Testing The Performance Of Leading Banks In India - An Experimental Study

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INTRODUCTION

The year 2008-2009 was a year that witnessed perfect storm- volatile oil prices, asset bubbles and over leveraged banks, in a very interconnected world - all leading to unarguably the greatest global financial crisis witnessed in the human history. The Indian Banking industry has not seen a collapse like that of Lehman Brothers or Merrill Lynch, or witnessed massive government-funded bailouts as in case of Citibank or RBS. However, Indian banking industry is not fully recession proof. The year 2008-2009 was a very difficult year for the Indian Banks. Many large Indian banks were facing the problem of achieving a satisfactory financial performance. Thus, it becomes important to analyze the performance of leading banks of India for the year from 2008-2009.

This study tests the performance of a set of ten leading Indian Banks during the year 2008-2009. The banks selected for the study are the banks that got the top ten ranking in the category of balance sheet size of more than ₹ 24,000 Crores in the survey by a leading business magazine *Business Today* during the year 2008-2009. The year 2008-2009 was chosen for this study because of the fact that it is was a crucial year for the financial systems of the whole world. This study evaluates the performance of the banks based on eight parameters - Net Interest Income, Cost to-Income Ratio, Capital Adequacy Ratio, Net NPAs, Deposit growth, Return on Assets, Return on Capital Employed and Operating Profit. These parameters have been identified as the key performance indicators of banks by industry experts. This study helps us to understand the commonly used performance measures of banks. It helps to identify the bank that performs the best with regard to each performance parameter. This study also analyses the strengths and weaknesses of each bank selected for the study.

LITERATURE REVIEW

Existing literatures provide us information on the commonly used measures used for evaluating the bank performance. Wood, Mack (2007) in his article, *"Seven Habits of Highly Efficient Banks"* has listed down the seven characteristics that are common to highly efficient banks. The seven characteristics are as follows:

1. Exceptionally focused senior management;
2. A clear, consistent message for the purpose across the organization;
3. Quick adaptation; embrace of change;
4. Understanding the market and the competition;
5. Customer-centric focus;
6. Selecting metrics that work;
7. Openness to new technologies;

Bank Performance analysis is generally done through traditional ratio analysis. Different versions of DuPont financial ratio analysis (Cole, 1973) seems to be more perspective for banks and other financial institutions. The focus of financial analysis for the management of any bank (or the banking sector as a whole) should be on the efficiency of performance of the bank measured from the viewpoint of investors/owners' income maximization. More widely, all stakeholders have to be interested in the performance results of the banks. The concept of a *"stakeholder monitor"* is useful, to take into account, the designing performance analysis of any bank. Various measures of rates of return are

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used mainly for that purpose. While ROA, ROE, and Interest Margin (and non-interest expenses) to gross income remain the key measures, they should ideally be supplemented by the analysis of other operating ratios (Sundararajan, 2002, p.20).

Karr, John (2007) in his article *"Performance Measurement in Banking beyond ROE"* says that ROE is not the ultimate performance scorecard for banks and gives some limitations of ROE. According to him, the ROE report card provides only a summary level picture of which parts of the bank are contributing to - or detracting from - shareholder value. It does not provide information as to the *"how's"* or *"why's"* of performance. Moreover, it does not indicate progress in terms of the bank's strategic agenda. Therefore, adoption of a broader set of performance measurement indicators is required. The indicators are needed to provide a better sense of performance along strategic lines, as well as to show how drivers of value are affecting the institution. Gregory T. Fraker (2005) in his article *"Using Economic Value Added (EVA) to Measure and Improve Bank Performance"* has illustrated that EVA can be an important tool that bankers can use to measure and improve the financial performance of their bank. Since EVA takes the interest of *'capitalized'*, *'undercapitalized'*, *'significantly undercapitalized'* or *'critically undercapitalized'*, depending on the aforementioned ratios and / or other factors, the bank's shareholders into consideration, the use of EVA by bank management may lead to different decisions than if the management relied solely on other measures. Vainu, Jaan (2002) in his study, *" Bank Performance Analysis - Methodology and Emprical Evidence"* has said that Banks' performance monitoring, analysis and control needs special analysis in respect to their operation and performance results from the viewpoint of different audiences, like investors/owners, regulators, customers/clients, and management themselves. In this article, different versions of financial ratio analysis are used for the bank performance analysis using financial statement items as initial data sources.

NEED FOR THE STUDY

In order to study the effects of the economic slowdown in the banking sector, the researchers have developed an interest to test the performance of select leading banks in India. This study helps us to know how the banking industry in India performed during the year 2008-2009, which was a year that posed threat for financial systems of the whole world. It also helps us to know the strengths and weaknesses of some of the leading banks of India. This study familiarizes the common man with the commonly used parameters for evaluating the bank performance. Thus, in a nutshell, we can say that this study helps us to know how far Indian banks are recession proof.

OBJECTIVES OF THE STUDY

- To test the performance of leading ten Indian banks during the year 2008-2009, with the help of various parameters.
- To identify the strengths and weaknesses of each bank.
- To offer suggestions based on the study.

RESEARCH METHODOLOGY

To achieve the given objectives, and to calculate the value of various performance parameters, the secondary data was used. The secondary data that are mainly used are published annual reports of various banks and the survey reports of leading business magazines. The research design used for this study is descriptive in nature, as the information available from published annual reports are used for testing the performance of banks for the period from 2008 and 2009. Hence, the performance of various banks is assessed with the help of various parameters. The following are the techniques used to test the same, which are as follows:

1. Operating Profit
2. Net Interest Income (NII = {Interest payments on assets} - {Interest payments on liabilities})
3. Cost to Income Ratio
4. Capital Adequacy Ratio
5. Net NPAs
6. Deposit Growth
7. Return On Assets
8. Return On Capital Employed

ANALYSIS AND DISCUSSION

The data collected from published annual reports was tabulated and analyzed using appropriate ratios. The ratios were calculated with the help of Microsoft Excel. The comparative analyses of performance of banks were done with the help of tables, bar charts and pie charts. The period selected for study is the year 2008-2009, as this year was a very crucial year for the financial systems around the world due to the financial meltdown faced by the world.

☸ **Comparative Analysis of Performance of Leading Banks of India during 2008-2009 :** In this part, a comparison has been made of the performance of the top ten banks (as per the Business Today survey) during the year 2008-2009 by testing their performance with the help of various ratios. Business Today had given the following ranking for banks, with a balance sheet size of more than ₹ 24,000 Crore during the year 2008-2009.

Table 1: Top Ten Banks of India

Rank	Bank
1	Axis Bank
2	Bank of India
3	Punjab National Bank
4	Bank Of Baroda
5	HDFC Bank
6	Indian Bank
7	Federal Bank
8	Corporation Bank
9	Union Bank Of India
10	Citibank

Source: Business Today Magazine, December13, Volume18.

These banks' performance are analyzed with the above mentioned parameters. The advantage of these parameters is that many of them are specifically designed for evaluating bank performance. A detailed analysis of these performance parameters is done, which is as follows:

☸ **Operating Profit:** Operating profit is the profit earned from a firm's normal core business operations. This value does not include any profit earned from the firm's investments (such as earnings from firms in which the company has partial interest) and the effects of interest and taxes. This is also known as *"earnings before interest and tax"* (EBIT). Operating profit shows the efficiency of a bank in managing operating expenses. It is calculated as follows:

Operating profit =Operating Revenue - Operating Expenses

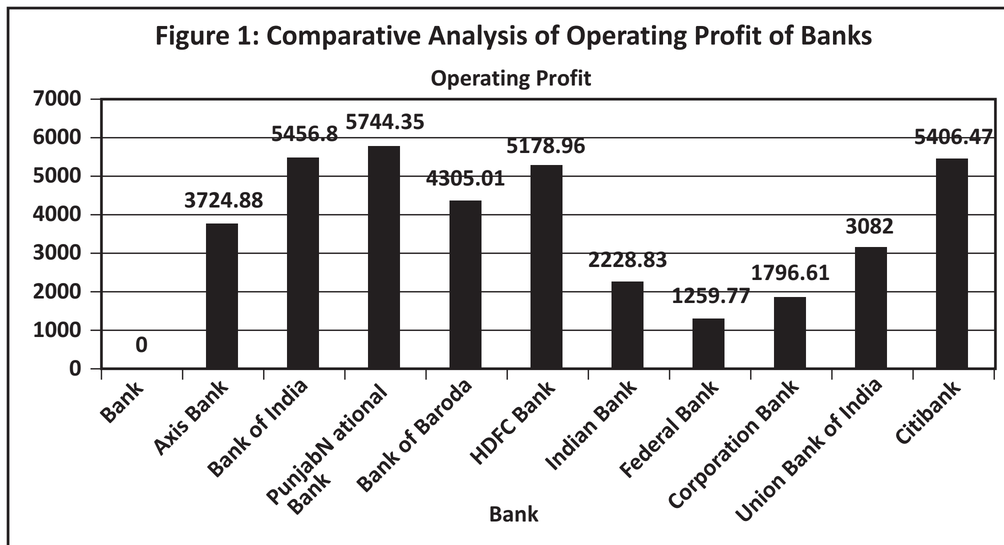
Here, the operating profit of various banks is compared in order to know their operational efficiency. The Table 2 below shows the Operating profit of the selected ten banks for the year 2008-2009.

Table 2: Operating Profit Of Ten Leading Banks During 2008-2009

Bank	Operating Profit (₹ Cr)
Axis Bank	3724.88
Bank of India	5456.80
Punjab National Bank	5744.35
Bank Of Baroda	4305.01
HDFC Bank	5178.96
Indian Bank	2228.83
Federal Bank	1259.77
Corporation Bank	1796.61
Union Bank Of India	3082.00
Citibank	5406.47

Source: Compiled by authors using published annual reports of banks

From the Table 2, we can find that operating profit of Punjab National Bank is the highest among the top ten banks selected for thw study. This shows that PNB has efficient control over its operating expenses. Besides that, it also shows that PNB is earning profits from its core business of banking rather than earnings from investment in outside sources. Federal Bank, Corporation Bank and Indian Bank have relatively less operating profit, hence, they should try to improve their operational efficiency.
For ease of understanding, the following Figure 1 shows the graphical representation of Operating profits of ten banks.



☸ **Net Interest Income:** Net interest income (NII) is the difference between the revenues on assets and the cost of servicing liabilities of organizations. For banks, the assets are commercial and personal loans, mortgages, construction loans and securities. The liabilities are deposits from customers. Notice that both cash flows are not interest payments. In other words, the NII is the difference between the interest payments to the bank on loans and the interest payments by the bank to the customers on the deposits.

NII = {Interest Payments On Assets}– {Interest Payments On Liabilities}

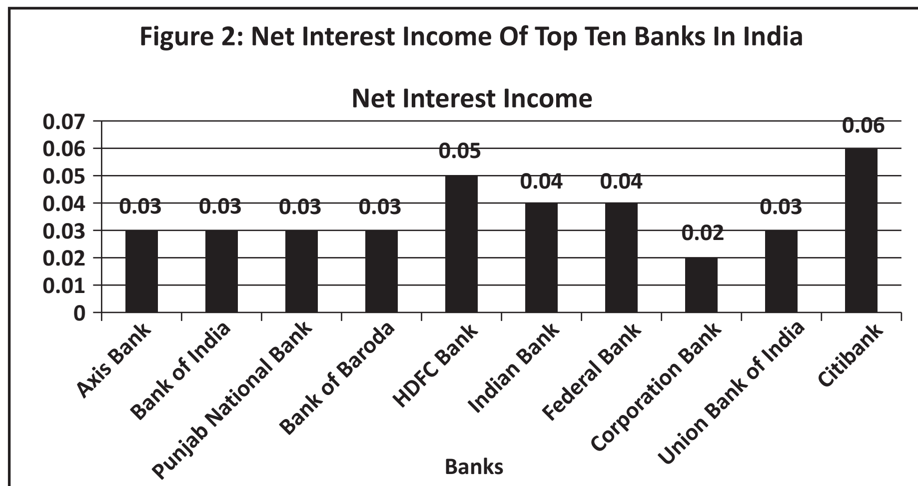
Net Interest Income boosts the profit of a bank. So, the higher the NII, the higher will be the profit of the bank. Here, the Net Interest Income of ten banks for the year 2008-2009 is compared and Punjab National Bank's NII with respect to other banks is analyzed.

Table 3: Net Interest Income Of Ten Leading Banks

Bank	Net Interest Income
Axis Bank	0.03
Bank of India	0.03
Punjab National Bank	0.03
Bank Of Baroda	0.03
HDFC Bank	0.05
Indian Bank	0.04
Federal Bank	0.04
Corporation Bank	0.02
Union Bank Of India	0.03
Citibank	0.06

Source: Compiled by authors using published annual reports of banks

The following Figure 2 gives the pictorial representations of Net Interest Income of top ten banks of India for the year 2008-2009.



From Table 3 and Figure 2, we can infer that the Net Interest Income is highest for Citibank (0.06%). The NII is very less for Corporation Bank, so it should take urgent measures to improve its NII, so that it can improve its profitability.

☸ **Cost to Income Ratio:** The Cost to Income ratio is an efficiency measure similar to the operating margin. Unlike the operating margin, lower is better. It is useful to measure how costs are changing as compared to income - for example, if a bank's interest income is rising, the costs are also rising at a higher rate - a look at the changes in this ratio will highlight the fact. It can be used for benchmarking by the bank when reviewing its operational efficiency. There is an inverse relationship between the cost income ratio and the bank's profitability.

Cost Income Ratio = Operating Expenses ÷ Operating Income

The Table 4 shows the Cost to Income Ratio of the top ten banks for year 2008-2009.

Table 4: Table Showing Cost To Income Ratio Of Top Ten Banks

Bank	Cost to Income Ratio
Axis Bank	0.43
Bank of India	0.36
Punjab National Bank	0.42
Bank Of Baroda	0.45
HDFC Bank	0.52
Indian Bank	0.39
Federal Bank	0.31
Corporation Bank	0.36
Union Bank Of India	0.42
Citibank	0.32

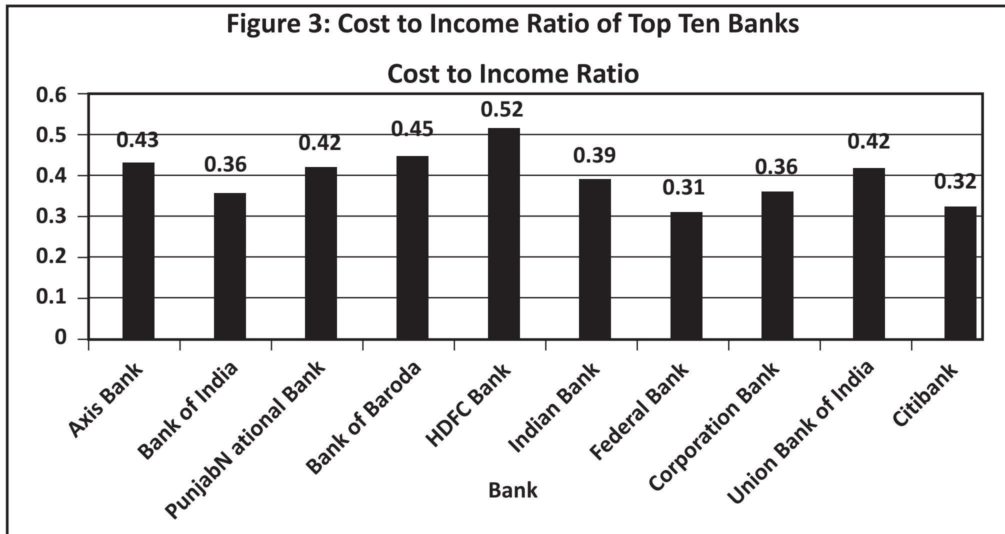
Source: Compiled by authors using published annual reports of banks

The Table 4 shows that the performance of Federal Bank is the best regarding Cost to Income Ratio, as it has the lowest ratio (0.31) among the ten banks. HDFC bank has high Cost to Income Ratio (0.52). Thus, HDFC bank has to take urgent measures to lower its Costs, so that it can improve its profitability. The Cost to Income Ratio of Bank of Baroda, Axis Bank and Union Bank of India is also relatively high.

☸ **Capital Adequacy Ratio:** Capital adequacy ratio (CAR), also called Capital to Risk (Weighted) Assets Ratio (CRAR), is a ratio of a bank's capital to its risk. National regulators track a bank's *CAR* to ensure that it can absorb a reasonable amount of loss and are complying with their statutory Capital requirements. Capital adequacy ratios ("CAR") are a measure of the amount of a bank's capital, expressed as a percentage of its risk weighted credit exposures.

CAR = Capital /Risk

The percent threshold (10% in this case, a common requirement for regulators conforming to the Basel Accords) is set



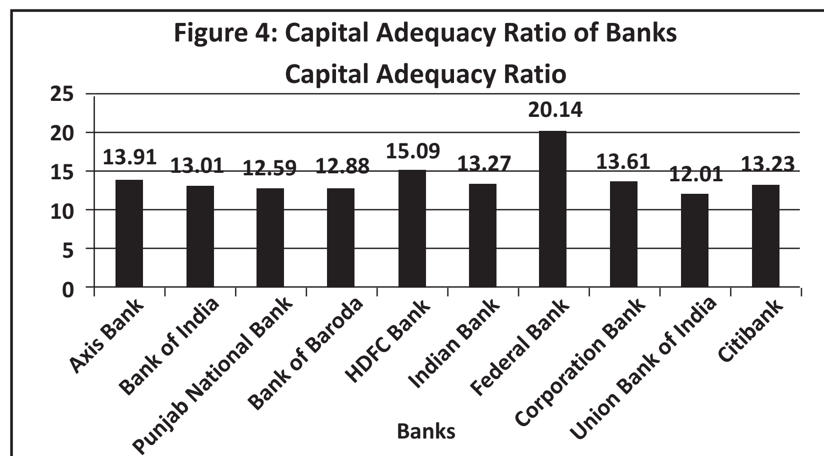
by the national banking regulator. The Table 5 presents the Capital Adequacy Ratio of top ten leading banks of India for the year 2008-2009.

Table 5: Capital Adequacy Ratio of Banks

Bank	Capital Adequacy Ratio
Axis Bank	13.91
Bank of India	13.01
Punjab National Bank	12.59
Bank Of Baroda	12.88
HDFC Bank	15.09
Indian Bank	13.27
Federal Bank	20.14
Corporation Bank	13.61
Union Bank Of India	12.01
Citibank	13.23

Source: Compiled by authors using published annual reports of banks

The following Figure 4 represents the Capital Adequacy Ratio of banks for the year 2008-2009.



The Table 5 indicates that the Capital Adequacy Ratio of Federal bank is the highest (20.14).However, all the banks are satisfying the Basel Capital Adequacy Norm of 10%.

☸ **Net NPAs:** The Indian banking sector is facing a serious problem of NPA. The extent of NPA is comparatively higher in public sectors banks. The Net NPA levels helps us to know the efficiency of Credit Risk Management system of the bank. The ratio of Net NPAs to Net Advances is a measure of quality of assets of the bank. Hence, the lower the Net NPA level, the better is the quality of the assets of the bank. The Table 6 shows the Net NPA levels of the top ten banks for the year 2008-2009.

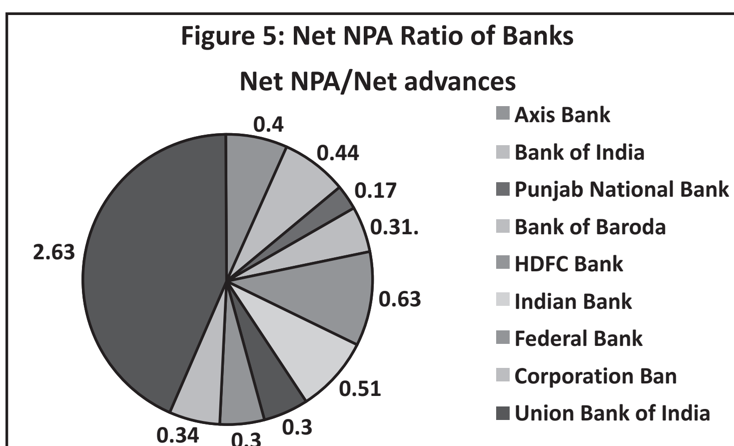
Table 6: Net NPA Levels Of Banks

Bank	Net NPA/Net advances
Axis Bank	0.40
Bank of India	.44
Punjab National Bank	0.17
Bank Of Baroda	0.31
HDFC Bank	0.63
Indian Bank	0.51
Federal Bank	0.30
Corporation Bank	0.30
Union Bank Of India	0.34
Citibank	2.63

Source: Compiled by authors using published annual reports of banks

The Figure 5 represents the Net NPA levels of the top ten banks for 2008-2009.

Figure 5: Net NPA Ratio of Banks



From the Figure 5, it becomes clear that the Net NPA ratio of Punjab National Bank is the lowest. This shows that Punjab National Bank has Efficient Credit Risk Management techniques. HDFC Bank and Indian Bank have high net NPA levels, so they have to take steps to improve the quality of their assets.

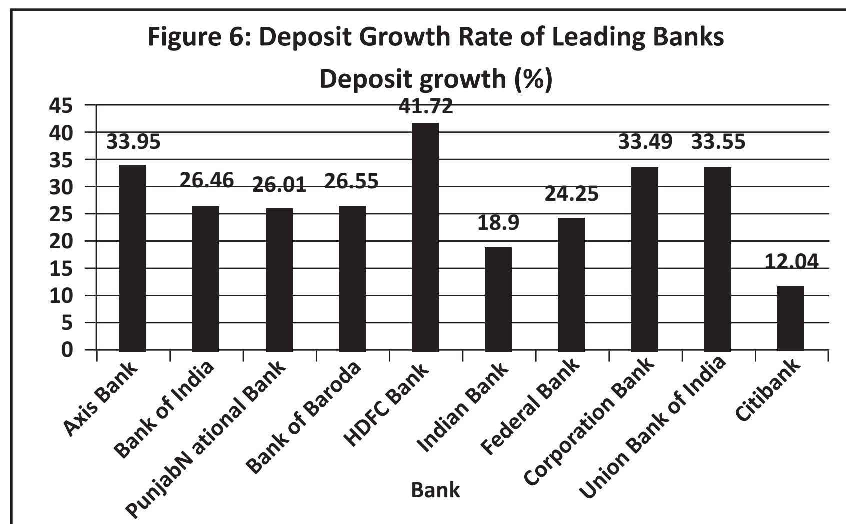
☸ **Deposit Growth:** Deposit growth rate is also one of the important performance parameters adopted for measuring the performance of the bank. Higher deposit growth can be a result of better interest on deposits or due to the increasing customer loyalty of banks. The Table 7 represents the deposit growth of selected ten leading banks for the year 2008-2009.

The Table 7 portrays that the deposit growth of HDFC bank is the highest (41.72). The deposit growth rate of Citibank and Indian Bank are comparatively low.

☸ **Return On Assets:** The Return on Assets (ROA) percentage shows how profitable a company's assets are in generating revenue. This number tells you what the company can do with what it has, i.e. how many dollars of earnings they derive from each dollar of assets they control. Return on assets is a common figure used for comparing performance of financial institutions (such as banks), because the majority of their assets will have a carrying value that is close to their actual market value. Return on assets is not useful for comparisons between industries because of

Table 7: Deposit Growth Of Leading Banks	
Bank	**Deposit growth (%)**
Axis Bank	33.95
Bank of India	26.46
Punjab National Bank	26.01
Bank Of Baroda	26.55
HDFC Bank	41.72
Indian Bank	18.90
Federal Bank	24.25
Corporation Bank	33.49
Union Bank Of India	33.55
Citibank	12.04
Source: Business Today, December 13, Volume 18	

Figure 6: Deposit Growth Rate of Leading Banks

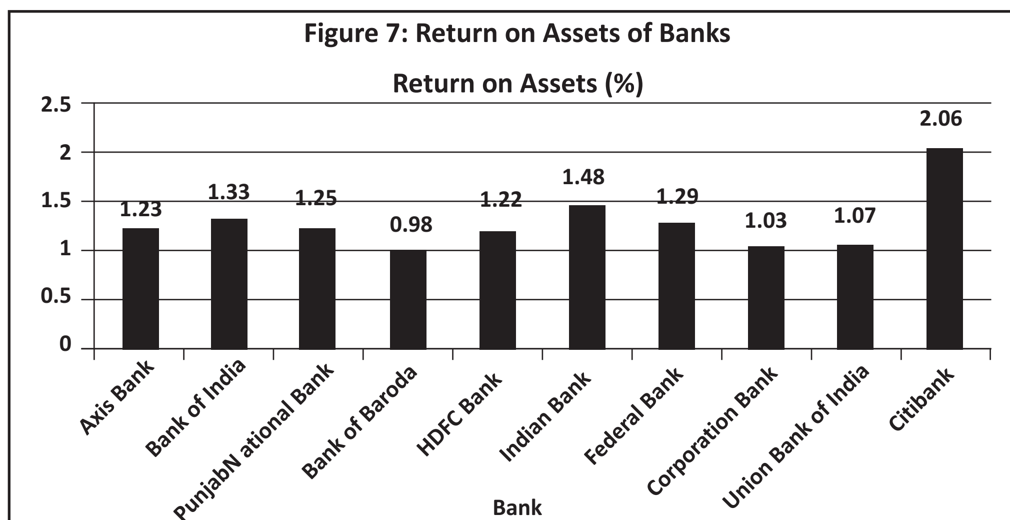


factors of scale and peculiar capital requirements (such as reserve requirements in the insurance and banking industries).

$$ROA = \frac{\text{Net Income + Interest Expense - Interest tax saving}}{\text{Average Total Income}}$$

Table 8: Return on Assets of Leading Banks	
Bank	**Return on Assets (%)**
Axis Bank	1.23
Bank of India	1.33
Punjab National Bank	1.25
Bank Of Baroda	0.98
HDFC Bank	1.22
Indian Bank	1.48
Federal Bank	1.29
Corporation Bank	1.03
Union Bank Of India	1.07
Citibank	2.06
Source: Compiled by authors using data from Published Annual Reports.	

The Table 8 shows the return on Assets of the leading banks for the year 2008 - 2009. From the Table 8, we can understand that the Return of Assets of Citibank is the highest (2.06%) among these banks. The return of assets of Bank of Baroda, Union Bank of India and Corporation Bank are comparatively low, hence, they should utilize their assets effectively. The following Figure 7 shows the pictorial representation of the Return on Assets of the leading ten banks for the financial year 2008-2009.



☸ **Return On Capital Employed:** Return on Capital Employed (ROCE) is used in finance as a measure of the returns that a company is realizing from its capital employed. It is commonly used as a measure for comparing the performance between businesses and for assessing whether a business generates enough returns to pay for its cost of capital. ROCE compares earnings with capital invested in the company. It is similar to Return on Assets (ROA), but takes into account sources of financing. It basically can be used to show how much a business is gaining for its assets, or how much it is losing for its liabilities.

ROCE = EBIT / Capital Employed

The Table 9 below shows the return on capital employed for the top ten leading banks for the year 2008-2009.

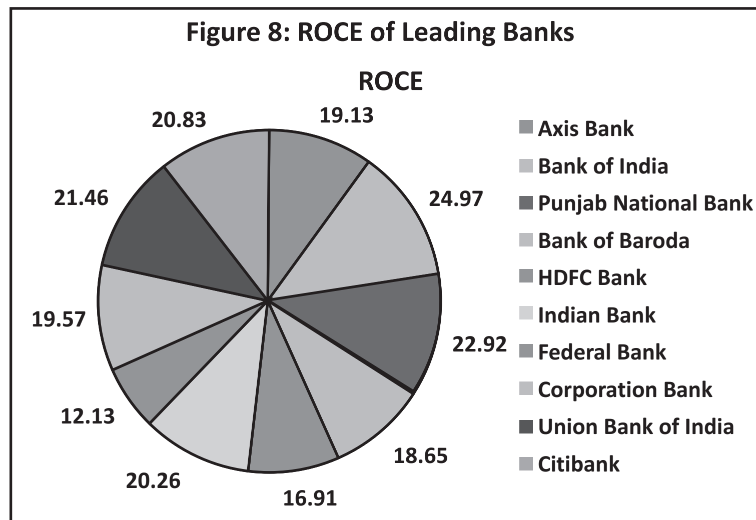
Table 9: Return On Capital Employed

Bank	ROCE
Axis Bank	19.13
Bank of India	24.97
Punjab National Bank	22.92
Bank Of Baroda	18.65
HDFC Bank	16.91
Indian Bank	20.26
Federal Bank	12.13
Corporation Bank	19.57
Union Bank Of India	21.46
Citibank	20.83

Source: Compiled by authors using published annual reports of banks

From the Table 9, it is clear that ROCE is highest for Bank Of India (24.97) followed by Punjab National Bank, Union Bank of India and Citibank. Federal Bank has comparatively very low ROCE, so it should take urgent measures in this direction for improvement.

The following Figure 8 represents Return on Capital employed for the top ten banks.



MAJOR FINDINGS OF THE STUDY

1. Among the top ten banks selected for the study, Punjab National Bank was having the highest Operating Profit for the year 2008-2009.

2. In the area of Net Interest Income, Federal Bank was in the topmost position among the ten banks selected for the study.

3. In Cost to Income Ratio, Federal Bank was the best performer, as it had the lowest Cost to Income Ratio. Thus, it had chances of earning higher profits.

4. Among the top ten leading banks of India, Capital Adequacy Ratio was highest for Federal bank in the year 2008-2009. Thus, Federal Bank was in a better position to absorb losses.

5. In the area of NPAs, PNB was the best performer among the leading ten banks, as it had the lowest Net NPA ratio. Thus, it had a very efficient Credit Risk Management System for reducing its NPAs.

6. The Deposit Growth Rate was highest for HDFC bank .Thus, HDFC bank had a good customer loyalty among the top ten banks.

7. Among the top ten leading banks of India, the Return on Assets was the highest for Citibank. Thus, the assets of Citibank were more profitable in generating revenue compared to other banks.

8. Return on Capital Employed was highest for Bank of India. Thus, Bank of India was efficiently utilizing its capital.

SCOPE AND DIRECTION FOR FUTURE RESEARCH

In this study, the performance of only ten leading banks of India is done, but further studies can be done on more public sector and private sector banks. Besides that, we can also use many other performance parameters for analyzing the performance of banks. This study can also be conducted in case of foreign banks. Moreover, the academic researchers in a developing economy like India can gain further, by using the result of this study for similar studies.

CONCLUSION

The year 2008-2009 was a very crucial year for the financial systems of the whole world, as it witnessed the greatest global financial crisis in the human history. The financial systems and banks of many countries collapsed during this year. This study throws light onto the performance of the major ten banks of India during the year 2008-2009. Eight performance parameters were used for measuring the performance of the leading Indian Banks. This study helps us to gain substantial knowledge about the various performance parameters used for evaluating the performance of banks. From the study, it was found that the performance of Indian Banks during the year 2008-2009 was satisfactory in spite of recession affecting the whole globe. The major banks in India have their own respective strengths and weaknesses. But in spite of that, their performance is at par with that of the major banks in the world. This shows that the Indian

Banking has grown to a great extent for the past few years, and it has gained efficiency in handling risk element. This study includes both public and private sector banks, thus it gives an overall idea about the efficiency of Indian Banking system.

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