeff. (b)	
Standard Error (S.E.)	
Coefficient of Determination	
F Statistics (Calculated)	
T Statistics (Calculated)	
F Statistics (Tabulated)	
T Statistics (Tabulated)	
Significance of relation (F)	
Significance of relation (T)	
Probability of higher F	

3)

RBB		
FY	Net Profit (Y)	Deposit (X)
2061/62	43,016,063,057.26	1,322,893,575.26
2062/63	46,195,481,570.30	1,591,488,713.45
2063/64	50,464,128,578.30	1,616,910,912.40
2064/65	58,333,116,174.48	1,718,939,269.04
2065/66	68,095,697,104.39	2,032,229,125.95
Regression Constant(a)	(9,197,319,479)	
RGRN Coeff. (b)	37.6810	
Standard Error (S.E.)	6.7903	
Coefficient of Determination	0.9112	
F Statistics (Calculated)	30.7939	
T Statistics (Calculated)	5.5492	
F Statistics (Tabulated)	10.1280	
T Statistics (Tabulated)	3.1824	
Significance of relation (F)	Significant	
Significance of relation (T)	Significant	
Probability of higher F	0.0115	

NBL	
Net Profit (Y)	De
2,050,250,000.00	
1,207,264,860.00	
226,952,911.00	
239,214,010.00	
894,254,182.00	
Regression Constant(a)	
RGRN Coeff. (b)	
Standard Error (S.E.)	
Coefficient of Determination	
F Statistics (Calculated)	
T Statistics (Calculated)	
F Statistics (Tabulated)	
T Statistics (Tabulated)	
Significance of relation (F)	
Significance of relation (T)	
Probability of higher F	

APPENDIX 18

Regression Of Net Profit(Y) on Total Deposits (X1),Total Investment(X2) & Loan Advances (X3)

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3$$

SCBNL

Net Profit	Total Deposits (X1)	Total Investment (X3)
536,245,000	19,363,470,000	9,702,553,000
658,756,000	23,061,032,000	12,838,555,000
691,668,000	24,647,021,000	13,553,233,000
818,921,000	29,743,999,000	13,902,819,000
1,025,115,000	35,871,721,000	20,236,121,000

Coefficient	-0.0078	0.0046	0.0292
S.E.	0.0062	0.0050	0.0051
R ² , SE. Y	0.9998	4829436.5550	#N/A
F Test, D. F.	1968.8315	1.0000	#N/A
	137759874388561000.0000	23323457439165.1000	#N/A
T Values	-1.2651	0.9214	5.7720
Correlation	0.9999		
F Tabulated	215.7073		
T Tabulated	12.7062		
Probability Of F	0.0166		

$$Y = - 7793463.74 + 0.00292 X1 + 0.0046 X2 - 0.0078 X3$$

APPENDIX 19

Regression Of Net Profit(Y) on Total Deposits (X1), Total Investment(X2) & Loan Advances (X3)

$$Y = a + b1 X1 + b2 X2 + b3 X3$$

NABIL

Net Profit	Total Deposits (X1)	Total Investment (X3)
520,114,085	14,586,608,707	4,275,528,208
635,262,349	19,347,399,440	6,178,533,108
673,959,698	23,342,285,327	8,945,310,567
746,468,394	31,915,047,467	9,939,771,428
1,031,053,098	37,348,255,840	10,826,379,001

Coefficient	0.0705	0.0266	-0.0398
S.E.	0.0494	0.0541	0.0478
R ² , SE. Y	0.9649	71782199.9692	#N/A
F Test, D. F.	9.1569	1.0000	#N/A
	141547073943171000.0000	5152684232417240.0000	#N/A
T Values	1.4270	0.4910	-0.8339
Correlation	0.9823		
F Tabulated	215.7073		
T Tabulated	12.7062		
Probability Of F	0.2372		

$$Y = 275802710.79 + -0.0398 X1 + 0.0266 X2 - 0.0705 X3$$

APPENDIX 20

Regression Of Net Profit(Y) on Total Deposits (X1), Total Investment(X2) & Loan Advances (X3)

$$Y = a + b1 X1 + b2 X2 + b3 X3$$

HBL

Net Profit	Total Deposits (X1)	Total Investment (X3)
308,277,000	24,814,012,000	11,692,342,000
457,458,000	26,490,852,000	10,889,031,000

491,823,000	30,048,418,000	11,822,985,000
635,869,000	31,842,789,000	13,340,177,000
752,835,000	34,681,345,000	8,710,691,000

Coefficient	0.0604	0.0282		-0.0227
S.E.	0.0472	0.0315		0.0499
R ² , SE. Y	0.9779	50811418.9664	#N/A	
F Test, D. F.	14.7391	1.0000	#N/A	
	11416000138182000.0000	2581800297379840.0000	#N/A	
T Values	1.2806	0.8965		-0.4559
Correlation	0.9889			
F Tabulated	215.7073			
T Tabulated	12.7062			
Probability Of F	0.1886			

$$Y = -237112589.39 - 0.0227 X1 + 0.0282 X2 - 0.0604X3$$

APPENDIX 21

Regression Of Net Profit(Y) on Total Deposits (X1),Total Investment(X2) & Loan Advances (X3)

$$Y = a + b1 X1 + b2 X2+ b3 X3$$

ADBL

Net Profit	Total Deposits (X1)	Total Investment (X3)
-78,632,817.20	27,223,046,161.96	1,355,832,882.79
353,524,879.43	29,631,817,480.57	1,511,330,021.29
1,058,448,590.18	32,416,358,357.08	3,177,460,912.73
669,239,366.97	32,553,827,474.54	2,881,658,756.59
1,057,600,440.06	35,159,610,215.50	4,896,061,772.90

Coefficient	-0.1330	-0.0776		0.3543
S.E.	0.0603	0.1575		0.1089
R ² , SE. Y	0.9793	139720797.8745	#N/A	
F Test, D. F.	15.8013	1.0000	#N/A	
	925413609261967000.0000	19521901358697500.0000	#N/A	
T Values	-2.2067	-0.4929		3.2545
Correlation	0.9896			
F Tabulated	215.7073			
T Tabulated	12.7062			
Probability Of F	0.1824			

$$Y = -6627592611.95 - 0.3543 X1 - 0.0776 X2 - 0.1330X3$$

APPENDIX 22

Regression Of Net Profit(Y) on Total Deposits (X1),Total Investment(X2) & Loan Advances (X3)

$$Y = a + b1 X1 + b2 X2+ b3 X3$$

RBB

Net Profit	Total Deposits (X1)	Total Investment (X3)
1,322,893,575.26	43,016,063,057.26	8,415,882,087.29

1,591,488,713.45	46,195,481,570.30	11,555,357,804.13
1,616,910,912.40	50,464,128,578.30	12,650,196,361.67
1,718,939,269.04	58,333,116,174.48	14,446,377,954.16
2,032,229,125.95	68,095,697,104.39	15,418,022,055.26

Coefficient	-0.1879	0.0283	0.1135
S.E.	0.2898	0.0511	0.1532
R ² , SE. Y	0.9571	106017974.7289	#N/A
F Test, D. F.	7.4414	1.0000	#N/A
	250918237010949000.0000	11239810965616400.0000	#N/A
T Values	-0.6485	0.5539	0.7409
Correlation	0.9783		
F Tabulated	215.7073		
T Tabulated	12.7062		
Probability Of F	0.2617		

$$Y = -1255852844.65 - 0.1135 X_1 - 0.0283 X_2 - 0.1879 X_3$$

APPENDIX 23

Regression Of Net Profit(Y) on Total Deposits (X1), Total Investment(X2) & Loan Advances (X3)

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3$$

NBL

Net Profit	Total Deposits (X1)	Total Investment (X3)
2,050,250,000.00	35,934,164,000.00	14,219,757,000.00
1,207,264,860.00	35,829,765,050.00	14,490,247,108.00
226,952,911.00	39,014,204,359.00	16,072,179,882.00
239,214,010.00	41,829,391,063.00	16,570,755,516.00
894,254,182.00	45,194,232,465.00	13,397,559,686.00

Coefficient	0.1238	-0.2461	-0.1554
S.E.	0.0470	0.1090	0.0338
R ² , SE. Y	0.9768	231424643.7722	#N/A
F Test, D. F.	14.0087	1.0000	#N/A
	2250811135688120000.0000	53557365745093300.0000	#N/A
T Values	2.6344	-2.2571	-4.6007
Correlation	0.9883		
F Tabulated	215.7073		
T Tabulated	12.7062		
Probability Of F	0.1934		

$$Y = -9056012349.42 - 0.1544 X_1 - 0.2461 X_2 + 0.1238 X_3$$

APPENDIX 24

Regression Of MVPS(Y) on EPS(X1) & DPS (X2)

$$Y = a + b_1 X_1 + b_2 X_2$$

SCBNL

	EPS(X1)	DPS(X2)	MVPS(Y)
	143.14	120.00	2,345.00
	175.84	140.00	3,775.00
	167.37	130.00	5,900.00
	131.92	130.00	6,830.00
	109.99	100.00	6,010.00

Coefficient	78.2519	-63.5939	4531.3399
S.E.	149.1606	84.7525	10078.7660
R ² , SE. Y	0.2372	2287.9325	#N/A
F Test, D. F.	0.3110	2.0000	#N/A
	3255460.1175	10469269.8825	#N/A
T Values	0.5246	-0.7503	0.4496
Correlation	0.4870		
F Tabulated	19.0000		
T Tabulated	4.3027		
Probability Of F	0.7628		

	a	X1	X2
Y=	4531.339861	78.25191534	-63.59389067

APPENDIX 25

Regression Of MVPS(Y) on EPS(X1) & DPS (X2)

$$Y = a + b_1 X_1 + b_2 X_2$$

NABIL

	EPS(X1)	DPS(X2)	MVPS(Y)
	105.49	70.00	1,505.00
	129.21	85.00	2,240.00
	137.08	140.00	5,050.00
	108.31	100.00	5,275.00
	106.76	85.00	4,899.00

Coefficient	81.7773	-96.8258	7307.6264
S.E.	33.7024	61.4086	5420.7064
R ² , SE. Y	0.7481	1262.1163	#N/A
F Test, D. F.	2.9695	2.0000	#N/A
	9460483.6164	3185875.1836	#N/A
T Values	2.4265	-1.5767	1.3481
Correlation	0.8649		

F Tabulated 19.0000
T Tabulated 4.3027
Probability Of F 0.2519

	a	X1	X2
Y=	7307.6264	81.77725803	-96.82579177

APPENDIX 26

Regression Of MVPS(Y) on EPS(X1) & DPS (X2)

$$Y = a + b1 X1 + b2 X2$$

HBL

EPS(X1)	DPS(X2)	MVPS(Y)
47.91	31.58	920.00
59.24	35.00	1,100.00
60.66	40.00	1,740.00
62.74	45.00	1,980.00
61.90	43.56	1,760.00

Coefficient	82.2653	-3.2880	-1518.3363
S.E.	25.4652	23.8493	738.3152
R^2, SE. Y	0.9499	146.0517	#N/A
F Test, D. F.	18.9708	2.0000	#N/A
	809337.7964	42662.2036	#N/A
T Values	3.2305	-0.1379	-2.0565
Correlation	0.9746		
F Tabulated	19.0000		
T Tabulated	4.3027		
Probability Of F	0.0501		

	a	X1	X2
Y=	-1518.33626	82.265258	-3.287950576

APPENDIX 27

Calculation of T values (CRR)

POCB (X1)	GOCB (X2)	X1^2	X2^2
6.82	13.73	46.51	188.60
5.35	15.36	28.59	235.83
5.79	13.58	33.56	184.33
6.45	13.70	41.56	187.60
7.99	17.67	63.84	312.23
32.40	74.03	214.06	1108.59
SP2			2.07
Calculated T value			-9.15

APPENDIX 28

Calculation of T values (NPM)

POCB (X1)	GOCB (X2)	X1^2	X2^2
33.77	25.64	1140.64	657.24
35.85	24.45	1284.98	597.80
33.87	21.66	1147.18	469.16
35.37	18.54	1250.80	343.61
35.79	24.95	1280.69	622.34
174.64	115.23	6104.29	2690.14
SP2			4.85
Calculated T value			8.53

APPENDIX 29

Calculation of T values (NPM)

POCB (X1)	GOCB (X2)
98.85	263.8
121.43	250.6
121.70	181.4
100.99	180.4
92.88	271.1
535.85	1147.5
SP2	
Calculated T value	

APPENDIX 30

Calculation of T values (MVPS)			
POCB (X1)	GOCB (X2)	X1^2	X2^2
1590.00	112.50	2528100.00	12656.25
2371.67	112.50	5624802.78	12656.25
4230.00	112.50	17892900.00	12656.25
4695.00	112.50	22043025.00	12656.25
4223.00	112.50	17833729.00	12656.25
17109.67	562.50	65922556.78	63281.25
SP2			921802.26
Calculated T value			5.45

APPENDIX 31

Calculation of T values (P/E ratio)				Calcula
POCB (X1)	GOCB (X2)	X1^2	X2^2	POCB (X1)
16.62	0.25	276.11	0.06	73.86
19.13	0.36	365.83	0.13	86.67
33.93	1.89	1151.02	3.55	103.33
44.01	1.79	1936.88	3.20	91.67
42.99	0.48	1847.85	0.23	76.19
156.67	4.76	5577.70	7.17	431.71
SP2			83.93	SP2
Calculated T value			5.24	Calculated T value

APPENDIX 33

Calculation of T values (Dividend1)			
POCB (X1)	GOCB (X2)	X1^2	X2^2
67.19	0.50	4514.94	0.25
81.67	0.50	6669.44	0.25
65.00	0.50	4225.00	0.25
55.00	0.50	3025.00	0.25
32.33	0.50	1045.44	0.25
301.19	2.50	19479.83	1.25
SP2			167.04
Calculated T value			7.31

APPENDIX 34

Calculation of T values (Interest Income on loan and Advances)			
POCB (X1)	GOCB (X2)	X1^2	X2^2
8.96	10.69	80.28	114.28
8.28	12.28	68.56	150.80
8.20	11.56	67.29	133.63
7.99	10.12	63.84	102.41
8.65	10.97	74.82	120.34
42.08	55.62	354.80	621.46
SP2			0.42
Calculated T value			-6.62

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Calculation of T values (ex)	
POCB (X1)	GOCB (X2)
31.99	40.6
31.60	44.3
31.86	40.9
30.45	49.3
31.69	53.8
157.59	229.1
SP2	
Calculated T value	

APPENDIX 36

Calculation of T values (Interest expenses on Total Deposit and Borrowings)			
POCB (X1)	GOCB (X2)	X1^2	X2^2
1.75	2.99	3.06	8.94
1.95	2.84	3.80	8.07
2.25	2.86	5.05	8.20
2.27	2.22	5.17	4.94
2.47	2.15	6.12	4.62

APPENDIX 37

Calculation of T values (Exchange Fluctuation income/Total Income)			
POCB (X1)	GOCB (X2)	X1^2	X2^2
12.45	0.15	155.09	0.02
11.89	1.53	141.45	2.35
10.72	-0.84	114.99	0.71
10.28	1.24	105.61	1.53
11.08	0.86	122.69	0.75

AP

Calculation of bonus/Tot	
POCB (X1)	GOCB (X2)
34.70	
32.99	
31.64	
33.52	
34.34	

	10.69	13.07	23.20	34.77
SP2				0.12
Calculated T value				-2.18

	56.42	2.94	639.83	5.36
SP2				0.84
Calculated T value				18.42

	167.19
SP2	
Calculated T value	

APPENDIX 39

Calculation of T values (Net Profit/Loan and Advances)			
POCB (X1)	GOCB (X2)	X1^2	X2^2
4.88	4.97	23.85	24.70
5.33	5.87	28.41	34.46
4.75	3.75	22.59	14.06
4.49	3.19	20.13	10.20
5.00	4.59	24.97	21.04
24.45	22.37	119.95	104.46
SP2			0.59
Calculated T value			0.85

APPENDIX 40

Calculation of T values (ROA)			
POCB (X1)	GOCB (X2)	X1^2	X2^2
2.21	1.78	4.88	3.18
2.48	2.58	6.15	6.64
2.20	2.16	4.85	4.68
2.18	1.67	4.75	2.78
2.33	2.22	5.43	4.91
11.40	10.41	26.07	22.19
SP2			0.07
Calculated T value			1.16

Calculation of T values (ROA)	
POCB (X1)	X2^2
3.97	3.97
4.27	4.27
3.89	3.89
3.87	3.87
3.93	3.93
19.93	19.93
SP2	
Calculated T value	

APPENDIX 41

Calculation of T values (Total Credit/Total Deposit)			
POCB (X1)	GOCB (X2)	X1^2	X2^2
56.20	74.91	3158.81	5611.01
54.61	65.82	2981.89	4332.27
57.16	63.53	3267.27	4036.48
52.12	65.80	2716.49	4329.20
61.35	66.21	3764.23	4383.76
281.44	336.27	15888.69	22692.73
SP2			15.54
Calculated T value			-4.40

APPENDIX 42

Calculation of T values (Operating Ratio)			
POCB (X1)	GOCB (X2)	X1^2	X2^2
3.03	5.05	9.21	25.50
2.97	6.97	8.83	48.53
2.96	6.33	8.78	40.03
2.81	5.74	7.89	32.91
3.10	6.13	9.59	37.62
14.87	30.21	44.30	184.59
SP2			0.26
Calculated T value			-9.54

Calculation of T values (Operating Ratio)	
POCB (X1)	X2^2
11.11	11.11
10.10	10.10
11.11	11.11
9.99	9.99
10.10	10.10
53.41	53.41
SP2	
Calculated T value	

APPENDIX 45

Calculation of T values (Capital Adequacy on Supplementary Capital)			
POCB (X1)	GOCB (X2)	X1^2	X2^2
1.95	1.88	3.79	3.52
2.03	-0.65	4.11	0.42

APPENDIX 46

Calculation of T values (Capital Adequacy on Total Capital)			
POCB (X1)	GOCB (X2)	X1^2	X2^2
13.17	-23.02	173.45	529.77
12.83	-33.57	164.69	1126.94

APPENDIX 47

Calculation of T values (Capital Adequacy on Total Capital)	
POCB (X1)	GOCB (X2)
3.82	4.00
3.37	2.00

1.70	0.72	2.88	0.52
2.35	1.90	5.51	3.61
1.94	1.96	3.76	3.85
9.96	5.82	20.05	11.93
SP2			0.67
Calculated T value			1.60

12.96	-25.84	167.96	667.71
12.22	-17.82	149.41	317.55
12.14	-7.51	147.38	56.45
63.33	-107.76	802.89	2698.42
SP2			47.10
Calculated T value			7.88

2.19	2
1.34	1
1.21	1
11.92	11
SP2	
Calculated T value	

INDICATORS FROM ANNUAL REPORTS

1. CRR

FY	BANKS						
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	8.77	3.83	7.86	6.82	11.15	
2005/06	2062/63	6.86	3.26	5.92	5.35	16.1	
2006/07	2063/64	5.46	6	5.92	5.79	11.38	
2007/08	2064/65	5.84	8.37	5.13	6.45	11.13	
2008/09	2065/66	8.18	9.03	6.76	7.99	14.81	
Mean		7.02	6.10	6.32	6.48	12.91	
S.d		1.44	2.60	1.04	1.02	2.37	
C.V.		20.46	42.58	16.41	15.73	18.32	

2.NET PROFIT RATIO

FY	BANKS						
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	34.01	34.33	32.98	33.77	-1.78	
2005/06	2062/63	37.06	35.32	35.16	35.85	8.33	
2006/07	2063/64	34.55	32.16	34.9	33.87	15.76	
2007/08	2064/65	34.94	29.58	41.58	35.37	8.49	
2008/09	2065/66	36.84	30.56	39.96	35.79	15.69	
Mean		35.48	32.39	36.92	34.93	9.30	
S.d		1.38	2.43	3.66	1.03	7.19	
C.V.		3.90	7.51	9.92	2.94	77.36	

3. Earning Per Share

FY	BANKS						
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	143.14	105.49	47.91	98.85	-4.69	
2005/06	2062/63	175.84	129.21	59.24	121.43	21.76	
2006/07	2063/64	167.37	137.08	60.66	121.70	65.14	
2007/08	2064/65	131.92	108.31	62.74	100.99	32.21	
2008/09	2065/66	109.99	106.76	61.9	92.88	50.91	

Mean		145.65	117.37	58.49	107.17	33.07	42.17
S.d		26.69	14.70	6.06	13.47	26.93	6.06
C.V.		18.33	12.53	10.36	12.57	81.45	10.36

4. Market Value Per Share(Rs.)

FY		BANKS					
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	2345	1505	920	1590.00		
2005/06	2062/63	3775	2240	1100	2371.67		
2006/07	2063/64	5900	5050	1740	4230.00		
2007/08	2064/65	6830	5275	1980	4695.00		
2008/09	2065/66	6010	4899	1760	4223.00		
Mean		4972.00	3793.80	1500.00	3421.93	0.00	
S.d		1852.35	1778.09	461.52	1357.79	#DIV/0!	
C.V.		37.26	46.87	30.77	39.68	#DIV/0!	#DIV/0!

5. Price Earning Ratio(Times)

FY		BANKS					
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	16.38	14.27	19.2	16.62		
2005/06	2062/63	21.47	17.34	18.57	19.13		
2006/07	2063/64	36.25	36.84	28.69	33.93		
2007/08	2064/65	51.77	48.7	31.56	44.01		
2008/09	2065/66	54.64	45.89	28.43	42.99		
Mean		36.10	32.61	25.29	31.33	0.00	
S.d		17.26	15.99	5.98	12.93	#DIV/0!	
C.V.		47.82	49.04	23.64	41.27	#DIV/0!	#DIV/0!

6. Divident on share Capita Including bonus(%)

FY		BANKS					
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	120	70	31.58	73.86		
2005/06	2062/63	140	85	35	86.67		
2006/07	2063/64	130	140	40	103.33		
2007/08	2064/65	130	100	45	91.67		
2008/09	2065/66	100	85	43.56	76.19		
Mean		124.00	96.00	39.03	86.34	0.00	
S.d		15.17	26.79	5.68	12.00	#DIV/0!	
C.V.		12.23	27.90	14.54	13.90	#DIV/0!	

7. Cash Dividend on Share Capita(%)

FY		BANKS					
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		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	120	70	11.58	67.19		
2005/06	2062/63	130	85	30	81.67		
2006/07	2063/64	80	100	15	65.00		
2007/08	2064/65	80	60	25	55.00		
2008/09	2065/66	50	35	12	32.33		
Mean		92.00	70.00	18.72	60.24	0.00	
S.d		32.71	24.75	8.32	18.28	#DIV/0!	
C.V.		35.56	35.36	44.43	30.34	#DIV/0!	

8. interest income\loan and advances(%)

F\Y		BANKS					
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	7.43	8.7	10.75	8.96	12.51	
2005/06	2062/63	6.23	8.29	10.32	8.28	12.11	
2006/07	2063/64	6.49	8.14	9.98	8.20	13.42	
2007/08	2064/65	6.2	8.04	9.73	7.99	9.19	
2008/09	2065/66	7.95	8.82	9.18	8.65	11.05	
Mean		6.86	8.40	9.99	8.42	11.66	
S.d		0.79	0.34	0.59	0.39	1.62	
C.V.		11.48	4.11	5.94	4.59	13.90	

9. Staff Expenses\Total Operating Expenses(%)

F\Y		BANKS					
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	22.53	31.5	41.95	31.99	28.8	3
2005/06	2062/63	24.29	28.93	41.57	31.60	49.05	3
2006/07	2063/64	23.76	24.41	47.4	31.86	36.89	3
2007/08	2064/65	24.28	21.17	45.91	30.45	54.36	3
2008/09	2065/66	23.58	23.96	47.54	31.69	54.81	4
Mean		23.69	25.99	44.87	31.52	44.78	3
S.d		0.72	4.15	2.92	0.61	11.49	
C.V.		3.04	15.96	6.50	1.95	25.66	

10. Interest Expenses on Total Deposit And Borrowings(%)

F\Y		BANKS					
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	1.31	1.68	2.26	1.75	4.83	
2005/06	2062/63	1.31	2.09	2.45	1.95	4.78	
2006/07	2063/64	1.65	2.54	2.55	2.25	4.9	
2007/08	2064/65	1.59	2.64	2.59	2.27	3.18	

2008/09	2065/66	1.5	3.22	2.7	2.47	3.27
Mean		1.47	2.43	2.51	2.14	4.19
S.d		0.16	0.58	0.17	0.29	0.88
C.V.		10.68	23.94	6.61	13.40	21.10

11. Exchange Fluctuation income\Total Income(%)

FY		BANKS					
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	17.32	12.24	7.8	12.45	0.03	
2005/06	2062/63	15.95	10.31	9.42	11.89	0.07	
2006/07	2063/64	15.44	10.02	6.71	10.72	-0.21	
2007/08	2064/65	14.75	7.81	8.27	10.28	0.15	
2008/09	2065/66	17.25	7.47	8.51	11.08	0.33	
Mean		16.14	9.57	8.14	11.28	0.07	
S.d		1.13	1.96	0.99	0.88	0.20	
C.V.		6.98	20.49	12.21	7.81	265.09	4

12. Staff Bonus\Total Staff Expenses(%)

FY		BANKS					
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	37.38	42.2	24.53	34.70	0	
2005/06	2062/63	35.83	40.86	22.28	32.99	3.91	
2006/07	2063/64	33.71	41.43	19.78	31.64	7.32	
2007/08	2064/65	34.63	41.42	24.51	33.52	3.24	
2008/09	2065/66	36.7	43.5	22.81	34.34	5.12	
Mean		35.65	41.88	22.78	33.44	3.92	
S.d		1.49	1.02	1.96	1.21	2.68	
C.V.		4.19	2.44	8.59	3.62	68.52	5

13. Net Profit\Loan and Advances(%)

FY		BANKS					
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	6.85	5.32	2.48	4.88	-0.25	
2005/06	2062/63	7.63	5.24	3.12	5.33	1.06	
2006/07	2063/64	6.75	4.62	2.89	4.75	3.07	
2007/08	2064/65	6.24	3.96	3.26	4.49	1.83	
2008/09	2065/66	7.93	4.02	3.04	5.00	2.76	
Mean		7.08	4.63	2.96	4.89	1.69	
S.d		0.69	0.65	0.30	0.31	1.34	
C.V.		9.72	13.95	10.10	6.36	79.36	

15. Net Profit\Total Assets(%) ROA

FY	BANKS						
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	2.46	3.06	1.11	2.21	-0.2	
2005/06	2062/63	2.66	3.23	1.55	2.48	1	
2006/07	2063/64	2.42	2.72	1.47	2.20	2.77	
2007/08	2064/65	2.46	2.32	1.76	2.18	1.52	
2008/09	2065/66	2.53	2.55	1.91	2.33	2.04	
Mean		2.51	2.78	1.56	2.28	1.43	
S.d		0.09	0.37	0.31	0.13	1.12	
C.V.		3.78	13.34	19.58	5.51	78.54	

16. Total Credit\Deposit

FY	BANKS						
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	43.49	75.05	50.07	56.20	115.01	6
2005/06	2062/63	39.92	68.63	55.27	54.61	112.42	5
2006/07	2063/64	43.78	68.13	59.57	57.16	106.24	
2007/08	2064/65	46.95	48.18	61.23	52.12	112.44	4
2008/09	2065/66	38.7	73.87	71.49	61.35	108.93	4
Mean		42.57	66.77	59.53	56.29	111.01	5
S.d		3.30	10.84	7.96	3.41	3.43	
C.V.		7.75	16.23	13.38	6.07	3.09	

17. Total Operating Expenses\Total Assets

FY	BANKS						
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	3.03	3.73	2.34	3.03	7.07	
2005/06	2062/63	2.69	3.86	2.36	2.97	10.25	
2006/07	2063/64	2.94	3.97	1.98	2.96	9.28	
2007/08	2064/65	2.78	3.86	1.79	2.81	7.72	
2008/09	2065/66	2.64	4.34	2.31	3.10	8.76	
Mean		2.82	3.95	2.16	2.97	8.62	
S.d		0.17	0.23	0.26	0.11	1.26	
C.V.		5.87	5.89	12.04	3.61	14.59	

18. Adequacy of Total Capital Fund on Risk Weighted Assets(%)(Core Capital)

FY	BANKS						
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	13.99	11.35	8.33	11.22	-15.5	-3
2005/06	2062/63	12.99	10.78	8.65	10.81	-2.08	-5
2006/07	2063/64	13.77	10.4	9.61	11.26	2.68	

2007/08	2064/65	11.52	8.75	9.36	9.88	6.68	
2008/09	2065/66	13.05	8.74	8.81	10.20	11.04	-2
Mean		13.06	10.00	8.95	10.67	0.56	-3
S.d		0.97	1.20	0.52	0.62	10.21	1
C.V.		7.41	11.98	5.85	5.78	1809.62	-2

19. Adequacy of Total Capital Fund on Risk Weithted Assets(%)(Suppelementary Cap

FY		BANKS						
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB	
2004/05	2061/62	2.07	1.09	2.68	1.95	9.74		
2005/06	2062/63	1.94	1.52	2.62	2.03	0		
2006/07	2063/64	1.94	1.64	1.51	1.70	2.16		
2007/08	2064/65	1.63	2.35	3.06	2.35	4.72		
2008/09	2065/66	1.65	1.96	2.21	1.94	4.65		
Mean		1.85	1.71	2.42	1.99	4.25		
S.d		0.20	0.47	0.59	0.23	3.64		
C.V.		10.59	27.67	24.39	11.75	85.53	3	

20. Adequacy of Total Capital Fund on Risk Weithted Assets(%)(Total Capital)

FY		BANKS						
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB	
2004/05	2061/62	16.06	12.44	11.01	13.17	-5.76	-3	
2005/06	2062/63	14.93	12.31	11.26	12.83	-2.08	-5	
2006/07	2063/64	15.71	12.04	11.13	12.96	4.84	-4	
2007/08	2064/65	13.15	11.10	12.42	12.22	11.40	-3	
2008/09	2065/66	14.70	10.70	11.02	12.14	15.69	-2	
Mean		14.91	11.72	11.37	12.67	4.82	-3	
S.d		1.13	0.77	0.60	0.46	8.96	1	
C.V.		7.58	6.60	5.25	3.62	185.93	-2	

21. Non Performing Credit\Total Credit(%)

FY		BANKS						
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB	
2004/05	2061/62	2.69	1.32	7.44	3.82	19.81		
2005/06	2062/63	2.13	1.38	6.6	3.37	20.59	3	
2006/07	2063/64	1.83	1.12	3.61	2.19	17.96	2	
2007/08	2064/65	0.92	0.74	2.36	1.34	10.77	2	
2008/09	2065/66	0.66	0.8	2.16	1.21	9.71	1	
Mean		1.65	1.07	4.43	2.38	15.77	3	
S.d		0.85	0.29	2.44	1.18	5.15	1	
C.V.		51.35	27.31	55.10	49.36	32.66	4	

22. Weighted Average Interest rate Spread

22. Weighted Average Interest rate Spread							
F\Y	BANKS						
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	3.7	5.01	3.19	3.97	6.73	
2005/06	2062/63	4.1	4.9	3.8	4.27	5.85	
2006/07	2063/64	3.95	4.15	3.57	3.89	5.88	
2007/08	2064/65	4.01	3.94	3.66	3.87	5.82	
2008/09	2065/66	3.98	4.16	3.66	3.93	5.75	
Mean		3.95	4.43	3.58	3.99	6.01	
S.d		0.15	0.49	0.23	0.16	0.41	
C.V.		3.79	10.99	6.46	4.06	6.79	

23. Book Net Worth(per share)

23. Book Net Worth(per share)							
F\Y	BANKS						
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB in rs. 000	RBB in r 000
2004/05	2061/62	422.38	337.00	239.59	332.99	(357.01)	(1,72
2005/06	2062/63	468.22	381.00	228.72	359.31	(51.41)	(1,59
2006/07	2063/64	512.12	418.00	264.74	398.29	78.34	(1,46
2007/08	2064/65	401.52	354.00	247.95	334.49	276.03	(1,32
2008/09	2065/66	327.53	324.00	256.52	302.68	497.00	(1,15
Mean		426.35	362.80	247.50	345.55	88.59	-14
S.d		69.83	37.51	14.09	35.67	324.11	2
C.V.		16.38	10.34	5.69	10.32	365.85	-

24. Total Shares

24. Total Shares							
F\Y	BANKS						
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	3,746,404	4,916,544	6,435,000	5032649.33	16,776,147	11,723
2005/06	2062/63	3,746,404	4,916,544	7,722,000	5461649.33	16,250,000	11,723
2006/07	2063/64	4,132,548	4,916,544	8,108,100	5719064.00	16,250,000	11,723
2007/08	2064/65	6,207,840	6,892,160	10,135,125	7745041.67	20,775,000	11,723
2008/09	2065/66	9,319,664	9,657,470	12,162,150	10379761.33	20,775,000	11,723
Mean		5430572.00	6259852.40	8912475.00	6867633.13	18165229.40	1172300
S.d		2402441.06	2083089.69	2250410.68	2223064.17	2392047.37	
C.V.		44.24	33.28	25.25	32.37	13.17	

25. Total Staff(no.)

25. Total Staff(no.)							
F\Y	BANKS						
		STND CHRTD	NABIL	HIMLAYAN	AVRG POCB	ADB	RBB
2004/05	2061/62	302	426	501	409.67	4093	
2005/06	2062/63	345	441	561	449.00	3973	

2006/07	2063/64	351	427	584	454.00	3437	
2007/08	2064/65	377	416	591	461.33	3528	
2008/09	2065/66	392	505	591	496.00	3427	
Mean		353.40	443.00	565.60	454.00	3691.60	318
S.d		34.52	35.78	38.15	30.86	316.98	17
C.V.		9.77	8.08	6.75	6.80	8.59	