

Post-Reform Profitability Analysis of Public Sector Banks An Empirical Study

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ABSTRACT

The reforms in the financial sector were stimulated by the report of the Narasimham Committee which drew attention to the poor loan recovery, weak capital position, high cost and low profitability of Public Sector Banks (PSBs). The Narasimham Committee attributed this record not to public ownership, but pointed mainly to the managerial and policy environment within which banks had operated and sought to improve the efficiency of banking system by introducing transparency in operations and ensuring that the sector is operating on a sound financial footing. On this basis, controls on interest rates were removed, the pre-emption of bank assets were reduced and regulatory and supervisory standards were strengthened with the introduction of new norms of asset classification, income recognition and capital adequacy requirements. Now, a reasonable duration of time has elapsed for a meaningful evaluation of how PSBs have performed in the changed policy environment. This paper is an attempt to critically evaluate the performance of Indian public sector banks, by examining the quantitative data on bank profitability and other related parameters like capital adequacy, asset quality, operational efficiency and the like, subsequent to the marked oriented reforms in 1991. For the purpose of the study, the sample constitutes SBI and its seven subsidiaries and eighteen other nationalized banks. Data of twelve years viz. from 1995-96 to 2006-07 has been considered in the sample, reason being most of the impact of banking reforms came into existence after 1995 onwards. Various statistical tools were used for in-depth analysis of quantitative data.

Introduction

In the pre reform era, banking activities in India were characterized by barriers to entry, control over pricing of financial assets, high transaction costs and restrictions on movement of funds from one market segment to another. In 1991, the Indian economy went through a process of economic liberalization. Recognizing that the success of economic reforms was contingent on the success of financial sector reform as well, the government initiated a fundamental banking sector reform package in 1992. Indeed, banks are very important for the smooth functioning of financial market as they serve as repositories of vital financial information and can potentially alleviate the problems created by information asymmetries. The banking reforms package was based on recommendations proposed by the Narasimham Committee Report (1992) that advocated a move to a more market oriented banking system, which would operate in an environment of prudential regulation and transparent accounting.

Banking sector reforms introduced in a gradual and sequenced manner were directed at removal of various deficiencies from which the system was suffering. The basic objective was to make the system more stable and efficient so that it could contribute in

accelerating the growth process. The first generation of India's banking sector reforms (1991) was 'curative' as they were for cleaning of balance sheet of banks and putting them on a recovery path. The second generation reforms (1998) were 'preventive', aimed at building a strong and robust banking system which could withstand the pressures of globalization.

Banking sector reforms in India are aimed at induction of best international practices and technological changes for competing globally. The Reserve Bank of India (RBI) has time and again emphasized transparency, diversification of ownership and strong corporate governance to mitigate the prospect of systemic risks in the banking sector. The PSBs in India transformed themselves to great extent so as to fit the requirements. It's almost one and half decade that the reform process was initiated in India. We feel it would be evident to analyze the performance of PSBs after reforms.

Literature Review

The first attempt to examine productivity, efficiency and profitability of commercial banks was made by Luther Committee (1976) appointed by RBI. For improving the performance of banks, it suggested

various measures like improvement of capital base, revision of tax laws, prompt and regular flow of information, uniform system of audit, simplification of systems and better customer services. S.G. Shah (1978) pointed out that the extremely high profits of banks in year 1975 was the by product of credit and monetary policies, thereby concluding that the profitability cannot be improved merely by increasing the margin between lending and borrowing rates. Varde and Singh (1979) stated that spread is affected by external factors (monetary credit, interest rate policy of RBI, fiscal policy of govt.) as well as internal factors (operational and managerial efficiency of banks). S.K. Verghese (1983) attributed fluctuations in profits and profitability of banks mainly to changes in interest rates, reserve requirement and interest tax.

A more flexible interest rate structure, liberal assistance from RBI, lower SLR ratio and creation of competitive environment were suggested by Marugesan and Rao (1991) as measures for improving banks' profits. The Narasimham Committee (1991) cited 'the system of directed investments' as the major element depressing the banks earnings. So M.N. Goiporia (1992) suggested that banks should be left free to pick up the priority sector category of borrowers. Charvaka (1993) and Narasimham Committee Report (1998) stressed on NPAS as the major impediment, adversely, affecting the profits of banks. The ratio of profits to assets or working funds was observed to be much lowered as compared to international averages by P.R. Bhatt and Ghosh (1995) over the past decades and in 1989-90, such profit were no more than 1.1% of working funds. The Verma Committee (1999) identified weak banks, strong banks and potential weak banks based on the study of seven financial performance parameters (capital adequacy ratio, coverage ratio, ROA, net interest margin, operating profit to average working funds, cost to income and staff cost to net interest income plus other income). Kaveri (2001) extended the study conducted by Verma Committee using nine efficiency parameters, which focused on

two major concerns of banks i.e. loan default and profitability. Das (1999) compared the performance of PSBs for three years in post reform period, 1992, 1995 and 1998 and concluded that banks tended in show risk averse behavior by opting for risk free investments over risky loans. Michael C. Kelly and Garry C. Zimmerman (1984) stressed that deregulation of interest rates did not had any significant effects on profitability. According to Amandeep (1991), the profitability is affected mainly by two factors i.e. spread and burden, besides other factors like credit policy, geographical expansion, increasing establishment expenses, low non-fund income etc. Kiran Chopra (1987) recommended proper management of costs as well as earnings for profitability of PSBs.

Research Objectives

The present study is aimed to investigate the profitability behavior of PSBs in the wake of banking reforms and to explore the inter-relationship between the various factors influencing the profitability of PSBs. Finally, suggestions are provided for the improvement of profitability status of PSBs.

Research methods and procedures

The present study is based on macro approach to the problem of profits and profitability of Banking Industry in India and seeks to analyze the post reform profitability performance of PSBs which account for the major share of banking business in our country. For the purpose of the study, the use of secondary data has been made. All the public sector banks, which include SBI and its seven subsidiaries and eighteen other nationalized banks, have been taken as the sample. Bank of Maharashtra has been excluded from the sample due to non availability of data.

The data has been mostly collected from various publications of RBI (available on line), RBI Library (New Delhi) and official website of National Stock Exchange (NSE). Data of twelve years viz. from 1995-96 to 2006-07 has been considered. An attempt in

made to analyze the trend of profitability behavior of banks in post-reform period by computing various ratios and doing financial analysis based on annual accounts and reports of banks for twelve years period (See Exhibit 1). Computerized technique MS-EXCEL is used for compiling the data used for analysis. factors such as education, political stability, openness but the existence of a well functioning

Exhibit 1
Accounting Ratios and Other Variables Used

Accounting Ratios Used	Other Variables Used
1. Profits to total assets ratio	1. Total Profits
2. Credit Deposit ratio	2. Assets and Liabilities
3. Cash Deposit ratio	3. Deposits and its types
4. Investment Deposit ratio	4. Investment by banks in India & outside India
5. Interest on Advances to Total Advances ratio	5. Borrowings by banks in India
6. Interest on Deposits to Total Deposits ratio	6. Interest earned & paid by banks
7. Operating expenses to Total Income ratio	7. Spread
8. Profits to Total Income ratio	8. Total Expenses
9. Profits to Total Expense ratio	9. Business per employee & Profit per Employee
10. Priority Sector Advances to Total Advances ratio	10. Initial Public Offers (IPOs) of banks
11. Net Non Performing Assets (NPA) as percentage to Net Advances	
12. Capital Risk Weighted Assets Ratio (CRAR)	

Appropriate statistical tools namely arithmetic mean, geometric mean, coefficient of variation and correlation coefficient have been used at different places as per the requirement of the study. For instance, average investments made by banks are computed using arithmetic mean. Similarly, the average ratios are computed using geometric mean. The coefficient of variation is computed in order to assess the consistency or to compare the variability of two or more data series over the years. The coefficient of correlation between advances & net profits and deposits & net profits in computed in order to ascertain their relationships.

Post-Reform Profitability Analysis – A Quantitative Assessment

The data for this study was systematically gathered and compiled using Excel Worksheets. The empirical analysis is attempted based on profits, assets, liabilities, income, expenses and employees of the banks. The major findings along with the discussions are stated below under their respective heads.

Total Profits Analysis

The banks witnessed gradual and consistent growth in profits, the highest growth (91%) being observed in year 2001-02. All eight banks which were running into losses in 1995-96 (Indian Bank, State Bank of Saurashtra, Vijaya Bank United Bank of India, Punjab and Sind Bank, Indian Overseas Bank, Punjab National Bank and UCO Bank) showed tremendous improvement in their performance, turning their losses into profits in a short span of time. The largest public sector bank (State Bank of India) enjoys the top position in profitability throughout. The profits have been most consistent for Bank of Baroda followed by Corporation Bank and SBI. The highest variation in observed in case of Indian Bank followed by UCO Bank and State Bank of Saurashtra. Table A classifies the banks, based on average profits of twelve years, computed using arithmetic mean.

Table 1: Classification of banks based on average profits

Range (Amt. in Rs. Crores)	Number of banks
0-500	21
500-1000	3
1000-1500	0
1500-2000	0
2000-2500	1
Total	25

Source: Data generated based on annual account of banks.
Note: Indian Bank has negative average profits so it is excluded from above classification.

On an average, banks have been earning profits of five hundred crores which are fairly large and quite

an achievement in comparison to average losses of Rs 15 crores in year 1995-96.

Assets Based Analysis

The major findings are as follows:

- Total assets of all the banks increased over the period of twelve years. The increase in assets at the highest rate (21.21%) is observed in 2006-07 whereas least growth (9.93%) is observed in 1996-97.
- The major part of assets is formed by advances (44%), followed by investments (36%), cash (13%), other assets (5%), and fixed assets (1%). The amount of advances has been most widely fluctuating over the years followed by investments.
- For majority of banks, the profit to assets ratio has been less than 1%.
- Total investments made by banks in India increased continuously over the period of study, the highest growth (21.83%) being observed in year 1998-99 whereas the least growth (5.13%) was observed in the year 2006-07.
- Of all the investments made by banks in India, the major part is comprised of investments in govt. and other approved securities (80%-87%), followed by investments in shares, debentures and bonds (9%-17%), and investments in joint ventures and others (2%-6%). The banks tended to show risk averse behavior by opting for risk free investments over risky loans.
- Total investments made by banks outside India increased for all the years except for a decline of 14.86% in 2003-04. The highest growth (47.73%) was observed in year 1997-98.
- In the year 1995-96, investments in govt. securities and investments in other options formed an almost equivalent proportion of total investments made outside India (See Table B). But with year 1998, the proportion of investments in govt. securities went on decreasing and that of investments in others went on increasing, finally becoming 20% and 76% of total investments respectively, by the year 2006-07. It indicates the changing tendencies of banks in their attitude of risk tolerance in investments.
- For almost all the banks, the investment deposit ratio increased up to the year 2003-04, after which it declined till 2006-07. Table C classifies the banks, based on average 'Investment Deposit ratio', computed using geometric mean. Majority of banks have investment deposit ratio between 40%-50%, thus investing considerable proportion of public money into viable profit opportunities.
- Cash Deposit ratio of all the banks reduced considerably, by almost 84% in 2006-07 as compared 1995-96. Majority of banks are maintaining an average cash deposit ratio between 8% to 10%.
- Credit Deposit ratio declined initially till 1998-99, after which it showed a rising trend till 2006-07. For majority of banks, the credit deposit ratio is between 50% to 60%.
- The coefficient of correlation between advances and net profits is very high (0.90), indicating strong relationship between these terms.
- Priority sector advances to total advances ratio showed a rising trend over a period of eleven years till 2005-06, thereafter declining in 2006-07 for majority of banks. Fairly large number of banks has given 40% of their advances to priority sector.
- Net NPA to net advances ratio declined continuously over the period of study. Majority of banks have less than 5% of advances as NPAs in comparison to 20% in 1994-95, which of course, is a very good sign of results of reforms.

Table 2: Comparison of Investment options outside India

Investment Options	Year	
	1995-96	2006-07
Investment in Government Securities	46%	20%
Investment in Subsidiaries and Joint Ventures	11%	4%
Investment in Others	43%	76%

Source: Data generated based on annual account of banks.

Liabilities Based Analysis

The major findings are as follows:

- The major part of total liabilities in formed by deposits (83%), followed by other liabilities and provisions (9%), reserves and surplus (4%), borrowings (3%) and capital (1%).
- Total deposits increased continuously form 1995-96 to 2006-07, the maximum growth (22.13%) being observed in 2006-07 while the least growth (11.33%) is observed in 2002-03.
- Time deposits formed 61%-64% of total deposits, savings deposits being 23%-28% of total deposits and demand deposit formed 12%-17% of total deposits. The banks depend heavily on fixed deposits for business.
- The coefficient of correlation between deposits and net profits worked out to be 0.95, stating that the increase in net profits can be attributed to increase in deposits.
- Borrowings from RBI which constituted a major portion (56%) of total borrowings in 1995-96, were reduced to a negligible figure of 1%

Table 3: Classification of banks based on average 'Investment Deposit ratio'

Range	Number of banks
30%-40%	4
40%-50%	20
50%-60%	2
Total	26

Source: Data generated based on annual accounts of banks.

towards the end (See Table D). The positive signs of reforms are manifesting in the form of reduced govt. dependence.

- Capital Risk Weighted Assets Ratio (CRAR), acting as a cushion for potential losses, increased over the period of study. Majority of banks have attained CRAR between 9% to 12%, which is in conformity with international standards.

To strengthen their capital base, many banks accessed the capital market with their IPOs'.

Table 4: Borrowings by banks in India

Sources of Borrowings	Year	
	1995-96	2006-07
Borrowings from RBI	57%	4%
Borrowings from Other Banks	7%	26%
Borrowings from Other Institutions & Agencies	37%	71%

Source: Data generated based on annual accounts of banks.

Income Based Analysis

- Total interest earned by banks increased continuously from 1995-96 to 2006-07, the maximum growth (22.45%) being observed in 2006-07, and the least growth (2.08%) was observed in 2003-04.
- Interest on advances forms the major component (50%) of interest income of banks followed by interest on investments (43%), interest on balances with RBI and the inter bank funds (5%) and interest earned on others (2%).
- Majority of banks have a profit income ratio of less than 10%.
- Interest on advances to total advances ratio rose only in 1996-97, declining continuously thereafter till 2005-06, and rising again in 2006-07. Banks have been able to earn interest on advances in the range of 9% to 11%.
- Spread showed a five fold increase in twelve

years period with maximum growth (21.66%) in year 2000-01.

Expense Based Analysis

- Total expenses increased over the period of study, the highest growth (21.12%) being observed in 2006-07 while the least growth (3.35%) was observed in 2002-03.
- More than two third of expenses are interest expenses and only one third are operating expenses.
- Operating expenses to income ratio ranged between 25% to 28% for all the years.
- Majority of banks are maintaining a profit to expense ratio of less than 15%.
- Interest payments of all the banks showed a rising trend over the years. Interest on deposits forms the major component (93%) of the total interest payments followed by interest paid on RBI / inter bank borrowing (3%) and interest expended on others (4%).
- Interest on deposits to total deposits ratio rose only in 1996-97, declining continuously thereafter till 2005-06 and rising again in 2006-07. Majority of banks pay on interest of 6%-7% on their deposits by the public.

Employee Based Analysis

Another measure of efficiency of the banking sector is the productivity of its personnel. A measure of productivity in the banking sector is the ratio of "turnover" or the total business generated as the sum of total deposits and advances to the total number of employees. Business per employee and profit per employee of all the banks increased over the period of study. On an average, business per employee stands at approximately 200 lakhs. Majority of banks are generating an average of more than Rs 1 lakh profit per employee.

Conclusions and Recommendations

The response of public sector banks to the reforms has been impressive. The banks have consolidated the gains of reform process. The banks have displayed considerable resilience with which they can adapt themselves to change. Public sector banks can therefore look to the future with optimism, given the vision, the will and the strategies to deal with the challenges.

In view of the findings, it is recommended that the bank should be admonished for excess investment in govt. securities, by reducing the yield on govt. securities. In order to enhance their profitability, they should endeavor to step up the flow of bank credit, to streamline and improve credit delivery systems by giving greater freedom to banks. Besides, the banks must endeavor to bring down the interest rates by reducing spread. The interest rates on fixed deposits should be increased to make their returns comparable with the returns on other alternative forms of investments. The banks should be given the freedom to quote different rates of interest for deposits at different centres and for different sizes of deposits. Priority sector should be redefined and lending should be monitored carefully. Interest rates on statutory reserve funds should be increased. RBI should work out in collaboration with each bank, a time bound schedule for reducing NPAs.

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