RESEARCH ARTICLE

A Comparative Study on Performance of Indian Public Sector Banks

Simran Jain*

Assistant Professor, Department of Management, Mewar Institute of Management, Vasundhara, Ghaziabad, Uttar Pradesh, India

Abstract

Banks play a positive role in the economic development of a nation as depositories of community's savings and as purveyors of credit. Banking as a major part of the financial sector, is the life blood of the economy. It plays a decisive role in accelerating the rate of economic growth. The importance of commercial banks in the process of economic development has been stressed from time to time by the economic thinkers and progressive bankers in the country. Banks are the heart of our financial structure.

Keywords: Banks, Public Sector Banks, Performance of Indian Public Sector Banks, Indian Banks, Indian Public Sector Banks, Punjab National Bank, Bank of Baroda, Canara Bank, State Bank of India, Bank of India.

IMS Manthan (The Journal of Innovations) (2020). DOI: 10.18701/imsmanthan.v15i02.5

Introduction

A good bank is not only the financial heart of the community but also one with an obligation of helping in every possible manner to improve the economic conditions of the ordinary people. A bank is a financial intermediary that accepts deposits and channels those deposits into lending activities. Banks are a fundamental component of the financial system and are also active players in financial markets. The essential role is to connect those who have capital (such as investors or depositors) with those who seek capital (individuals who want a loan or businesses to grow). Banks play an important role in the economic development of every nation. They have control over a large part of the supply of money in circulation. Through their influence over the volume of bank money, they can influence in nature and character of production in any country. Economic development is a dynamic and continuous process. Banks are the mainstay of the economic progress of a country because the economic development highly depends upon the extent of mobilization of resources and investment and on the operational efficiency of the various segments (i.e., Trade, Industrial Development, and Agriculture) of the economy. Thus, in the modern economy, banks have become part and parcel of all economic activities in India.

Profile Organization/Company

A bank is a financial institution licensed to receive deposits and make loans. Banks may also provide financial services, such as wealth management, currency exchange, and safe deposit boxes. There are two types of banks: commercial/retail banks and investment banks. In most countries, banks are regulated by the national government or central bank. The essential role is to connect those who have capital (such as investors or depositors), with those who seek capital (such as individuals wanting a loan or businesses wanting to grow. Banks are key financial intermediaries or institutions that serve as "middle man" in transferring funds from servers to those who invest in real assets like houses, equipment, and factories. In performing these functions, financial intermediaries improve the well-being of both savers and investors, and by improving economic efficiency, they raise the living standard of the society. The banking sector is considered to be an important source of financing for most businesses. They play a very important role in attaining stable prices, a high level of employment, and sound economic growth. They make funds available to meet the needs of individuals, businesses, and the government. In doing this, they facilitate the flow of goods and services and the activities of governments.

Different Types of Banks in the World

There are different types of banks being present in the world. Some of the types are: Commercial Banks, Community Development Banks, Cooperative Bank, Credit Unions, Ethical Banks, Exchange Bank, Federal or National Banks, Indigenous Bank, Industrial Development Bank, Internet Banking, Investment Bank, Islamic Banks, Land Development

Corresponding Author: Simran Jain, Assistant Professor, Department of Management, Mewar Institute of Management, Vasundhara, Ghaziabad, Uttar Pradesh 201012, Email: shalinis455@gmail.com

How to cite this article: Jain, S. (2020). A Comparative Study on Performance of Indian Public Sector Banks. IMS Manthan (The Journal of Innovations), 15(2): 16-29

Source of support: Nil

Conflict of interest: None

Submitted: 31/07/2021 **Accepted:** 30/08/2021 **Published:** 23/12/2021

Bank, Merchant Banks, Mortgage Banks, Postal Savings Bank, Private Bank, Savings Banks. (www.investopedia.com).

The world's first bank, on record, was the Taula de la Ciutat, which opened in Barcelona in 1401. The Taula de la Ciutat opened in Barcelona in 1401 to act as a treasury resource for the Catalonian government. The bank is on record as the first official bank in the world, although the practice of banking has been traced back for several centuries. (www.refrence.com). The first bank of India is the Bank of Hindustan, established in 1770. This bank was established at Calcutta under European management. It was liquidated in 1830-32. As per the Reserve Bank of India (RBI), India's banking sector is sufficiently capitalized and well-regulated. The financial and economic conditions in the country are far superior to any other country in the world. Credit, market, and liquidity risk studies suggest that Indian banks are generally resilient and have withstood the global downturn well.

The Indian banking industry has recently witnessed innovative banking models like payments and small finance banks. The central bank granted in-principle approval to 11 payments banks and 10 small finance banks in FY 2015-16. RBI's new measures may go a long way in helping the restructuring of the domestic banking industry.

The Indian banking system consists of 26 public sector banks, 25 private sector banks, 43 foreign banks, 56 regional rural banks, 1,589 urban cooperative banks, and 93,550 rural cooperative banks, in addition to cooperative credit institutions. Public-sector banks control nearly 80 percent of the market, leaving comparatively much smaller shares for their private peers. Banks are also encouraging their customers to manage their finances using mobile phones.

Standard & Poor's estimates that credit growth in India's banking sector would improve to 11–13 percent in FY17 from less than 10 percent in the second half of CY14. (www.ibef.org)

Public Sector Banks

The term public sector banks are used commonly in India. This refers to banks that have their shares listed in the stock exchanges NSE, BSE, and Indian government holds a majority stake in these banks. They can also be termed government-owned banks. Ex: State bank of India. The public sector banks hold over 75% of the total assets of the banking industry, with the private foreign banks holding 18.2% and 6.5%, respectively. Since liberalization, the government has approved significant banking reforms. While some relate to nationalized banks (like encouraging mergers, reducing government interference, and increasing profitability and competitiveness), other reforms have opened up the banking and insurance sectors to private and foreign players. The Public Sector Banks (PSBs) play an important role in the economy of India. Of late, because of a variety of legacy issues, including the delay caused in various approvals and land acquisition, etc., and because of low global and domestic demand, many large projects are strained. Public Sector Banks that have got a predominant share of infrastructure financing have been affected by this phenomenon. It has resulted in lower profitability of Public Sector Banks, mainly due to provisioning for the restructured projects and gross NPAs.

As of now, the PSBs are adequately capitalized and meeting all the Basel III and RBI norms. However, the Government of India wants to adequately capitalize all the banks to keep a safe buffer over and above the minimum norms of Basel III. We have, therefore, estimated how much capital will be required this year and in the next three years till FY 2019. If we exclude the internal profit generation that will be available to PSBs (based on the estimate of average profit of the last three years), the capital requirement of extra capital for the next four years up to FY 2019 is likely to be about INR1,80,000 crore. This estimate is based on a credit growth rate of 12% for the current year and 12 to 15% for the next three years, depending on the bank's size and growth ability. We are also presuming that the emphasis on Public Sector Bank's financing will reduce over the years by developing a vibrant corporate debt market and greater participation of Private Sector Banks.

Objectives of the Study

Role of Objective

Objectives are the concrete statements that describe the things a project is trying to achieve. A project objective should be written to be evaluated after a project to see whether it was achieved. One technique for writing an objective is to make sure that it is SMART - Specific, Measurable, Attainable/Achievable, Realistic, and Time-bound.

Starting a project without clear objectives, specific directions, and a prepared plan of action is like starting out on a road trip with no idea where you're going or how to get there. You will waste gas, time, and effort. Likewise, a business suffers when one tries to implement a plan without clarity and forethought. While one certainly may not predict the project's outcome, he can define the scope of the technical and organizational components of the project, resources he is willing to allocate to the entire project, establish clear deadlines, and the expected results as discussed by Gupta (2014).

Objectives of the Project

- To analyze the financial performance of Indian Public Sector Banks using CAMEL model.
- To study challenges and opportunities faced by Public Sector Banks.

Scope of Study

This study will help the customers identify which bank is better in terms of financial performance against other public sector banks. Public sector banks, an important group of financial organizations of our economy, act as the backbone of economic growth and prosperity. Therefore, these banks are treated as the instruments for the conversion of state credit into dynamic credit. In terms of the role of Public Sector Banks in a planned economy, they may be distinguished from other financial institutions in much as the former assist in implementing government plans by providing the sinews of development. Primarily, the banks perform functions of a technical nature, including the fulfillment of credit requirements as per the government's economic plans and controlling the utilization of these credits according to planned priorities.

Methodology

Methodology for Data Collection

Research Methodology

- The present study attempts to evaluate the performance of selected Public Sector Banks in India. It examines and compares the various aspects of the performance of selected Public Sector Banks in India. Secondary data has been used for this study.
- Several indicators can measure the performance of a bank. Among these, profitability is the most important and reliable indicator as it gives a broad indication of a bank's capability to increase its earnings. Profitability is a key performance parameter in the banking sector, reflecting the efficient utilization of all resources in an organization. The banks are now facing several challenges such as frequent changes in technology required for modern banking, stringent prudential norms, increasing competition, worrying level of non-performing assets, raising customer expectation, increasing pressure on profitability, asset-liability management, liquidity, and credit risk management, raising operating expenditure, shrinking size of the spread and so on.

Sources of Data Collection

- The study is based on secondary data taken from the financial statements of the respective Public Sector Banks to analyze their performance.
- For more information, different journals and related websites will be considered as and when required for the study.
- The data has been collected from various sources such as Statistical Tables relating to banks in India, RBI Monthly Bulletin, IBA Bulletins, and annual reports of banks. Moreover, data have been taken from the year 2011 to 2015.

Research Design

- "CAMEL" model as a tool is very effective, efficient, and accurate to be used as a performance evaluation in banking industries and to anticipate the future and relative risk.
- "CAMEL" ratios are calculated in order to focus on financial performance.
- CAMEL is a ratio-based model used to evaluate the performance of banks with the help of different criteria, viz. Capital Adequacy, Asset Quality, Management Quality, Earnings, and Liquidity. The present study is a descriptive research study based on an analytical research design.
- Capital Adequacy reflects the overall financial condition of the banks. Asset Quality is assessed by Net NPA to Net Advances. Management Quality is evaluated by two variables, Profit Per Employee (PPE) and Business Per Employee (BPE). Earning quality is examined by Return on Assets (ROA). Liquidity implies the cash position of the bank.

Technique used

The researcher identifies the following factors to assess the financial performance and also responsible for the profitability of the Public Sector Banks in either direction.

Capital Adequacy

The capital base of financial institutions facilitates depositors in forming their risk perception about the organization. Also, it is a significant stricture for financial managers to maintain adequate levels of capitalization. Capital adequacy is very useful for a bank to conserve & protect stakeholders" confidence and prevent the bank from bankruptcy. Reserve Bank of India prescribes banks to maintain a minimum Capital to risk-weighted Assets Ratio (CRAR) of 9 % about credit risk, market risk, and operational risk on an ongoing basis, as against 8 % prescribed in Basel documents. For determining Capital Adequacy of selected banks, we have taken Capital to Risk-weighted Assets Ratio (CRAR); this ratio is propounded to ensure that banks can adopt a reasonable level of losses arising from operations and to ascertain the bank's loss bearing capacity

Asset Quality

Asset quality determines the healthiness of financial institutions against loss of value in the assets as asset impairment risks the solvency of the financial institutions. The weakening value of assets has a spillover effect, as losses are eventually written-off against capital, which eventually exposes the institution's earning capacity. With this framework, the asset quality is assessed concerning the level and severity of non-performing assets, adequacy of provisions, distribution of assets etc. To determine the Asset Quality of selected banks we have taken Net NPAs to Net Advances Ratio, as it is the most standard measure to assess the Assets Quality.

Management Quality

Management efficiency, another indispensable component of the CAMEL framework, means adherence to set norms, a knack to plan and be proactive in the dynamic environment, leadership, innovativeness, and administrative competence of the bank. To determine the management efficiency of selected banks, we have taken Total Advances to Total Deposits ratio. This ratio assesses the efficiency of the bank's management in applying the deposits available, excluding other funds like equity capital, etc., into advances with high yields.

Earnings Quality

The quality of earnings represents the sustainability and growth of future earnings, the value of bank's lucrativeness and its competency to maintain quality and earn consistently. Earnings and profitability are examined against interest rate policies and the adequacy of provisioning. The single best indicator used to gauge earning is the Return on Assets (ROA), net income after taxes to total asset ratio. To determine Earnings Quality, we have taken the Operating Profit to Total Assets ratio, reflecting the return on assets employed.

Liquidity

In an adequate liquidity position, the institution can obtain sufficient funds, either by increasing liabilities or by converting its assets to cash quickly at a reasonable cost. To determine the liquidity of selected banks, we have taken Liquid Assets to Total Assets ratio, as it reflects the bank's ability to meet its financial obligations and maintain an adequate level of liquid assets, which will otherwise result in a decline in the earnings.

The one-way ANOVA test has been applied to the sample data to determine whether there is any significant difference between the CAMEL ratios. Analysis of variance (ANOVA) is a technique to test for the significance of the difference between more than two sample means and to make inferences about whether our samples are drawn from the populations having the same mean. The term one-way ANOVA refers to a single variable or factor of interest is controlled, and its effect on the elementary units is observed.

Sampling Design

Sampling may be defined as selecting an aggregate or totality based on which a judgment or inference about the aggregate or totality is made. In simple words, it is the process of obtaining information about the population by examining only a part of it. The top five banks have been taken as samples for this study - State Bank of India, Bank of Baroda, Punjab National Bank, Canara Bank, and Bank of India.

State Bank of India

State Bank of India (SBI) is an Indian multinational, public sector banking and financial services company. It is a government-owned corporation with its headquarters in Mumbai, Maharashtra. As of 2016-17, it had assets of INR30.72 trillion (US$460 billion) and more than 14,000 branches, including 191 foreign offices spread across 36 countries, making it the largest banking and financial services company in India by assets. The company is ranked 232nd on the Global 500 list of the world's biggest corporations as of 2016. (www.statebankofindia.com)

Bank of Baroda

Bank of Baroda is an Indian state-owned International banking and financial services company headquartered in Navi Mumbai (earlier known as Baroda) in Gujarat, India. It is the second-largest bank in India, next to State Bank of India, and is headquartered in Navi Mumbai, Maharashtra, India. It has a corporate office in Mumbai. Based on 2014 data, it is ranked 801 on Forbes Global 2000 list. BOB has total assets over INR 3.58 trillion, a network of 5493 branches in India and abroad, and 10441 ATMs as of September 2016 (www.bankofbaroda.com).

Punjab National Bank

Punjab National Bank is an Indian multinational banking and financial services company. It is a state-owned corporation based in New Delhi, India. Founded in 1894, the bank has over 6,968 branches and over 9,935 ATMs across 764 cities. It serves over 80 million customers (www.punjabnationalbank.com).

Canara Bank

Canara Bank is an Indian state-owned bank headquartered in Bangalore, Karnataka. It was established at Mangalore in 1906, making it one of the oldest banks in the country. The government nationalized the bank in 1969. As of September 2016, the bank had a network of 5849 branches and more than 10026 ATMs spread across India. The bank also has offices abroad in London, HongKong, Moscow, Shanghai, Doha, Bahrain, South Africa, Dubai, Tanzania, and New York (www.canarabank.com).

Bank of India

Bank of India (BOI) is a commercial bank with headquarters in New Delhi, India. Founded in 1906, it has been government-owned since nationalization in 1969. However, some branches are individually owned, such as Kandia, Indonesia, etc. Bank of India has 4828 branches as of 31 December 2013, including 56 offices outside India, including five subsidiaries, five representative offices, and one joint venture. BOI is a founder member of SWIFT (Society for Worldwide Inter Bank Financial Telecommunications), which facilitates cost-effective financial processing and communication services (www.bankofindia.com).

Hypothesis of the Study

The present study tested the following null hypothesis:

- H0 = There is no significant difference in the performance of Public Sector Banks in India as assessed by CAMEL model.

- H1 = There is a significant difference in the performance of Public Sector Banks in India assessed by CAMEL model.

Literature Review

A *literature review* is a text of a scholarly paper, which includes the current knowledge, including substantive findings and theoretical and methodological contributions to a particular topic. Literature reviews are secondary sources and do not report new or original experimental work. Most often associated with academic-oriented literature, such reviews are found in academic journals and are not confused with book reviews that may appear in the same publication. Literature reviews are a basis for research in nearly every academic field. A narrow-scope literature review may be included as part of a peer-reviewed journal article presenting new research, situating the current study within the body of the relevant literature, and providing context for the reader. In such a case, the review usually precedes the methodology and results in sections of the work.

Dhanabhakyam M (2012) "Financial Performance of selected Public Sector Banks in India" attempted to analyze the financial performance of selected Public Sector Banks in India. The study's objectives are to analyze the financial performance of selected Public Sector Banks, enlighten on the establishment of Public Sector Banks, and offer suggestions for improving the performance of banks. The reviewed study attempted to analyze various public sector banks' financial performance, including Bank of India, Canara Bank, Indian Bank, Indian Overseas Bank, State Bank of India, Union of India. The variables of the study were Ratio Analysis, Correlation, and Regression. The period of the study is Ten years and is based on secondary data i.e., unpublished financial reports, journals, magazines, and websites. From ratio analysis and correlation analysis, it can be viewed that Public Sector Banks has a positive financial performance throughout the study period, which shows that banks can continue their operations and satisfy the customers. This study will help the researcher analyze the financial performance of Public Sector Banks that have their shares listed in the stock exchange NSE and BSE, and also the Government of India holds the majority stake in these banks. The sample banks take the following important steps for overall real growth, i.e., introducing Modern Marketing Strategies, improving credit deposit proportion, generating non-interest income, introducing Branch Administration, monitoring the controlling mechanism on important ratios, and prudential disclosure of financial information. According to this report, the selected Public Sector banks have performed well on the growth rate and financial efficiency sources during the study period.

Gupta R. (2014) "An analysis of Indian Public Sector banks using CAMEL approach" attempted to analyze the financial performance of Indian Public Sector Banks using Camel Approach. CAMEL is a ratio-based model used to evaluate the performance of banks with the help of different criteria, viz. Capital Adequacy, Asset Quality, Management Quality, Earnings, and Liquidity. The present study is a descriptive research study based on an analytical research design. The study's main objective is to analyze the financial position and performance of the Public Sector banks in India using CAMEL model. All the 26 Public Sector Banks in India have been analyzed for the study. The study is based on secondary data, viz. journals, IBA bulletin, statistics published by Reserve bank of India, and annual reports published by the banks. The statistical tools used for the study are Kolmogorov-Smirnov, Arithmetic mean and F-test, and one-way ANOVA for analysis and interpretation. From the various analysis, it can be viewed that due to the radical changes in the banking sector in recent years, the central banks worldwide have improved their supervision quality and techniques. In evaluating the functions of the banks, many of the developed countries are now following uniform financial rating systems (CAMEL RATING) along with the existing procedures and techniques. Various studies have been conducted in India as well on various banks using CAMEL framework. Different banks are ranked according to the ratings obtained by them on the five parameters. The result shows a statistically significant difference between the CAMEL ratios of all the Public Sector Banks in India, thus, signifying that the overall performance of Public Sector Banks is different. Also, it can be concluded that the banks with the least ranking need to improve their performance to come up to the desired standards. The reviewed study covers all the aspects which are necessary to analyze the performance of any bank. This study will help the researcher in analyzing the financial performance of Indian Public Sector banks.

Pandi T.(2014) "Factors determining the profitability of Public Sector banks in India" attempted to analyze the factors determining the profitability of Public Sector Banks in India. The study's objective is to identify the performance of PSBs concerning CRAMEL and factors determining profitability and to present the findings and offer suitable suggestions to improve the profitability of the Public Sector Banks. The study covers a period of 10 financial years from 2003-04 to 2011-12. Several indicators can measure the performance of a bank. Among these, profitability is the most important and reliable indicator as it gives a broad indication of a bank's capability to increase its earnings. The variables of the study were Correlation analysis and Path Co-efficient Analysis. The required information is collected from the volumes of published reports by the Statistical Department of RBI, Mumbai, RBI bulletins, reports on currency and finance, books relating to Public Sector Banks, journals, magazines, and unpublished reports. The government mainly controls Indian banking section as PSB's being leaders in this sphere. It is suggested that the government formulate bank-specific policies and implement them through Reserve Bank of India for the upliftment of Public Sector Banks. The study has observed that the banking sector in India has responded very positively in enhancing the role of market forces regarding measures of prudential regulations of accounting, income recognition, provisioning, exposure, and introduction CRAMELS supervisory rating system. All the banks have to take the necessary steps to improve the overall performance of the banking sector.

Sodhi A.(2016) "Fundamental analysis of selected Public and Private sector banks in India" attempted to do fundamental analysis of selected Public and Private Sector Banks in India. The objective of the study is to analyze the profitability position of the selected banks which is helpful in making decisions. Hypotheses of study are that there is no significant difference between the selected banks (H0), and there is a significant difference between the selected variables of selected banks (H1). To analyze the fundamentals of the top five banks, three in the public sector and two in the private sector have been taken as samples. State Bank of India, Bank of Baroda, PNB, HDFC, and ICICI have been taken as samples for this study. The study variables were net profit margin, operating profit margin, return on equity, and earnings per share, dividend per share, price-earnings ratio, and dividend payout ratio. The required information is collected from the volumes of published reports by the Statistical Department of RBI, RBI bulletins, and unpublished reports. Tabular analysis, Descriptive analysis, and ANOVA were used in the study. This research paper provides insights into the financial performance of selected banking companies. The selected Public Sector Banks' Net Profit Margins dropped after 2013, significantly impacting their core profitability. Given the improvement in assets, the Public Sector Banks are likely to improve their NPMs.

Bhatia K. (2015) "Comparative study of Performance of Public and Private Sector banks" attempted to analyze the comparative study of the performance of Public and Private Sector Bank in India. The study's objective was to promote the saving habits of the masses, fostering the economic growth of the country by providing funds to the business sector, earning sufficient profit, and developing basic industries, consumer products industries, large and small business enterprises, and the service sector. The study examines the parameters which new generation private sector banks influence public sector banks. Emphasis has been placed on exploring and identifying the underlined competition issues for the banking professional in general and public sector banks in particular. The research hypothesizes that all the banks are not utilizing their full potential, public has more faith in public sector banks in terms of deposits and performance of public sector banks and private sector banks. The tools used to compare the banks were data analysis and independent sample test. To compare the performance 50 public and private bank customers are taken as samples. This research is conducted based on primary as well as secondary data. Primary sources include research analysis and surveys conducted among bank customers to know their assessment about banks. Secondary sources include data from several research journals, dissertations, project reports, academic books, handbooks, government reports, newspapers, and websites. Findings of the study were more no. of the people has a/c with public sector banks, majority of the respondents whether in the private sector or public sector banks have saving a/c with banks, people want a change in the behavior of the staff of the private sector banks and no. of problems found by the people is more in private sector banks.

Goel C. (2013) "A comparative study on the Performance of selected public and private sector bank in India" attempted to analyze a Comparative Study on the Performance of Selected Public Sector and Private Sector Banks in India. The study's objectives are to compare the profit earning of the selected public sector banks and private sector banks from 2009 to 2012 and investigate the factors affecting the profit earning of the selected banks during the study. For the in-depth analysis of the profitability, three major public sector and three private sector banks are selected based on their Total Assets from 2009 to 2012. They are State Bank of India, Punjab National Bank, Bank of Baroda, ICICI Bank, HDFC Bank, and Axis Bank. Suitable statistical techniques are used for data analysis like ratios and coefficient correlation. Secondary data has been used for data collection through Reserve Bank of India monthly bulletins, annual reports, moneyrediff, money control, bank websites, etc. The reviewed study covers all the aspects which are necessary to analyze the performance of any bank. This study will help the researcher analyze the financial performance and compare Indian Public Sector banks with Private Sector Banks.

Koundal V.(2012) "Performance of Indian Banks in Indian financial system" attempted to analyze the performance of Indian Banks in the Indian Financial System. The study's objectives are to analyze the comparative performance of the public sector, old private sector banks, new private sector banks, and foreign sector banks and it also studies the challenges and opportunities particularly faced by the public sector banks. The study hypothesizes that the performance of foreign banks is significantly better than old private sector banks, new private sector banks, and public sector banks, and the performance of new private sector banks is significantly better than old private sector banks and public sector banks. The paper is concerned with the Indian banking system. For this, all commercial banks have been selected for this study. The study is based on secondary data. The required data have been collected from the various issues of Banking Statistics, published by the Reserve Bank of India. Ratio analysis is used in this study as a tool to compare the performance of selected sector banks. This paper concludes that although various reforms have produced favorable effects on commercial banks in India, transformation is taking place almost in all banks. It has also realized that the profitability of public sector banks appears to have started improving, but despite this, the foreign and private sector banks take a big share of the cake. Our public sector banks are still lagging regarding the various financial parameters in comparison with other banks.

Chaudhary K. (2011) "Performance of Indian public sector banks and private sector banks" attempted to analyze the Performance of Selected Public Sector and Private Sector Banks in India. The study's objectives are to compare the performance of public sector banks and private sector banks of India, find out trends in NPA Level, and suggest various measures for NPA management. Public sector banks are the ones in which the government has a major holding. They are divided into two groups, i.e., nationalized banks and State Bank of India and its associates. The study concludes that it is the right time to take suitable and stringent measures to eliminate the NPA problem. Efficient management information should be developed. The bank staff involved in sanctioning the advances should be trained about the proper documentation and charge of securities and motivated to prevent advances from turning into NPA. The reviewed study covers all the aspects which are necessary to analyze the performance of any bank. This study will help the researcher analyze the financial performance and compare Indian Public Sector banks with Private Sector Banks.

Karthikeyan M.(2014) "Performance of public sector banks in India" attempted to analyze the performance of Public Sector Banks in India. The study's objectives are to measure the performance of selected Public Sector Banks and offer suitable recommendations based on the study to improve financial performance. The study hypothesizes that there is no significant difference in public sector banks' performance as assessed by the CRAMEL model. The present study is a descriptive research study based on an analytical research design. The secondary data from the annual reports of relevant banks for 10 years has been taken, which is the most recent data available on the banking sector to analyze various banks' available financial information, different techniques of applied research, and accounting tools like comparative ratios employed. Based on the findings of the study, the banks, in order to improve their performance, the authorities of the respective banks may consider CRAMEL split-up ranking to understand their current position and take necessary steps to enhance their rating. This study will help the researcher analyze the financial performance of Public Sector Banks that have their shares listed in the stock exchange NSE, BSE, and also the Government of India holds the majority stake in these banks.

Kaur M. (2016) "Financial analysis of selected public sector banks" attempted to analyze the financial performance analysis of selected public sector banks. The study's objectives are to evaluate the Financial Performance of Selected Public Banks using the CAMEL model approach and compare the banks and their performance of 5 years. The secondary data has been used for the study, taken from the banks' annual reports. For conducting this research, the Leading 5 Public sector banks have been nominated based on the total assets, namely State Bank of India, Bank of Baroda, Punjab National Bank, Bank of India, and Canara bank. The present study is descriptive research, and CAMEL Model has been used to conduct the research. The study tools are Capital Adequacy, Asset Quality, Management Efficiency, Earning Quality, and Liquidity. The conclusion is that the overall performance of the selected banks' study is similar to every study. The study results recommend that the State Bank of India improve its Assets Quality, Management Efficiency, and Liquidity.

Similarly, Punjab National Bank has to improve its Liquidity and Assets Quality, and Bank of India should focus on Capital Adequacy and Earning quality. Due to the passage of time, the ranking of Canara Bank and Punjab National Bank has decreased, which is a negative sign for the Banks. They both need to increase their overall productivity and efficiency to compete with the tough like Bank of Baroda.

Subraveti R. (2010) "Performance of banking industry in India" attempted to analyze the performance of selected Public Sector Banks using CAMEL approach. The main objective is to analyze the financial position and performance of the 5 selected Public Sector Banks in India using CAMEL model. The study hypothesizes that there is no significant difference in the performance of the 5 selected Public Sector Banks in India as assessed by CAMEL model (H0). There is a significant difference in the performance of 5 selected Public Sector Banks in India assessed by CAMEL model. Five major Public Sector Banks in India, excluding SBI and its associate's banks have been analyzed for the study. For this study, secondary sources of data collection have been used, viz. journals, IBA bulletin, statistics published by Reserve Bank of India, and annual reports published by the banks. The tools used for this study are ANOVA analysis, Arithmetic mean, Standard Deviation, and Shapiro-Wilk Test. Due to the many recent changes in the banking sector, like improved quality of service, supervision, and awareness about the need for banking, there have been universally accepted evaluating techniques like the CAMEL approach and other existing procedures to analyze the performance from time to time.

Gupta R. (2014) "Financial performance of Indian new Private and Public sector banks" attempted to analyze Financial Performance of Indian New Private and Public sector banks. The study's main objectives are to analyze the financial performance of Indian commercial banks using CAMEL Model and compute the performance of the new private sector and public sector banks. The hypotheses tested are that the

Public sector banks have higher Capital Adequacy Ratio and net NPA/Net Advances, whereas Private sector banks have a higher profit per employee, business per employee, return on assets, and higher current ratio. Five leading private sector banks- ICICI Bank, HDFC Bank, Axis Bank, Kotak Mahindra Bank, and Indusind Bank and five public sector banks- State Bank of India, Punjab National Bank, Bank of Baroda, Canara Bank, and Bank of India have been taken as sample. For this study, data are collected from secondary sources like RBI bulletin and the Indian Banker and Indian bank's association website. The tools used for the study include SPSS software and CMIE- prowess. This study will help the researcher analyze the financial performance of Public Sector Banks that have their shares listed in the stock exchange NSE and BSE and also the Government of India holds the majority stake in these banks.

Data Presentation and Analysis

The previous chapter covers the banking profile, study's objectives, scope of the study, research methodology, hypothesis, and literature review. This chapter covers the statistical analysis of data collected using the research instrument. Analysis of the data was carried out using both MS Excel and SPSS (Statistical Package for Social Sciences) to identify which Public Sector Bank is better in terms of financial performance against others.

Capital Adequacy

Capital adequacy is said to be one of the important reflectors of a bank's financial health. Protecting stakeholder' confidence and preventing its bankruptcy is essential for a bank to survive. Capital is supposed to be a cushion, which protects stakeholder interest and increases stability and efficiency.

Capital Adequacy indicates the overall financial position of a bank. It indicates whether the bank has sufficient capital to bear unexpected losses in the future and bank leverage.

Capital to Risk-Weighted Asset Ratio (CRAR)

This ratio is propounded to ensure that banks can adopt a reasonable level of losses arising from operations and ascertain the bank's loss bearing capacity. Higher the ratio means banks are stronger and the investors are more protected. The latest RBI guideline for banks in India is to maintain a CRAR of 9%. Capital to Risk-weighted Assets Ratio (CRAR) = (Tier-I + Tier-II)/Risk-Weighted Assets. Tier 1 capital includes shareholders' equity, perpetual non-cumulative preference shares disclosed reserves and innovative capital instruments. Tier 2 capital includes undisclosed reserves, revaluation reserves of fixed assets, and long-term holdings of equity.

Analysis

All the four banks, namely Bank of Baroda, Canara Bank, State Bank of India, and Punjab National Bank, have approximately equal CAR with 13.94,13.22,13.02,13.01.

Interpretation

It Implies that these banks have a greater capacity to adapt to the loss. On the other hand Bank of India has taken the last position with CAR 11.91%, which is the least. So, Bank of Baroda does not have much capacity to adapt to its losses. However, all the banks have followed the guidelines of RBI and have maintained a CAR of 9%.

Assets Quality

The quality of assets also plays a crucial role in determining the financial strength of a bank. The prime objective to assess the quality of assets is to ascertain the composition of Non-

Table 1: CAMEL Model

Camel	*Ratios*	*References*
C	Capital to Risk weighted Assets Ratio	Roopak(2009), Pandi (2012), Gupta (2014), Reddy (2015), Pandi (2012), kaur (2016), Sikarwar(2014), Lakhtaria (2013)
A	Net NPAs to Net Advances Ratio	Gupta(2014), Reddy (2015) Roopak (2009), Koundal (2012), Kaur (2016)
M	Total Advances to Total Deposits	Gupta(2014), Reddy (2015), Roopak (2009)
E	Operating Profit to Total Assets	Pandi(2012), Gupta (2014), Reddy (2015), Kaur(2016), Lakhtaria (2013)
L	Liquid Assets to Total Assets	Pandi(2012), Gupta (2014), Reddy (2015), Kaur (2016), Koundal (2012), Sikarwar (2014)

Source: Developed for the study

Table 2: Capital to Risk Weighted Asset Ratio

S.no	Banks	2015	2014	2013	2012	2011	Average	Rank
1	SBI	12.96	12.92	13.86	11.98	13.39	13.02	3
2	BOB	12.87	13.30	14.67	14.52	14.36	13.94	1
3	PNB	12.69	13.16	12.63	12.42	14.16	13.01	4
4	BOI	11.15	11.11	12.03	12.24	13.00	11.91	5
5	CB	11.14	12.40	13.76	15.38	13.43	13.22	2

Performing Assets (NPAs) as a percentage of the total assets. The following ratios are required to assess assets quality:

Net NPAs to Net Advances Ratio:

Measuring the net non-performing assets as a percentage of net advances is the most standard measure for assessing assets quality. Net NPAs are calculated by deducting net provisions on non-performing assets and interest in the suspense account from Gross NPAs.

Analysis

Bank of Baroda secures first position with a lower NPA of 0.81% against Net Advances followed by Bank of India and Canara Bank with 1.55 and 1.66%, whereas Punjab National Bank and State Bank of India have higher NPA and secures the last position.

Interpretation

It states that Bank of Baroda has adopted a better lending policy and managed the Non-performing assets better than the other four banks. At the same time, State Bank of India has a higher NPA of 1.97% and securing the last position indicating the poor management and lending policy.

Management Efficiency

Management efficiency is one of the crucial components of the CAMEL model that ensures a bank's survival and growth. Management efficiency means to follow up of defined norms, capability to plan and respond to a dynamic environment, and administrative ability of the bank. Effective management is one of the crucial factors behind any institution's performance.

Total Advances to Total Deposits

This ratio assesses the efficiency of the bank's management in applying the deposits (including receivables) available, excluding other funds like equity capital, etc., into advances with high yields. Savings deposits, demand deposits, term deposits, and deposits of other banks are included in total deposits.

Analysis

State Bank of India Stands at First Position with Advances to Deposits ratio of 82.34%, followed by Punjab National Bank with 75.86%, Bank of India with 75.32%, Bank of Baroda with 72.25% and Canara Bank secures the last position with 71.07%.

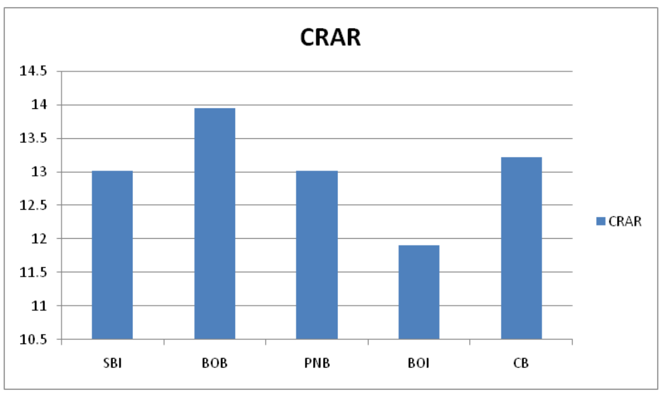

Figure 1: Capital to Risk Weighted Asset Ratio

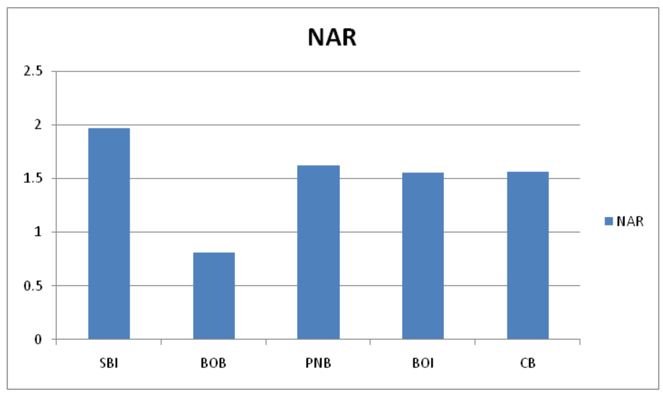

Figure 2: Net of Assets to Net Advances Ratio

Table 3: Net of Assets to Net Advances Ratio

S.no	*Banks*	*2015*	*2014*	*2013*	*2012*	*2011*	*Average*	*Rank*
1	SBI	2.57	2.10	1.82	1.63	1.72	1.97	5
2	BOB	1.52	1.28	0.54	0.35	0.34	0.81	1
3	PNB	2.85	2.35	1.52	0.85	0.53	1.62	4
4	BOI	2.00	2.05	1.47	0.91	1.31	1.55	2
5	CB	2.00	2.17	1.46	1.10	1.06	1.56	3

Table 4: Total Advances to Total Deposits

S. no	*Banks*	*2015*	*2014*	*2013*	*2012*	*2011*	*Average*	*Rank*
1	SBI	85.82	85.57	82.25	80.16	77.88	82.34	1
2	BOB	69.60	69.12	74.39	74.48	72.25	72.25	4
3	PNB	79.37	80.27	78.39	78.34	62.95	75.86	2
4	BOI	77.85	75.86	78.18	71.34	73.36	75.32	3
5	CB	71.64	68.16	71.19	72.10	72.26	71.07	5

Interpretation

It states that the State Bank of India has made efficient and appropriate utilization of Its Depositor's deposits by advancing the money for maximum growth of the bank. Whereas, other four banks namely, Bank of Baroda, Punjab National Bank, Bank of India, Canara Bank has approximately equal Ratio of Advances to Deposits following State Bank of India. It means that they have utilized the money well but not as efficiently as the State Bank of India.

Earning Quality

The quality of earnings is an important criterion representing the income quality in terms of income generated by core activity income from lending operations. This criterion contains importance in light of the argument that most of the bank's earnings are from non-core activities such as treasury operation, investments, corporate advisory service, etc.

Operating Profit to Total Assets

This ratio reflects the return on assets employed. It is calculated by dividing the net profits by the total assets of the bank. Higher the ratio reflects better earning potential and vice versa.

Analysis

Higher the net profit is better the earning potential of the bank. The above table shows that Bank of Baroda leads in net profit to assets ratio with 1.09 followed by Punjab National Bank with 1.00.

Interpretation

It means that both the banks are earning a good amount of return on their assets. At the same time, the condition for Bank of India is Poor. The earning potential of Bank of India is 0.68, like half of that of Bank of Baroda.

Liquidity

Liquidity is a crucial aspect that reflects the bank's ability to meet its financial obligations and maintain an adequate level of liquid assets, otherwise resulting in a decline in earnings. An adequate liquidity position can be obtained by increasing liabilities or converting its assets quickly into cash. The bank has to take proper measures to hedge the liquidity risk while securing a good proportion of funds invested in high return generating securities.

Liquid Assets to Total Assets

This ratio measures the overall liquidity position of a bank. The liquid assets include cash in hand, money at call and short notice, balance with Reserve bank of India and balance with other financial institutions/banks (India and Abroad). The total assets include the revaluation of all the assets.

Analysis

Higher the Liquidity, Better is the solvency and working capital of the banks, which is required for day-to-day operations. Bank of Baroda stands at first position with Liquid assets of 14.28%, followed by Bank of India with 10.80%. At the same time, Punjab National Bank and State Bank of India have low liquid assets of 5.19 and 7.71%.

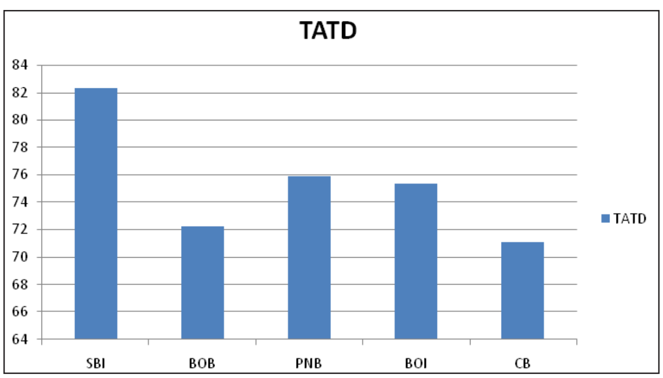

Figure 3: Total Advances to Total Deposits

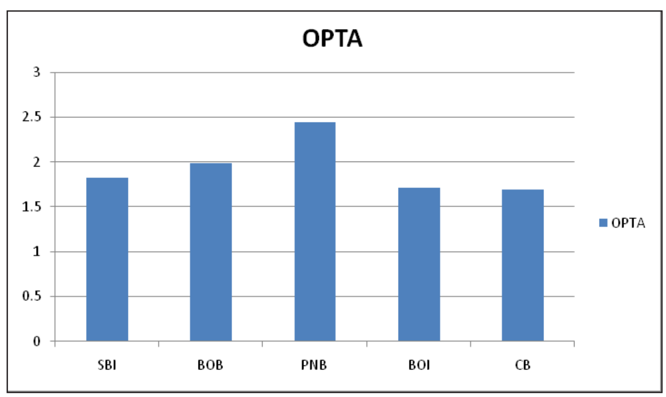

Figure 4: Operating Profits to Total Assets

Table 5: Operating Profit to Total Assets

S.no	Bank	2015	2014	2013	2012	2011	Average	Rank
1	SBI	1.34	1.46	2.38	2.17	1.75	1.82	3
2	BOB	1.61	1.88	2.19	2.22	2.03	1.99	2
3	PNB	1.98	2.19	2.59	2.72	2.70	2.44	1
4	BOI	1.46	1.63	1.81	1.78	1.88	1.71	4
5	CB	1.51	1.56	1.72	2.15	1.50	1.69	5

Interpretation

It means that Bank of Baroda and Bank of India is more solvent and has great potential to fulfill demand than State bank of India and Punjab National Bank.

Hypothesis of the Study

- H_0 = There is no significant difference in the performance of Public Sector Banks in India as assessed by CAMEL model.
- H_1 = There is a significant difference in the performance of Public Sector Banks in India assessed by CAMEL model.

Anova Test

To determine whether there is any significant difference in the performance of Public Sector Bank CAMEL ratios, one way ANOVA test has been applied on the sample data. The results are tabulated as follows:

The outcome of p-value interprets the independent t-test result. The null hypothesis is accepted if p-value is greater than 0.05, and the alternative hypothesis is accepted if p-value is less than 0.05.

Analysis and Interpretation

The Leading Five Public Sector Banks ratios found out that Bank of Baroda has performed better in Capital Adequacy, has better earning capacity, has secured the first position in liquidity, and has better management efficiency. Thus it can be ranked at number 1 followed by Punjab National Bank at number 2, as it has a sound risk management system and has a greater capacity to meet's its additional capital needs. Canara bank has always remained in the middle position, and thus it has been ranked at number 3. Bank of India has been ranked at number 4, and State Bank of India has been ranked at number 5, as it has not performed well according to the study though it holds the highest amount of assets and cash reserves.

Capital Adequacy has a significant value of 0.053, which is more than the significance level, i.e., 0.05. It means that the null hypothesis is accepted, and the alternative hypothesis is rejected. Moreover, there is no significant difference in the performance of selected Public Sector Banks.

Asset Quality has a significant value of 0.128, which is more than the significance level, i.e., 0.05. It means that the null hypothesis is accepted, and the alternative hypothesis is rejected. And there is no significant difference in the performance of selected Public Sector Banks.

Management Efficiency has a significant value of 0.032, which is less than the significance level i.e., 0.05. It means that the null hypothesis is rejected, and the alternative hypothesis is accepted. Furthermore, there is a significant difference in the performance of selected Public Sector Banks.

Earning quality has a significant value of 0.006, which is less than the significance level, i.e., 0.05. It means that the null hypothesis is rejected, and the alternative hypothesis is accepted. Moreover, there is a significant difference in the performance of selected Public Sector Banks.

Liquidity has a significant value of 0.000, which is less than the significance level i.e. 0.05. It means that the null hypothesis is rejected, and the alternative hypothesis is accepted. Moreover, there is a significant difference in the performance of selected Public Sector Banks.

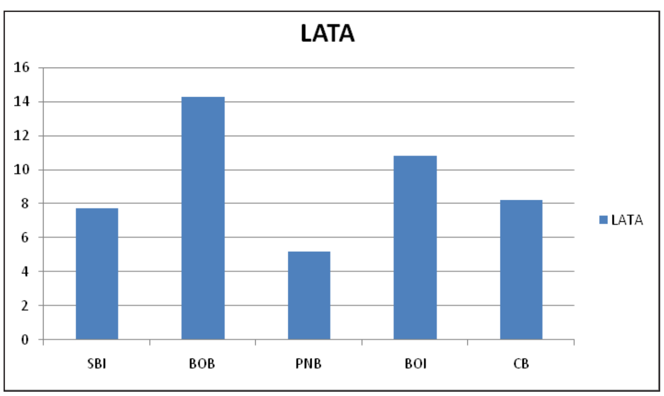

Figure 5: Liquid Assets to Total Assets

Challenges and Opportunities Faced by Public Sector Banks (Followed by objective 2 of the study)

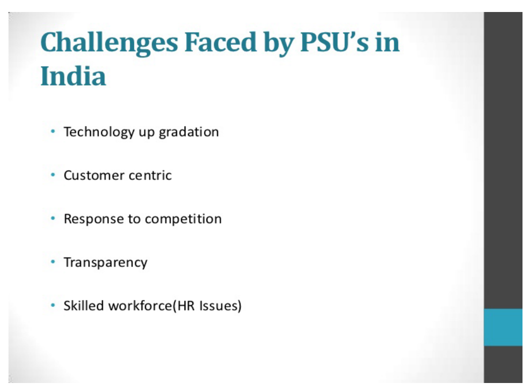

Table 6: Liquid Assets to Total Assets

S.no	Bank	2015	2014	2013	2012	2011	Average	Rank
1	SBI	6.97	6.80	6.97	9.43	8.40	7.71	4
2	BOB	16.99	13.14	14.38	14.04	12.86	14.28	1
3	PNB	8.15	5.66	6.4	7.78	7.98	5.19	5
4	BOI	10.68	12.13	9.15	10.67	11.36	10.80	2
5	CB	8.9	8.3	5.45	9.07	5.4	8.22	3

Table 7: ANOVA

		Sum of Squares	*Df*	*Mean Square*	*F*	*Sig.*
Capital Adequacy	Between Groups	10.678	4	2.670	2.809	.053
	Within Groups	19.007	20	.950		
	Total	29.685	24			
Asset Quality	Between Groups	2.999	4	.750	2.038	.128
	Within Groups	7.358	20	.368		
	Total	10.357	24			
Management Efficiency	Between Groups	466.585	4	116.646	3.272	.032
	Within Groups	713.080	20	35.654		
	Total	1179.665	24			
Earning Quality	Between Groups	1.887	4	.472	4.952	.006
	Within Groups	1.905	20	.095		
	Total	3.792	24			
Liquidity	Between Groups	186.840	4	46.710	23.693	.000
	Within Groups	39.429	20	1.971		
	Total	226.269	24			

Although many reforms have been made in the Public Sector Banks, there is still a need to modify the policies of public sector banks. At present, they face many internal and external challenges, which hinder their performance, but these banks can convert these challenges into opportunities with care and some modifications.

- Competition: In this globalized world, banks are facing severe competition internally as well as externally. Public sector banks will have to leverage technology for innovative product development to stay ahead in the race.
- Greater Customer-Orientation: Greater customer orientation is the only way to retain customer loyalty and compete. Public sector banks need to bring about total customer orientation in their products/services, and their policies and strategies should also be customer-focused.
- Technology: In the deregulated environment managing a wide range of products and offering top-class customer services will create new challenges. In this context, technology will be the key to reduce transaction costs, offering customized products, and managing risks. This is compelling banks to provide internet banking facilities, and Increasingly, customers demand fast, convenient, and glitch-free banking services. Our public sector banks are lagging in technology when we compare them with their counterparts. There is a need for planning and coordination at all levels of the organization.
- Management of NPA: After the global financial turmoil in 2008, public sector banks begin the New Year with a lurking fear that their Non-Performing Assets (NPA) would go up with their portfolios coming under severe stress. There is already a visible strain on Consumer, credit card, vehicle loan portfolios, and many banks have taken conscious decisions to scale down their advances to risky sectors. The ongoing financial crisis has had its toll on export-related sectors like IT, textile, and SMEs. This may indirectly impact banks' Asset quality. There is, therefore, a pressing need to ensure adequate risk-management mechanisms to overcome this challenge
- New Basel Capital Accord: Basel II Accord emphasizes three Pillars, viz. Capital Adequacy, Supervisory Review, and Market Discipline. The new Accord will increase the level of capital required for the banking institutions in the region, mainly owing to the new operational risk charge. Measuring credit, market, operational, interest rate, liquidity, and other risks in compliance with the new Accord will not be an easy task for either bank managers or supervisory authorities. There is a lack of rating agencies, and the majority of individual claims remain unrated. Further, banks and supervisors will be required to invest considerable resources in upgrading technology, including adequate data access, technical capacity, and human resources to meet the minimum standards in the new Accord.
- Issue of HRM: Different committees related to public sector banks have enumerated several problems relating to HRM in public sector banking such as over manning, low human resources productivity, indiscipline, restrictive practices, lack of management commitment to training etc. Banks need to build a service culture using technology in a customer-friendly manner. This urgently requires reorienting HRD strategies in public sector banks, and banks need to emphasize the right size, skills, and attitude.

- Public Perception: At last, public perception will decide the future of public sector banks. The perception of customers regarding public sector banks is very poor. Public sector banks should improve their perception, by all means, to remain competitive in the market.
- Political Interference: Over the year, the most serious damage to the banking system has been done by political and administrative interference in credit decision-making. Some political leaders, for their political reasons, have used a write-off system. It should be checked.

Summary

The chapter attempts to present and analyze the data collected from various websites of the Banks. Data collected has been summarised and tabulated using Microsoft Excel. The data has been presented using tabular representation for ease of understanding. ANOVA test was carried out using SPSS software.

Summary and Conclusions

The present chapter aims to recollect the various phases of the study. A summary of the research with the main findings has also been presented. Revisiting of objectives is essential to understand whether the purpose and aim of the research have been achieved. Limitations of the study have been pointed out. Recommendations based on the study have also been presented. Finally, the chapter throws light on directions for future research.

Findings

According to research conducted by CAMEL Model for Leading Five Public Sector Banks It is found out that:

- Bank of Baroda has performed better in Capital Adequacy, followed by Punjab National Bank. It states that these banks have a good risk management system and greater capacity to meet their additional capital needs.
- Bank of Baroda has good quality assets and performs better than the other four Banks followed by Bank of India. It shows that these two banks have managed their Assets and NPA's better and have invested their assets in the right place.
- Bank of Baroda has better management efficiency and ranks at first position, followed by Punjab National Bank. So, both these banks have greater productivity and good working management and take corrective measures if any conflict occurs.
- Bank of Baroda has better earning capacity and secures the first position in earning quality, followed by Punjab National Bank. It shows that both these banks can earn regular cash inflows and can earn better profits in the future to sustain in the market.
- Bank of Baroda has secured the first position in liquidity, followed by Bank of India. It shows that both these banks have invested their cash in High return securities and have good amount of working capital.

Conclusion

The study results show that Bank of Baroda is leading in all the aspects of CAMEL followed by Punjab National Bank in Capital Adequacy, Management efficiency and Earning capacity, and Bank of India in Asset Quality. In contrast, the State Bank of India has not performed well, though it holds the highest amount of assets and cash reserves. Canara Bank has always remained in the middle position. There has been a significant change in the performance of these banks throughout the years. Bank of Baroda has performed well. Due to radical change in the banking sector in recent years, Central banks worldwide have increased their supervision quality and technique. If we compare the overall Performance of the Selected Banks, the study is similar to every study. Whether it is Lakhtaria (2013), Aspal and Malhotra (2013), or Gupta (2014), in which Bank of Baroda has performed better than all other selected banks. However, due to the passage of time, there are fluctuations in the other four banks' performance.

Limitations of the Study

- This research paper studies only the quantitative aspect of the performance of selected banking companies and does not study the qualitative aspects of performance like business models, competitive advantage, management, corporate governance etc.
- The study is limited to financial data for 5 years, from 2011 to 2015.
- The research paper studies the performance of only five banks. The analysis can be further done based on the categorization of the banking industry into the public sector, private sector and foreign banks.
- This study is based on the analysis of secondary data. The result and conclusion of this study might not be accurate due to the reliability of the secondary data and limitation on the variables selected and the period considered.
- This study mainly focuses on selected independent variables, which may not represent the financial analysis completely.

Suggestion

- The Study recommends that State Bank of India needs to improve its Assets Quality, Management Efficiency, and Liquidity. Similarly, Punjab National Bank has to improve its Liquidity and Assets Quality, and Bank of India should focus on Capital Adequacy and Earning quality.
- Due to the passage of time, the ranking of Canara Bank and Punjab National bank has decreased, which is a negative sign for the Banks. They both need to increase their overall productivity and efficiency to compete with tough banks like Bank of Baroda.
- It is suggested that the government formulate bank-specific policies and implement them through Reserve Bank of India for the upliftment of Public Sector Banks.

- Public sector banks should upgrade technology and formulate customer-friendly policies to face national and international competition.
- Profits are to be generated through the high volume of business coupled with better services. However, while marching towards this, the bank has to encounter various risks such as credit, capital, liquidity, market, etc.

Recommendations

The present chapter aims to make some suggestions based on the analysis and findings of the study. These suggestions are aimed at improving the performance of Indian Public Sector Banks.

Recommendations of the Study

Since the banking sector reforms have been set in motion, profitability became the buzzword and the prime mover of banks' financial strength and performance. Unlike in the past, all banking operations gradually measured their ability to generate social banking possibilities for their meaningful survival and growth. Therefore, there should be a shift in the bank's objective from bank growth. The sample banks take the following important steps for overall real growth.

- Introducing Modern Marketing Strategies
- Improving Credit-Deposit Proportion
- Generating Non-Interest Income
- Introducing Innovative Branch Administration
- Monitoring the Controlling Mechanism on Important Ratios
- Prudential Disclosure of Financial Information

Biblography

Virender Koundal. (Assistant Professor, University of Jammu and Kashmir), " Performance of Indian Banks in Indian Financial System "International journal of multidisciplinary research, 2012: (1, January), ISSN 2231-5780

Mr. Roopak Gupta, Ms. EktaSikarwar "Financial Performance of New Private and Public sector banks", IOSR Journal of Business and Management (IOSR-JBM), 2014

Durai Pandi T, Vellingiri P, "Factore determining profitability of public sector banks in India", International research Agiculture Rural Development", 2014

Dr. Dhanabhakyam M. Kavitha M, "Financial Performance of selected public sector banks in India", "Indian journal of Research", 2012

Cheenu Goel, Chitwan Bhutani Rekhi, "A comparative study on the performance of selected public sector and private sector banks in India", "Business Management and Social Science(JBM&SSR), 2013; (7,July)"

M.Karthikeyan and Dr.P.Sivakami (2014) "Performance of Public sector banks in India (A study using CAMEL Model)

CA. Ruchi Gupta (2014) "An analysis of Indian Public sector banks using CAMEL approach", "Indian Journal of Research"

Amanjot Kaur Sodhi (2016) "Fundamental analysis of selected Public and Private sector banks in India. "NMIMS Management Review, volume XXVIII January-February 2016"

Dr. Niranjan Reddy (2015) "An analysis of selected Public sector banks using CAMEL approach" "International Journal of Core Engineering and Management (IJCEM) Volume 2, Issue I April 2015"

Manpreet Kaur(2016) "Financial analysis of selected public sector banks: A CAMEL Model approach", Indian Journal of Research"

Kajal Chaudhary (2011) "Performance of Indian public sector banks and private sector banks : A comparative study", "International Journal of Innovation, Management and Technology, volume 2, no. 3, june 2011"

Khushboo Bhatia (2015) "Comparative study of Performance of Public and Private sector Bank", "ISSN-2277-1166 Volume 4, Issue 10(October, 2015)"

Garima Chaudhry (2014) "Performance comparison of Public and Private sector bank's", "Indian Journal of Research Volume:3, Issue:4, April 2014"

Manoj, P., K., (2010) "Determinants of profitability and efficiency of banks in India"

Dr. Apporva Trivedi (2009) "A comparative nalysis of public and private sector bank's through CAMEL rating system" "International Journal of Social Science & Interdisciplinary Research vol.1 issue 9 September 2009"

Websites

List of all Public sector banks in India accessed from http://www.iba.org.in/viewmembanks.asp on 27-Sept-2014.

All the Annual Reports of Selected Public Sector Banks from 2009-2014 accessed from www.moneycontrol.com on 01-Feb-2015.

www.rbi.org.in

www.indiabudget.nic.in

www.allbankingsolutions.com

www.Iba.org.in