

An Analytical Comparative Study of Gross NPA to Total Advances of Private and Public Banks in India

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ABSTRACT

A robust banking framework serves as a catalyst for economic development and inclusive financial growth. This research presents a comparative evaluation of asset quality between public and private sector banks in India, specifically focusing on Gross Non-Performing Assets to Total Advances. Given that the banking sector acts as the backbone of economic stability, managing credit risk is essential for sustained growth and financial health. The study utilizes secondary data to analyze trends in credit defaults and lending practices across the two banking sectors. The study examines how these institutions align with international Basel regulatory standards to mitigate losses and maintain capital adequacy. The analysis investigates whether ownership structure-private versus public-results in a statistically significant difference in NPA management. Preliminary results suggest that while both sectors face challenges with credit recovery, their resilience is heavily dictated by the effectiveness of their respective risk management frameworks and adherence to regulatory capital norms. By providing a side-by-side comparison of GNPA ratios, this study offers insights for policymakers and financial analysts regarding the credit health of the Indian banking landscape and the effectiveness of recovery mechanisms.

Keywords: Total Advances, Gross NPA, Asset Quality, Public and Private Sector Bank

INTRODUCTION

The banking system holds a pivotal position within a nation's economy, serving as its fundamental lifeblood. A robust banking institution is essential in contemporary society, contributing significantly to a country's economic development and forming the bedrock of its money market. The banking sector fulfills three core functions within an economy: operating the payment system, mobilizing savings, and allocating these savings to investment projects. As the nucleus of the financial sector, the banking system plays a critical role in transmitting monetary policy impulses throughout the entire economic system. An efficient banking structure can foster increased investment, thereby facilitating a more rapid rate of economic growth. Global experience consistently demonstrates that nations with well-developed, market-oriented, and free banking systems achieve faster and more sustained growth.

The banking sector is an integral component of any economy, significantly influencing its performance. Economists consistently highlight the banking system's effectiveness in fostering economic development. As a core economic institution, banks are expected to have a more direct and positive correlation with economic performance compared to most non-economic entities. Banks are often regarded as the global marketplace, the nerve center of national economies and finance, and a key indicator of economic outlook. They are not merely facilitators of monetary transactions but are, in essence, drivers of development.

In India, the critical role of banks in accelerating economic development has been increasingly acknowledged, particularly following the nationalization of fourteen major commercial banks in July 1969 and an additional six in April 1980. This nationalization fundamentally transformed the concept of banking. Banks are no longer perceived solely as lending institutions; they are now expected to serve society more broadly, adopting a socio-economic development-oriented perspective. They are specifically tasked with

utilizing their resources to achieve social upliftment and expedite economic development. The Indian banking sector has emerged as a robust catalyst for the nation's economic growth, with the Indian banking system recognized as one of the stronger performers globally.

Researchers have conducted diverse studies to assess bank performance, offering various perspectives on the performance of banks across different countries. Traditional performance evaluation systems for banks primarily utilize financial metrics such as Return on Assets (ROA) and Return on Investment (ROI) to gauge financial performance. However, contemporary thought leaders and organizational managers recognize that these traditional systems, being predominantly financially focused, provide an incomplete assessment of overall organizational performance and an inadequate feedback mechanism. An overemphasis on financial measurements may lead to short-term profit gains but can compromise competitive positioning and threaten long-term profitability.

Non-financial criteria, including customer satisfaction, employee satisfaction, and corporate social responsibility, are increasingly considered essential for the strategic success of any bank. Customer satisfaction is paramount to the profitability of retail banking, exerting a long-term financial impact on the banks' operations. Bank performance is also intrinsically linked to the efficiency and satisfaction levels of its human resources. A high degree of human capital efficiency and employee satisfaction directly correlates with superior bank performance. Furthermore, research indicates that banks demonstrating social responsibility in their routine operations tend to achieve stronger financial performance.

A positive correlation has been observed between corporate social responsibility and the financial performance of banks, applicable to both short-term and long-term horizons. Consequently, the holistic performance of banks can be assessed through two primary dimensions: financial aspects and human aspects. Within the human aspect, key performance indicators for a bank include customer satisfaction, employee satisfaction, and Corporate Social Responsibility (CSR).

The CAMEL rating is a supervisory rating system which was originally developed in U.S. to study a banks overall condition. It is applied to every bank in the U. S. and it is also implemented by various banking supervisory regulators. Ratings are assigned based on ratio analysis of the financial statements combined with on site examinations made by a designated supervisory regulator. Ratings are not released to the public but only the top management to prevent a possible bank run on an institution which receives a CAMEL rating downgrade.

In 1979 the Uniform Financial Institutions Rating System was implemented in U.S. banking institutions and later on worldwide following a recommendation by the U. s. Federal Reserve. The system became internationally known as CAMEL abbreviation reflecting five assessment areas i.e. Capital Adequacy, Assets Quality, Management Efficiency, Earnings Quality and Liquidity.

Asset quality is high loan concentrations that present undue risk to the banks;

- a) The appropriateness of investment policies and practices
- b) The investment risk factors when compared to capital and earnings structure
- c) The effect of fair value of investments against book value of investments

The asset quality rating is a function of present conditions and the possibility of future deterioration or improvement based on economic conditions, current practices and trends. The examinee assesses banks management of credit risk to determine the appropriate component rating for asset quality. Along with the assessment of credit risk, the examiner evaluates the impact of other risks such as interest rate, liquidity, strategic and compliance. The trend and quality of all major assets are considered for rating. This includes loans, investments, other real asset owned and any other asset that could adversely affect the banks financial condition.

Rating 1 denotes high asset quality and minimum portfolio risks. Also the lending and investment policies and procedures are in writing, safe and sound operations are followed. Rating 2 suggests high quality assets although the level and severity of classified assets are greater in Ranking 2 banks. The banks under ranking 1 & 2 exhibit trends that are stable and positive. Rating 3 shows a significant degree of bank based on either current or anticipated asset quality problems. Banks in this category may have only a moderate level of problem assets. However these banks may be experiencing negative trends, inadequate loan underwriting, poor documentation, higher risk investments etc. Ratings 4 & 5 represent increasingly severe asset quality problems. Rating 4 indicates a high level of problem assets that will threaten the banks viability. Rating 4 is assigned to banks with moderately severe levels of classified assets combined with other problems such as inadequate valuation allowances, high risk concentration or poor underwriting documentation and collection practices. Rating 5 indicates that the banks viability has deteriorated due to worse effect of its asset problems, its earnings and the level of capital.

LITERATURE REVIEW

Reddy and Yuvaraja (2001) in their research article had suggested that the adoption of international capital adequacy standards, deregulation of interest rates and entry of private and foreign banks underlined that the speed and sequencing of the financial sector reforms should be as per the requirements of the Indian economy.

Rao (2002) concluded that the international regulations are forcing the Indian banks to adopt better operational strategies and upgrade the skills. The system requires new technologies, well-guarded risk and credit appraisal system, treasury management, product diversification, internal control, external regulation as well as skilled human resources to achieve the international excellence and to face the global challenges.

Singh R (2003), in his paper Profitability management in banks under deregulate environment, IBA bulletin, No25, has analyzed profitability management of banks under the deregulated environment with some financial parameters of the major four bank groups i.e. public sector banks, old private sector banks, new private sector banks and foreign banks, profitability has declined in the deregulated environment. He emphasized to make the banking sector competitive in the deregulated environment. They should give importance to non- interest income sources.

Petya Koeva (July 2003), in his study on The Performance of Indian Banks during Financial Liberalization has studied new empirical evidence on the impact of financial liberalization on the performance of Indian commercial banks. The analysis focuses on examining the behavior and determinants of bank intermediation costs and profitability during the liberalization period. The empirical results suggest that ownership type has a significant effect on performance indicators and had observed that the increase in competition during financial liberalization has been associated with lower intermediation costs and profitability of the Indian banks.

Muniappan (2003) focused on two areas - firstly, challenges faced by the Indian banks and secondly, the management of these challenges. Every aspect of the banking industry, whether it is profitability, NPA management, customer service. Risk management, HRD etc., has to undergo the process of transformation of aligning with the international best practices. He concluded that the future of Indian banking system needs a long-term strategy, which should cover various areas like structural aspects, business strategies, prudential control systems, integration of markets, technology issues, credit delivery mechanism and information sharing.

Ram Mohan TT(2003) , in his paper ‘Long run performance of public and private sector bank stocks’ Vol 37, has made an attempt to compare the three categories of banks-Public, Private and Foreign banks using Physical quantities of inputs and outputs, and comparing the revenue maximization efficiency of banks during 1991-92 to 1999-2000. The findings show that PSBs performed significantly

better than private sector banks but not differently from foreign banks. The conclusion points to a convergence in performance between public and private sector banks in the post-reform era, using financial measures of performance

In a paper published in the Financial Express in 2004, titled “India’s Best Banks” has been doing for several years through its annual exercise to evaluate and rate Indian banks. They claim that this survey is a comprehensive one, which evaluates the performance of private, public, Indian, and foreign Banks operating in India. With the objective of making the comparison more meaningful, banks were categorized into Public Sector Banks, New Private Sector Banks and Foreign Banks. Financial information for the year ending March 31st, 2002 and March 31, 2003 relating to each of the banks falling into the aforesaid categories was collected from the data available from RBI. Five major criteria were identified against which the banks were ranked. These criteria are (i) Strength and soundness (ii) Growth, (iii) Profitability, (iv) Efficiency/Productivity, and (v) Credit quality. Considering the current banking, industrial and over-all economic scenario, pertinent weights were assigned to each of the major criteria. In the first category of "State-Run" or Public Sector Banks, State Bank of Patiala and Andhra Bank is the top two. In the category of best old private sector banks, the magazine ranks the Jammu and Kashmir Bank and Karur Vysya Bank as the first best and second best. In the category of 'New' Private Banks, HDFC as number one and ICICI Bank at number two. Finally, in the category of Foreign Banks, the magazine ranks Standard Chartered Bank and Citi Bank at the top two slots.

With an intention to honor excellence, **Outlook Money (2004)**, titled “The best in the business cover story”, (March 2004), has announcing annual awards for the best performers in the personal finance universe. In the best bank award category, the magazine selected Corporation Bank among public sector banks and HDFC Bank among private sector banks and presented outlook money award 2004 to these two banks. A rigorous selection process was devised in consultation with Earnest and Young. The short listed contenders were mailed questionnaires seeking information on operational aspects like Number of Branches, Number of ATMs, Deposits, NPAs, CAR, Return on Assets. They have taken two categories of Banks Public and Private Sector. All Public Sector Banks (except SBI, nominated for Hall of Fame Award), and Private Banks with deposit base of more than Rs.2,000 Cr as on 31 March 2003 were selected. The jury - A.K. Purwar, Anu Aga, Shitin Desai, Uma Shashikanth and Sandipan Debo-assigned weights to various parameters and choose the winner for 2004.

Ghosh and Das (2005) highlighted the ways how market forces may motivate banks to select high capital adequacy ratios as a means of lowering their borrowing costs. If the effect of competition among banks is strong, then it may overcome the tendency for bank capitalization. If systemic effects are strong, regulation is required. Empirical tests for the Indian public sector banks during the 1990s demonstrated that better capitalized banks experienced lower borrowing costs.

Baral (2005) study the performance of joint ventures banks in Nepal by applying the CAMEL Model. His study was based on secondary data drawn from the annual reports published by joint venture banks. His report analyzed the financial health of joint ventures banks in the CAMEL parameters. His findings of the study revealed that the financial health of joint ventures is more effective than that of commercial banks. Also, the components of CAMEL model showed that the financial health of joint venture banks was not difficult to manage the possible impact to their balance sheet on a large scale basis without any constraints inflicted to the financial health.

Bodla & Verma (2006) examined the performance of SBI and ICICI through the CAMEL model. Data set for the period of 2000-01 to 2004-05 were studied for the purpose of the study. With the reference to the Capital Adequacy, it concluded that SBI has an advantage over ICICI. Regarding to assets quality, earning quality and management quality, it can be said that ICICI has an edge upon SBI. Therefore the liquidity position of both banks was sound and did not differ much.

Mohan (2006) focused on the changes in efficiency and productivity in Indian banking and stated that the patterns of efficiency and technological change witnessed in Indian banking can be viewed

as consistent with expectations in an industry undergoing rapid change in response to the forces of deregulation. In reaction to the evolving market prospects a few pioneering banks might adjust quickly to seize the emerging opportunities, while others may respond slowly and cautiously.

Research Statement

‘An Analytical Comparative Study of Gross NPA to Total Advances of Private and Public Banks in India’

Period of the Study

The study is covered for ten years from the year 2004-05 to 2013-14. This period is selected for the study because it is a period after the submission of The Narsimham committee report II. The second phase of reforms process can be covered during this time period. Again this period is selected to avoid the effects of demonetization and corona pandemic on Indian banking sector.

Hypothesis

- 1) There is no significant difference in Gross NPA to Total Advances among banks.
- 2) There is no significant difference in Gross NPA to Total Advances of private and public sector.

Sample Design:

In the study, selected banks from the private sector and public sector in Indian banking sector are covered. Three banks selected for the research purpose in each sector are the three largest banks in respective sector. The selected banks in Indian banking sector are divided in following two groups from the year 2004-05 to 2013-2014:

Sr. No	Public Sector Bank	Private Sector Bank
1	State Bank Of India	ICICI Bank
2	Bank Of Baroda	Axis Bank
3	Punjab National Bank	HDFC Bank

Gross NPA to Total Advance Ratio

The CAMEL model of analysis of financial performance of bank identifies five major aspects that are capital adequacy, assets quality, management efficiency, earnings quality and liquidity. Asset quality is an aspect of bank management that entails the evaluation of firm's assets in order to facilitate the measurement of the level and size of credit risk associated with its operation. Asset quality and loan quality are two terms with basically the same meaning while its management is considered very important for the banking sector. Seven principles of Basel committee address the relevant issues of bank asset quality or credit risk management.

Problems of asset quality may become future time bomb for banks and so the standards of safety and soundness are required to set up asset quality monitoring system deterioration in bank asset quality affects its operations and financial performances well as the general soundness of the financial system in which it is an entity. In this study the management of asset quality, the second variable of CAMEL model has been tested using Gross NPAs to Total Advances ratio

Gross NPAs to Total Advances Ratio = Gross NPAs

Total Advances

TABLE-1 GROSS Npas TO TOTAL ADVANCES RATIO OF THE SELECTED BANKS

	1.37	3.1	0.99	5.09	2.99	5.41
	1.21	3.31	0.97	4.9	2.43	4.36
	1.06	3.73	1.02	4.57	1.55	2.97
	1.12	4.64	1.06	3.35	1.38	1.81
	1.26	5.23	1.44	3.09	1.37	1.72
	1.1	4.42	2.01	2.9	1.29	1.62
	0.83	3.36	1.43	3.08	1.86	2.78
	1.14	2.11	1.4	2.96	2.5	3.51
	1.69	1.52	1.45	3.68	3.99	4.2
	1.99	3.03	1.72	6.15	7.65	6.19

Source: Computed and obtained from IBA bulletins and www.capitaline.com

H0 (A): There is no significance difference of Gross NPA to Total Advances Ratio among various banks.

H1 (A): There is a significance difference of Gross NPA to Total Advances Ratio among various banks.

Descriptive								
Gross NPA to Total Advances Ratio								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Axis	10	1.2770	.33566	.10615	1.0369	1.5171	.83	1.99
ICICI	10	3.4450	1.12796	.35669	2.6381	4.2519	1.52	5.23
HDFC	10	1.3490	.34424	.10886	1.1027	1.5953	.97	2.01
SBI	10	3.9770	1.12700	.35639	3.1708	4.7832	2.90	6.15
BOB	10	2.7010	1.94054	.61365	1.3128	4.0892	1.29	7.65
PNB	10	3.4570	1.57951	.49948	2.3271	4.5869	1.62	6.19
Total	60	2.7010	1.58058	.20405	2.2927	3.1093	.83	7.65

Test of Homogeneity of Variances

Gross NPA to Total Advances Ratio

Levene Statistic	df1	df2	Sig.
3.925	5	54	.004

Significance value is $0.004 < 0.10$, So Levene test does not accept the assumption of equal variance of **Gross NPA to Total Advances** among various banks. Henceforth for testing hypothesis non parametric test should be used.

Kruskal-Wallis Test:

Ranks			
	Bank	N	Mean Rank
Gross NPA to Total Advances Ratio	Axis	10	11.60
	ICICI	10	42.20
	HDFC	10	13.80
	SBI	10	45.60
	BOB	10	29.65
	PNB	10	40.15
	Total	60	

Test Statistics ^{a,b}	
Gross NPA to Total Advances Ratio	
Chi-Square	35.900
df	5
Asymp. Sig.	.000
a. Kruskal Wallis Test	
b. Grouping Variable: Bank	

Here, at 5 % level of significance the value of **Kruskal-Wallis Test** is less than 0.05 ($0.00 < 0.05$) it is concluded that There is a significance difference of **Gross NPA to Total Advances** among various banks.

H0 (B): There is no significance difference of Gross NPA to Total Advances Ratio between public and private sector banks.

H1 (B): There is a significance difference of Gross NPA to Total Advances Ratio between public and private sector banks.

Descriptive								
Gross NPA to Total Advances Ratio								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Private sector Bank	30	2.0237	1.22980	.22453	1.5645	2.4829	.83	5.23
Public sector Bank	30	3.3783	1.61896	.29558	2.7738	3.9829	1.29	7.65
Total	60	2.7010	1.58058	.20405	2.2927	3.1093	.83	7.65

Test of Homogeneity of Variances			
Gross NPA to Total Advances Ratio			
Levene Statistic	df1	df2	Sig.
1.815	1	58	.183

Significance value is $0.183 > 0.10$, So Levene test accept the assumption of equal variance of **between public and private sector banks Gross NPA to Total Advances**. . Henceforth for testing hypothesis parametric test should be used.

So T test as a parametric test should be used to identify the significant differences of **Gross NPA to Total Advances Ratio between public and private sector banks**.

T Test:

Group Statistics					
	Bank Type	N	Mean	Std. Deviation	Std. Error Mean
Gross NPA to Total Advances Ratio	Private sector Bank	30	2.0237	1.22980	.22453
	Public sector Bank	30	3.3783	1.61896	.29558

Independent Samples Test								
	Levene's Test for Equality of Variances		t-test for Equality of Means					
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference

									Lower	Upper
Gross NPA to Total Advances Ratio	Equal variances assumed	1.815	.183	-3.650	58	.001	-1.35467	.37119	-2.09768	-.61165
	Equal variances not assumed			-3.650	54.108	.001	-1.35467	.37119	-2.09882	-.61051

From the above table, significance value $0.001 < 0.05$ henceforth it is concluded that there is significance difference of **Gross NPA to Total Advances Ratio between public and private sector banks.**

Findings of the Study

- 1) There is a significant difference in Gross NPA to Total Advances among the selected banks.
- 2) There is a significant difference in Gross NPA to Total Advances among private and public sector banks

Significance of the Study

The study will help the researcher to understand important aspect of financial performance analysis of banks. The researcher can use this study to further enhance his study in the post demonetization as well as post pandemic period. The study can be used to compare the performance of the same banks in pre and post demonetization period.

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