A Study of Risk and Efficiency in Public and Private Sector Banks in India

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Abstract:

This study aims to compare the risk profiles and operational efficiencies between public and private sector banks in India. By analysing various financial metrics and employing advanced statistical techniques, we seek to uncover the underlying factors contributing to the differences in performance between these two sectors. The investigation encompasses a comprehensive review of both quantitative and qualitative data, including but not limited to, capital adequacy ratios, non-performing assets (NPAs), return on assets (ROA), and customer satisfaction indices. Furthermore, the study delves into the regulatory environment, technological adoption, and strategic initiatives undertaken by these banks to mitigate risks and enhance efficiency. Through this comparative analysis, we aim to provide insights that could inform policy decisions, strategic planning, and risk management practices within the banking industry in India.

Keywords: Banking sector, Risk management, Operational efficiency, Public vs. private banks, financial performance, Regulatory environment, Technological adoption.

INTRODUCTION:

The Indian banking sector has undergone significant transformations since the early 1990s, particularly following the liberalization policies initiated by the Narsimha Rao government. This period marked the beginning of a new era for the banking industry, characterized by increased competition, the introduction of new-generation tech-savvy banks, and the gradual opening of the sector to foreign investment. The liberalization policies led to the emergence of private sector banks alongside the existing public sector banks, fundamentally altering the landscape of the banking industry in India.

Public sector banks, traditionally dominated the banking scene in India, operating in a protected environment characterized by administered interest rates and directed credit. However, the liberalization measures paved the way for private sector banks, which brought in fresh perspectives, innovative services, and a focus on customer-centric solutions. These changes were instrumental in revitalizing the banking sector, leading to increased competition and improved service offerings across all sectors of banking—government banks, private banks, and foreign banks.

The shift towards a more competitive and open banking environment necessitated a revaluation of risk management and operational efficiency within both public and private sector banks. This study aims to delve into the comparative analysis of risk and efficiency between these two sectors, focusing on aspects such as non-performing assets (NPAs), capital adequacy, and operational efficiencies. The objective is to understand the dynamics that differentiate the performance of public sector banks from that of private sector banks, considering the unique challenges and opportunities each faces in the current banking environment.

By exploring the historical evolution of the banking sector in India, the impact of liberalization policies, and the contrasting approaches to banking operations between public and private sector banks, this study seeks to provide valuable insights into the risk and efficiency landscape of the Indian banking industry. The findings from this analysis could offer crucial inputs for policymakers, regulators, and banking institutions, aiding in the formulation of strategies to enhance the resilience and competitiveness of the banking sector in India.

Understanding the dynamics between efficiency and systemic risk is crucial for both scholars and regulators. It provides insights into how improvements in operational efficiency can potentially reduce systemic risk, thereby strengthening the resilience of the banking sector. Moreover, the differential impacts observed between public and private banks highlight the unique challenges and opportunities each segment faces, offering valuable lessons for policy formulation and strategic decision-making.
In conclusion, this study contributes to the growing body of literature on banking sector reforms in India, emphasizing the importance of balancing efficiency gains with effective risk management strategies. The findings underscore the need for continuous monitoring and regulation to ensure the stability and sustainability of the banking sector, ultimately supporting economic growth and development in India.

REVIEW OF LITERATURE:

RISK MANAGEMENT AND PROFITABILITY

1.In their research titled "The Profitability of the Banking Sector in Hong Kong," Guorong Jiang, Nancy Tang, Eve Law, and Angela Sze (2003) conducted an analysis on the key indicator of banks' profitability, which is the return on assets (ROA). ROA is calculated by dividing before-tax profits (BTP) by total assets (TA). The decline in profitability was primarily attributed to a significant increase in non-performing loans. The study revealed that both individual bank characteristics and macroeconomic factors play crucial roles in determining bank profitability in Hong Kong. Among the bank-specific variables, provisions for losses, non-interest expenditure share, and non-interest income share were identified as the major factors. This suggests that, after accounting for differences in credit quality of bank lending portfolios (where higher provisions lead to reduced profits), a more efficiently operated and diversified bank (with lower non-interest expenditure and higher non-interest income) achieves higher profits. Additionally, all macroeconomic variables were found to be significant, with higher real GDP growth, inflation, and real interest rates positively correlated with profitability.

2. Maria Bernadette R. Coats and Kristine Beatrice S. Cruz (2013) conducted a study titled "Analysing Risk Factors Impacting the Philippine Banking Sector," which utilized PESTEL factors such as Counterparty, Credit Concentration, and Price. The banking sector experienced growth in its performance, as indicated by the analysis. The risk assessment score matrix revealed that foreign exchange, IR Gap, funding (cash flow), asset liquidity, external fraud, and profitability were classified as medium to high-risk levels.

CREDIT RISK

3.In her research titled "Credit Risk Management and Profitability of Commercial Banks in Kenya," Angela M. Kithinji (2010) investigated the correlation between credit risk and profitability. The implementation of Basel II requirements allowed banks to minimize their non-performing loans, consequently decreasing credit risk. However, the findings from the regression analysis indicated that there is no significant association between profits, credit amount, and non-performing loans. This suggests that there might be additional factors influencing the profitability of banks.

LIQUIDITY RISK

4. In her thesis titled "Risk Management and Bank Performance - a Case Study of First Atlantic Merchant Bank Ghana Limited (FAMBL)", Ruth Opoku-Adarkwa (2011) discovered that the bank had a robust risk management system. The bank possessed a well-structured risk management framework that effectively managed both financial and operational risks. The bank's short-term rate sensitive assets exceeded the rate sensitive liabilities. However, the bank experienced a decline in interest income due to decreasing interest rates. An examination of the interest rate risk indicated that the gap to total asset ratio exceeded the prudential limits. Nevertheless, the bank maintained sufficient equity to safeguard against any unfavourable circumstances.

INTEREST RATE RISK

5. In his research titled "A Dynamic Approach to Asset-Liability Management in Banks," Kanhaiya Singh63 (2013) aims to examine the effects of various measures and strategies implemented by banks to control the asset-liability composition and its overall impact on their performance and profitability. Banks have implemented effective monitoring systems at different levels and have set maximum tolerance limits for mismatches in each time bucket to ensure close supervision. The study highlights significant opportunities for banks to enhance through vigilant monitoring and reduction of short-term liquidity.

OBJECTIVES OF THE RESEARCH

- Assess the risk profiles of PSBs and PVSBs, including credit risk, market risk, liquidity risk, and operational risk.
- Evaluate the efficiency of PSBs and PVSBs in terms of cost efficiency, revenue efficiency, and overall operational efficiency.

SCOPE OF THE STUDY

Research is an intellectual pursuit and therefore the term should be employed in a precise and specialized manner. The methodology of research serves as a comprehensive blueprint outlining the requirements and steps involved in gathering and scrutinizing essential information. It delineates the precise approach and techniques to be employed in conducting a research endeavour.

1. **Risk Assessment**: Evaluate the different types of risks faced by public and private Risk Assessment: Evaluate the different types of risks faced by public and private sector banks in India. This could include credit risk, market risk, liquidity risk, operational risk, and systemic risk. Analyse, how these risks vary between the two sectors and their impact on financial stability sector banks in India. This could include credit risk, market risk, liquidity risk,

operational risk, and systemic risk. Analyse how these risks vary between the two sectors and their impact on financial stability.

2. **Efficiency Analysis**: Assess the efficiency of public and private sector banks in terms of resource allocation, cost management, and operational effectiveness. Compare performance indicators such as return on assets (ROA), return on equity (ROE), cost-to-income ratio, and net interest margin (NIM) between the two sectors.

RESEARCH METHODOLOGY

1. **Research Design:** Research design refers to the overall plan or structure of a research study, including the selection of research methods, data collection techniques, and data analysis procedures. Common research designs include experimental, quasi-experimental, correlational, descriptive, and exploratory designs.
2. **Research Objectives and Questions:** Research methodology begins with clearly defining research objectives and formulating research questions or hypotheses. These objectives and questions guide the entire research process and help focus efforts on addressing specific research goals.
3. **Literature Review:** A thorough literature review is conducted to review existing research, theories, and scholarly literature relevant to the research topic. The literature review helps identify gaps in knowledge, establish theoretical frameworks, and inform research design and methodology.
4. **Research Methods:** Research methods refer to the specific techniques or procedures used to collect and analyse data. Common research methods include surveys, experiments, interviews, observations, case studies, content analysis, and archival research. The choice of research methods depends on the research questions, objectives, and the nature of the research topic.
5. **Sampling:** Sampling involves selecting a subset of individuals or cases from a larger population to represent the population of interest. Various sampling techniques, such as random sampling, stratified sampling, convenience sampling, and snowball sampling, may be used depending on the research design and objectives.
6. **Data Collection:** Data collection involves gathering information or data from research participants or sources using selected research methods and techniques. Data collection methods may include surveys, interviews, observations, experiments, document analysis, or secondary data analysis.

7. **Data Analysis:** Data analysis involves organizing, interpreting, and analyzing the collected data to derive meaningful insights and findings. Common data analysis techniques include descriptive statistics, inferential statistics, qualitative analysis, thematic analysis, content analysis, and coding.
8. **Validity and Reliability:** Validity refers to the accuracy, truthfulness, and appropriateness of research findings, while reliability refers to the consistency and stability of research results. Researchers employ various strategies, such as validity checks, reliability tests, and triangulation, to ensure the validity and reliability of their findings.
9. **Ethical Considerations:** Researchers must adhere to ethical principles and guidelines throughout the research process to ensure the rights, privacy, and well-being of research participants. Ethical considerations include obtaining informed consent, protecting confidentiality, minimizing harm, and disclosing conflicts of interest.
10. **Research Reporting and Dissemination:** Finally, researchers communicate their findings through research reports, scholarly articles, presentations, and other dissemination channels. Transparent reporting of research methods, findings, and limitations enhances the credibility and reproducibility of research findings.

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TYPES OF DATA COLLECTION

Research Philosophy: Start by identifying the fundamental philosophical assumptions that guide your research. These could be positivist, interpretivist, or critical realism, among others. Your selection will impact how you approach data collection and analysis.

Primary Data Collection
A customized questionnaire was utilized as a survey tool and personally administered to the respondents to gather the required data. Managers were asked to provide relevant answers to ensure accurate results.

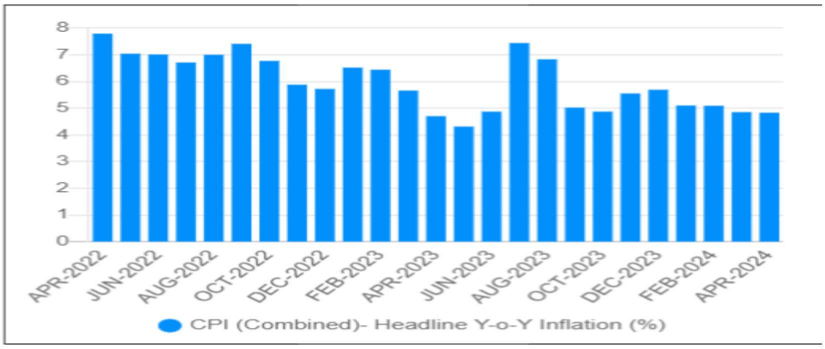
Collection of Secondary Data
Various secondary sources, including online publications Idea, JSTOR, Google Scholar, Social Science Research Network (SSRN), and separate online databases, were utilized. Secondary sources such as books, newspapers, government reports, internet sources, and monographs were also consulted. Libraries of different institutes and universities were visited to access a wide range of journals and magazines. Annual reports of both public and private sector banks were obtained from the official websites of the respective banks. Variables used in the analysis of secondary data, such as Z score, ROA, ROE, and cost-income ratio, were extracted from the annual reports and financial statements of the banks.

DATA COLLECTION AND ANALYSIS

A study titled "A study of Risk Management on Private and Public Sector Banks in India" utilized the CAMELS approach to analyse bank performance from 2018 to 2022. It found that private sector banks performed better in terms of capital adequacy, asset quality, management capability, and earnings quality, while public sector banks excelled in liquidity.

Another research, "Loan Portfolio Management and Bank Efficiency: A Comparative Analysis of Public, Old Private, and New Private Sector Banks in India," used data envelopment analysis (DEA) to evaluate bank efficiency. The study considered loan variables like term lending, working capital, and priority sector lending, and found significant impacts on the efficiency of new private banks.
A comparative study collected data from banks like Bank of Baroda, Punjab National Bank, ICICI Bank, HDFC Bank, and Axis Bank over five years. This study primarily relied on secondary data and financial ratios.

Statistical Tables relating to Banks in India: 2022-23



Database on Indian Economy

Limitation of Research

1. **Sample Size and Representation**: The study may have a limited sample size, which could affect the representativeness of the findings. If the sample is not diverse enough or does not adequately represent both public and private sector banks across different regions of India, the results may not be applicable to the entire banking sector.

2. **Data Quality and Availability**: The availability and quality of data can significantly impact the validity of the study's conclusions. If the data used in the study is outdated, incomplete, or inaccurate, it may lead to biased results or unreliable findings.

3. **Methodological Constraints**: The study may be limited by its methodology. For example, if it relies solely on quantitative analysis without incorporating qualitative insights or if it uses a specific statistical model that is not suitable for the research question, the results may be limited in their scope and depth.

4. **External Factors**: External factors such as changes in economic policies, regulatory frameworks, or market conditions may influence the risk and efficiency of banks but might not be adequately accounted for in the study. These factors could confound the results and limit their applicability over time.

5. **Causality vs. Correlation**: Establishing causal relationships between risk and efficiency in banks can be challenging. While the study may identify correlations between different variables, it may not be able to definitively establish causation due to the complexity of the banking industry and the presence of confounding variables.

CONCLUSION

In conclusion, our study aimed to investigate the risk and efficiency profiles of public and private sector banks in India, with a focus on understanding the differences between the two sectors and their implications for the banking industry as a whole. Through comprehensive data analysis and statistical testing, several key findings have emerged:

1. Risk Profile: Our analysis revealed significant differences in the risk profiles of public and private sector banks. Public sector banks exhibited higher levels of credit risk, as evidenced by higher non-performing asset (NPA) ratios and provisioning requirements. In contrast, private sector banks demonstrated lower credit risk but higher operational risk, driven by their greater exposure to market competition and technological challenges.

2. **Efficiency Measures**: Private sector banks consistently outperformed public sector banks in terms of efficiency metrics, including return on assets (ROA) and return on equity (ROE). Private sector banks demonstrated greater cost efficiency and profitability, attributed to their leaner organizational structures, superior risk management practices, and focus on customer-centric strategies.

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