

**THE PERFORMANCE ANALYSIS OF INDIAN COMMERCIAL BANKS:
AN EMPIRICAL APPROACH**

*A Synopsis Submitted To
The Maharaja Sayajirao University of Baroda
For the Degree of*

**Doctor of Philosophy
in
Business Economics**

By

NEHA P PANDYA

Assistant Professor in Banking and Insurance

Under the Guidance of

DR. SHRADHA H. BUDHEDEO

Associate Professor in Business Economics

**DEPARTMENT OF BUSINESS ECONOMICS
FACULTY OF COMMERCE
THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA
VADODARA, GUJARAT, INDIA**

CONTENTS

1. Introduction and Rationale of the study
2. Review of Literature
3. Objectives of the Study
4. Methodology
5. Brief Discussion on Chapters
6. Thesis Outline

THE PERFORMANCE ANALYSIS OF INDIAN COMMERCIAL BANKS: AN EMPIRICAL APPROACH

1. Introduction and Rationale of the Study

The banking industry is an integral part of the Indian financial system. The sector plays a pivotal role in the economic development of the nation. Over the past seven decades, the Indian banking industry has undergone a paradigm shift in terms of its content, structure, scope, functions and governance. Since the inception of economic planning in India, the banks have traversed a long journey. The banking sector has witnessed tremendous changes and challenges. It is probably one of the few large banking systems in the world which have been robust enough to withstand even the global financial crisis.

The India banking story has moved on from commercial to social banking, from class to mass banking, from cash to card banking, and from traditional to digital banking. The total number of commercial banks in existence has gone up from 89 in 1956 to 153 in 2017. The number of bank branches has increased from mere 4067 in 1956 to 1,42,468 in 2017. The average population served per bank branch has improved from 98000 in 1956 to 9237 in 2017. Deposits of commercial banks as percentage of national income have multiplied manifold from 10% in 1956 to over 68% in 2017. Over these seven decades, the banking business has increased remarkably. From providing plain vanilla banking services, banks have gradually transformed themselves into universal banks. Availability of ample opportunities and options, varied banking products and instruments, improved services and facilities have been complementing the growth phase of the country. Participating in this growth curve will definitely provide a launch pad for greater business expansion to all bank groups operating in the economy.

The banking landscape has undergone major transformation with the adoption of nationalisation, restructuring and deregulation measures in the financial sphere of the country. Two rounds of nationalisation, first in July 1969 and then in April 1980 have led to 20 major commercial banks in the ambit of the public sector. As a result, public

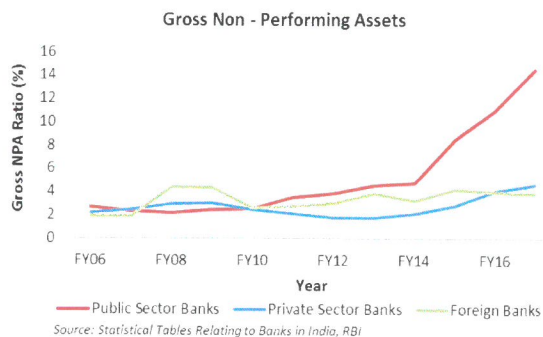
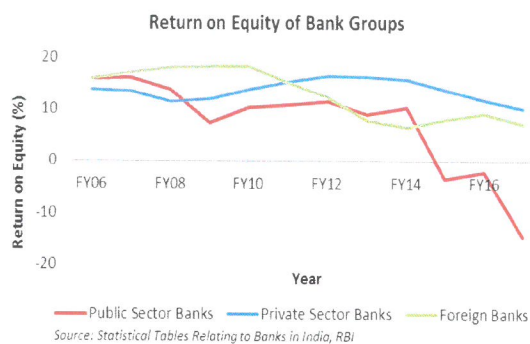
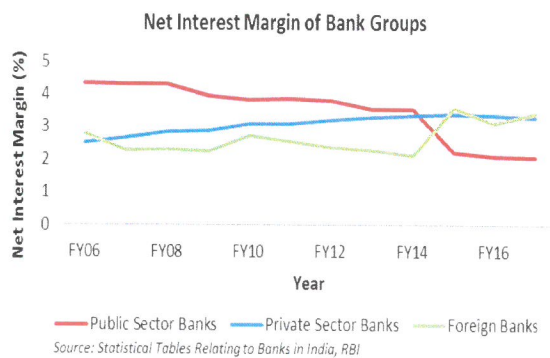
sector banks have come to occupy a central position in the banking scene. Branch network expanded significantly, resulting into wide banking coverage and penetration. This brought 80% of the banking sector under government ownership and control. The public sector banks spearheaded the banking space of the nation for nearly two decades.

Indeed, nationalisation stands as a landmark in the history of commercial banking in India. Yet, it had its own share of issues. After nationalisation, government owned banks dominated the banking sector which led to problems like excessive bureaucratization, red-tapism and disruptive tactics of trade unions of bank employees. Until the early nineties, the banking sector suffered from lack of competition, low capital base, low productivity and high intermediation cost. The role of technology was limited and service quality was almost missing. Banks did not follow proper risk management system and their prudential standards were weak. All these resulted in poor asset quality and low profitability in the sector. This scenario called for a need to introduce corrective measures. Reforms became imperative as despite the impressive quantitative growth, there was an alarming deterioration in the health and integrity of the Indian financial system.

With the introduction of economic and financial reforms in 1990s, the financial sector underwent a major revival. Quite a few new private sector banks and foreign banks made entry into the banking space, infusing competition into the sector. However, the impact of reforms could be visibly felt only by the turn of the decade. The sector became aggressively competitive and recorded unprecedented growth for the next 10 years. This was a decade of rising competition, technology upgradation, automation of banking processes, digitalisation, and improved productivity and profitability for the banking sector. The banking industry recorded a CAGR of 18% in total assets as against an average 7% GDP growth rate during 2000s. The ratio of bank's business to GDP has doubled from 64% in 2000 to 135% in 2010. The revenue generated by the industry multiplied four times from US \$ 11.8 billion in 2001 to US \$ 46.9 billion in 2010. It also recorded nine-fold growth in its profit after tax during the same period. Overall, the sector has been exhibiting an expansion in its efficiency and earnings.

The financial crisis that hit the globe in 2008 had distressing effects on the western economies. Although the Indian banking system remained fairly insulated from the

impact of the crisis and the subsequent global economic slowdown, the growth trajectory of many banks in the sector witnessed a change thereafter. Against this backdrop, it becomes pertinent to observe the performance of bank groups over the past decade. For this purpose, the study has reviewed certain financial parameters as Return on Equity (ROE), Net Interest Margin (NIM), and Gross Non-Performing Assets (GNPA) of public sector banks, private sector banks and foreign banks for the period 2006 to 2017, as presented in the graphs below.



The movement in the performance parameters of the bank groups revealed the following key points:

- The public sector banks have been exhibiting a drastic fall in their performance in terms of return on equity and net interest margin.
- The return on equity and net interest margin of public sector banks has fallen below that of their private sector competitors and foreign banks.
- The public sector banks have witnessed continuous increase in their gross NPA ratio from 2.64 percent in 2006 to as high as 14.6 percent by 2017. In contrast, private sector banks have managed to control their GNPA ratio at 4.6 percent in 2017. Foreign banks have also been able to maintain their GNPA ratio at relatively lower levels.

The above behaviour of NIM, ROE and GNPA over the last decade has raised certain important questions. What could be the reasons for the dismal performance of the public sector banks? Are public sector banks bound by stringent regulation and controls by the government? Do these banks lack the support of requisite technology? Has the entry of new banks in the post-reform phase and the resulting competition triggered a fall in their performance? Is it stress on their quality of assets or are banks unable to manage their costs and NPAs? The past couple of years have been a watershed for all bank groups in general and for the public sector banks in particular. As the nationalised banks constitute nearly 75% share in the banking business in India, their performance effectiveness becomes a matter of serious concern for the banking sector, government, as well as monetary authorities.

There has been a great deal of debate in the country about profitability of Indian commercial banks, in particular the nationalised banks. It is believed that if weakening trends in the profitability of public sector banks is not reversed, the financial viability of these banks may be at stake. Public sector banks constitute an integral component of the banking system in India and are the most important channel for financial intermediation. Hence, any weakness in these banks would have serious implications for the system and be detrimental to the financial services sector in particular, and to the economy on the whole. It is therefore critical to find answers to fears pertaining to the banking system in the country. Do nationalised banks fail in their financial performance as compared to their private sector and foreign competitors? What determines the profitability of banks? Is it asset quality, or bank efficiency, or their liquidity position? Do banks adhere to proper risk management systems and prudential standards? Does size of banks and technology upgradation have a significant impact on bank profitability? How well do the banks respond to macroeconomic factors? This study attempts to examine these issues in a scientific manner and undertake a comprehensive performance evaluation of commercial banks in India to further improvements in the banking sector and facilitate better policy formulation.

2. Review of Literature

There is a vast pool of literature available on the study of performance of banks. An in-depth survey of literature has been dealt with keeping the broad aims of the

research in view. The review of literature on bank performance reveals that studies have examined bank performance across nations, for bank groups and individual banks, over different time periods, using diverse methodologies. The broad parameters of bank performance investigated by the studies were profitability, productivity, liquidity, efficiency, competition, capital structure, and capital adequacy requirements by banks. Literature reveals that variables such as return on assets, return on equity, net interest margin, business per employee, profit per employee, credit-deposit ratio, total deposit to total assets, total advances to total assets, NPAs to advances, NPAs to assets, interest income to total assets, non-interest income to total assets, earning per share, market concentration, and macroeconomic variables like inflation and GDP growth have been examined by the studies.

The studies with reference to India have largely analysed performance of banks by employing financial ratio analysis and data envelopment analysis. Among the international studies, developing nations have been found to focus on ratio analysis and CAMEL(S) methodology. The developed nations on the other hand have adopted multiple regression analysis, data envelopment analysis, and stochastic frontier analysis for examining bank performance. Many studies, both Indian and international have also assessed bank performance with the help of DuPont analysis and sequential decomposition models. The studies reviewed are either aggregative, case studies, or the coverage is too small in terms of number of banks and the time period covered. The studies have focused on only limited variables either in combinations or as singular parameters. The outcomes of the studies are bound to differ as they relate to different countries, different banks, different time periods, and use different methodologies.

In view of the above, the present research attempts to make a sincere effort to study, examine and evaluate the performance of commercial banks in India over different phases of time. The study covers a long time period spanning over nearly two decades. An attempt is made to analyse the performance of banks on different parameters covering a number of financial variables. The study also tries to explore the factors affecting bank profitability and their impact for all bank groups to ensure effective policy inference.

3. Objectives of the Study

The aim of this research endeavour is to empirically examine the performance of banking industry in India in the liberalization era. The main objectives of the study are:

- i. To evaluate the progress of Indian banking industry over different phases of time.
- ii. To analyse the trends in financial performance of commercial banks and bank groups.
- iii. To identify the factors affecting the profitability of banks i.e. study of determinants of bank profitability.
- iv. To examine the nature and sensitivity of profitability of banks to its determinants.
- v. To derive relevant policy inferences and suggest policy options based on the above empirical analysis.

4. Methodology

The present study focuses on scheduled commercial banks, primarily the public sector banks, private sector banks and foreign banks for evaluating the performance of banks in India.

A. Methods and Techniques of Analysis

The objectives of the study have been examined using suitable statistical and mathematical techniques. The techniques used in the analysis are:

- i. Ratio Analysis
- ii. Time-Series Analysis
- iii. Regression Analysis
- iv. Coefficient of Correlation
- v. Estimation of Elasticity

All these techniques have been used in validity with alternative test statistics.

B. Target Sample

The performance analysis of banks in India has been carried out for scheduled commercial banks alone (excluding RRBs). In total, 15 banks (5 banks each) have been selected from the three bank groups – public sector banks, private sector banks and foreign banks.

C. Time Period

The important milestones of Indian banking industry have been examined through the post-independence period to the post-crisis period. The analysis for the growth and progress of commercial banks has been carried out over various phases of time that ranges right from 1969 to 2018. The financial reforms were launched in India in 1993 but the actual impact of reforms on the banking sector could be felt only by the turn of the century. Hence, the trend analysis and determinant analysis cover nearly two decades of banking from 2001 to 2018.

D. Data Source

Secondary time series data is engaged for the study. Annual observations have been considered. The data used in the study have been sourced from various issues of the Reserve Bank of India publications, Handbook of Statistics on Indian Economy, Indian Economic Survey and IMF publications.

5. Brief Discussion on Chapters

In the quest of finding answers to the questions highlighted in the earlier discussion and to achieve the objectives of the study, the entire thesis has been divided into six chapters focusing on performance of commercial banks in India.

Chapter 1: Introduction

This is the introductory chapter of the thesis. The chapter involves discussion on the evolution of banking and the history of banking in India. It also outlines the rationale and objectives of this research endeavour.

Chapter 2: Review of Literature

This chapter provides a detailed survey of studies on performance of banks in India and abroad, so as to bring out the research gaps. The performance of banks has been reviewed from two perspectives, Indian experience and International experience.

Chapter 3: Progress of Indian Banking Industry

This chapter begins with an evaluation of the road traversed by Indian banking industry over the post-independence era in response to the changes and challenges in the banking sector. It involves a discussion on the different milestones of the Indian banking industry from the post-independence period to post-crisis period. The growth and progress of commercial banks in the country have also been examined over different phases – Nationalisation, Technology Upgradation, Deregulation, and Digitalisation.

Chapter 4: Performance of Commercial Banks in India

In this chapter, the financial performance of commercial banks has been examined. Trends in financial performance of bank groups and selected individual banks have been analysed by estimating financial ratios on the basis of parameters such as capital adequacy, asset quality, efficiency, productivity, profitability, and liquidity. The trends in performance of public sector banks, private sector banks and foreign banks are traced over a period of two decades to facilitate assessment and comparison of bank performance.

Chapter 5: Determinants of Bank Profitability

The focus of this chapter is on understanding the important parameters or factors that influence the profitability of banks and those that could lead to bank failures. In this pursuit, an attempt has been made to examine the possible impact of financial, non-financial, and economic factors on profitability of banks. Various econometric models have been developed to identify the determinants of bank profitability and examine the nature and sensitivity of variables studied by estimating elasticity.

Chapter 6: Conclusions, Suggestions and Policy Inferences

This chapter summarizes and concludes the findings of the present research endeavour and draws relevant suggestions and policy inferences with an aim to further improvements in the Indian banking industry.

6. Thesis Outline

The chapter scheme in the thesis proceeds in the following manner.

Chapter 1: Introduction

- i. Evolution of Banking
- ii. History of Banking in India
- iii. Rationale of the Study
- iv. Summary of Literature Survey
- v. Objectives of the Study
- vi. Research Methodology
- vii. Chapter Plan

Chapter 2: Review of Literature

- i. Review of Bank Performance: Indian Experience
- ii. Review of Bank Performance: International Experience

Chapter 3: Progress of Indian Banking Industry

- i. Milestones of Indian Banking Industry
- ii. Growth and Progress of Commercial Banks in India: Phase Analysis
- iii. Findings and Conclusions

Chapter 4: Performance of Commercial Banks in India

- i. Trends in Performance of Public Sector Banks
- ii. Trends in Performance of Private Sector Banks
- iii. Trends in Performance of Foreign Banks
- iv. Conclusions and Observations

Chapter 5: Determinants of Bank Profitability

- i. Model Specification
- ii. Research Methodology
- iii. Empirical Results
- iv. Conclusions and Inferences

Chapter 6: Conclusions, Suggestions and Policy Inferences

Appendices

Bibliography