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Profitability Analysis of Indian Public and Private Sector Banks: A Comparative Study

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Abstract

Presently banks in India are confronting with dual challenges of maintaining the profitability position on one hand and on the other to bring novelty and innovation in financial products after squeezing costs. As Financial Ratio analysis provides the true picture of financial condition of banks, thus the present study makes an attempt to evaluate the Spread, Burden and Profitability ratios of selected Public and Private Banks for the period 1999-2000 to 2015-2016 through Mean, Standard Deviation and Compound Annual Growth Rate. The study is based on secondary data in which Bank-wise and Sector-wise analysis has also been done. PNB and HDFC Bank have the highest spread among Public and Private Sector Banks, respectively. Burden is on higher side of Public Banks, whereas Private Banks have incentivized their non-interest incomes. Profitability in terms of Total Assets and Total Income is inflated for Private Sector Banks as per Sector-wise analysis. Public Sector Banks must align their profitability ratios with Private Sector Banks so as to survive and endure.

Keywords: Burden, Profitability, Public and Private Sector Banks, Ratio Analysis, Spread.

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1. Introduction

Profitability of commercial banks holds the pivot stage in providing a sound, prudent, safe, secured and sustained banking system. Nationalisation of banks led to the philosophy of 'Mass Banking' which resulted in worsening of asset quality and excess pre-emptions. Moreover, political interference added cost to banks by erosioning their profitability. Although Gradual liberalisation or banking reforms accelerated banks' profitability, but the global financial crisis 2007-08 impacted the overall growth of financial sector. It was coupled with deterioration in asset quality and profitability (RBI, 2012). Despite the general slowdown in the economy from 2008 onwards, the rise in profits of Scheduled Commercial Banks (SCBs) indicated the increasing efficiency of banks (Rao, 2012).

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Table 1: Trends of Net Profits of Scheduled Commercial Banks (SCBs)

(INR in cores)

Banks/Years	2006-07	2007-08	2008-09	2009-10	2010-11
Public Sector Banks	20152	26592	34394	39275	44922
Old Private Sector Banks	1122	1978	2409	2312	3101
New Private Sector Banks	5343	7544	8459	10797	14610
Foreign Banks	4585	6612	7570	4740	7716
SCBs	31203	42726	52771	57124	70349

Source: Rao, K.S. (2012), "Profitability of Commercial Banks: Strategic differentiators", *The Indian Banker*, Vol.VII, No. XI, pp. 34–39.

Profitability indicates the earning capacity of the banks. It not only highlights the managerial competency of the banks but also portrays work culture and operating efficiency of the bank (Dasgupta and Devajyoti, 2001). In this paper three sorts of ratios have been used to analyse and compare the profitability of Public and Private Sector Banks, i.e., Spread, Burden and Profitability ratios.

1.1 Ratio Analysis and Bank Profitability

For measuring the profitability of banks, analysis of relevant ratios is the best available method because of their conciseness, comparability and the direct relevance of the relationships established to various earning capabilities of the banks. Ratio analysis enables the management of the banks to identify the causes of the changes in their profits and profitability over a period of time and thus helps in pinpointing the direction of action required for altering the profitability prospects of the banks in future.

1.1.1 Spread Ratios: Spread is the difference between interest earned and interest paid by the banks. It is the net amount available to the banks for meeting their operating expenses with regard to administration and management of working funds. Following are the various spread ratios.

a) Interest Earned as percentage of Average Working Funds (IE/AWFs) – Interest earnings relate to funds based income earned from the traditional banking business i.e. of lending funds. The ratio of interest earned as percentage of average working funds indicates the rate of income a bank earns on its total assets (Sawhney, 2008).
b) Interest Paid as percentage of Average Working Funds (IP/AWFs) – Interest expenditure consists of funds based expenditure incurred to earn interest income. The major constituents of interest expenditure include interest paid on deposits, borrowings and balance from RBI and interbank borrowings.
c) Spread as percentage of Average Working Funds (S/AWFs) – It can also be calculated by taking the difference between interest earned and interest paid as proportion of average working funds.

1.1.2 Burden Ratios: Burden is the non-interest expenditure which is not covered by non-interest income. To reduce the burden, either the interest income should be increased or the non-interest expenditure should be reduced or both. Burden ratios are as follows.

a) Non-Interest Expenditure as a percentage of Average Working Funds (NIE/AWFs) – This ratio expresses the effective management of funds (Rajni and Dhaliwal, 2012) consists of manpower expenses like salaries, allowances, provident fund and other current and non-current expenses.
b) Non-Interest Income as a percentage of Average Working Funds (NII/AWFs) – Non-interest income of the bank comprises income by way of commission, exchange, brokerage, service charges and other miscellaneous receipts.
c) Burden as a percentage of Average Working Funds (B/AWFs) – This ratio can also be calculated by taking the difference between the non-interest expenditure as a percentage of average working funds and non-interest income as a percentage of average working funds.

1.1.3 Profitability Ratios: Profitability is a ratio of earnings to the funds used. The ratios of profitability are as follows.

a) Net Profit as a percentage of Total Assets (NP/TI) – This ratio is an indicator of excellent utilisation of resources. It is also known as Return on Assets (ROA).

b) Net Profit as a percentage of Total Income (NP/TI) – This ratio represents the income generating capacity of the banks. Profitability of banks can also be related to the total income of the banks. Total income includes both interest income and non-interest income of banks (Arora and kaur, 2017).

2. Literature review

Aburime (2008) in his study sought to econometrically identify significant macroeconomic determinants of bank profitability. He used a Panel Data approach of one hundred and fifty four banks comprising 1255 observations over the 1980-2006 period on the macroeconomic indices. His regression results revealed that the monetary policy, inflation, real interest rates and exchange rate regime are significant macroeconomic determinants of bank profitability in Nigeria, whereas, banking sector development, stock market development, and financial structure are insignificant.

Jegadeeshwaran and Sendhivelan (2011) in their study intended to examine the profitability of HDFC Bank from the financial year 2005-2009 on the basis of secondary data and analysis has been done on the basis of percentages and averages. They concluded that profitability of the bank is good during the period of study due to its strong financial position, geographical spread and highly motivated staff. Finally, they remarked that HDFC Bank is well placed to meet the future challenges and is a leader in the expanded and transformed financial system in India.

Nayak and Nahak (2011) in their research paper analysed the performance of Public Sector Banks in India during the post-liberalisation period. They have used various accounting ratios pertaining to profitability, financial efficiency, operational efficiency and financial soundness to build performance index for 27 Indian Public Sector Banks for the period 2000 to 2009. They found that there has been a significant improvement in the performance of Public Sector Banks after reform measures. They also analysed that State Bank of India continues to be the number one bank in India and there is competition among Punjab National Bank, Canara Bank, Bank of India and Bank of Baroda for the number two place in different years.

Guruswamy (2012) in his study made an attempt to analyse the profitability performance of SBI and its Associates. The scope of the study is confined to all the banks of SBI Group for a data period 1996-1997 to 2007-2008. For the purpose of evaluation, he used five profitability ratios namely: Profit in relation to Working Funds, Profit in relation to Total Income, Profit in relation to Total Deposits, Profit in relation to Total Assets and Profit in relation to Net Worth. He analysed on the basis of secondary data and concluded that all the five ratios show fluctuating trends during the study period in all the banks.

Rajni and Dhaliwal (2012) in their research paper attempted to evaluate the profitability of Primary Co-Operative Agricultural and Rural Development Banks in Punjab in terms of spread ratios, burden ratios and profitability ratios by applying statistical tools i.e., Mean, Standard Deviation, Coefficient of Variation of absolute data and of ratios over the period of ten years 2002–2012. They observed that profitability of banks is fluctuating throughout the study period. They stated that although Co-Operative banks are meant for service motive, but they must also earn some profits for their existence.

Goel (2015) in her research paper analysed the profitability of Indian Public Sector Banks in the light of Basel II Norms, before and after the implementation of Basel II Norms. She chose SBI, Allahabad Bank, Bank of Baroda, Bank of India and Canara Bank and covered ten years 2004–2005 to 2013–2014 for collecting the secondary data. She did not find empirically any strong evidence in the improvement in profitability before and after implementation of Basel II Norms. She advised that banks are required to control the costs in order to increase the profit and re-examine their policies and procedures to properly run their operations.

Bagh et. al. (2017) in their research paper examined the impact of Risk Management Practices on Financial Performance of eighteen listed Commercial Banks of Pakistan for the period 2004 to 2016. They divided banks into large, medium and small commercial banks on the basis of their financial performance. They took five independent variables for risk management practices i.e., Capital Adequacy Ratio, Interest rate Risk, Operational Risk, Non-Performing Loans and Liquidity Risk, along with one dependent variable is viz. Return on Equity (ROE). They analysed that Risk Management Practices have significant impact on the financial performance of small, medium and large banks. They found that banks should fully concentrate on the loan assessment procedure, policies, quality of loans and liquidity management. They suggested that Pakistani banks should incubate a balanced risk management culture to mitigate risks, risk based strategy formulation and corporate grievance ramework.

Vadrale and Katti (2018) in their study attempted to analyse the Profitability Performance of Public and Private Sector Banks during the period 2001 to 2015. They selected banks on the basis of net profits from 2007 to 2011 namely SBI, PNB, Canara Bank, BOB and BOI in Public Sector Banks and ICICI Bank, HDFC Bank, Axis Bank, Federal Bank and J&K Bank among Private Sector Banks. They analysed seven ratios on the basis of core business activity of banks namely Return on Funds, Return on Advances, Return on Investments, Cost of Funds, Cost of Deposits and Cost of Borrowings and Spread. They concluded that even though the cost of funds was same for both the bank groups, Private Sector Banks have more spread because Return on Advances was satisfactory. They suggested that Public Banks need to address the spread by widening the gap between return on funds and cost of funds. Banks must focus on reducing the cost of funds, with controlling cost of deposits and cost of borrowings. Finally, they remarked that overall performance in Private Sector Banks is more satisfactory than Public Sector Banks.

3. Objectives of the Study

The main objectives of the paper are:

- To identify how Public and Private Sector Banks are managing their profitability in terms of ratios.
- To analyse and compare Spread, Burden and Profitability ratios of Selected Public and Private Sector Banks.
- To discuss Sector-wise performance profitability of selected banks on the basis of ratios.

4. Data and Methodology

The research works is analytical in nature as it is based on secondary data only. A major portion of data is extracted from Performance Highlights of Public and Private Sector Banks—Annual Publications of IBA (Indian Banking Association).The study is conducted on a period of 17 years, i.e. from 1999-2000 to 2015-2016. For the purpose of the study, 10 large banks, i.e., five Public Sector Banks and five Private Sector Banks, which are chosen on the basis of five year average of gross assets ranging from 2007-2008 to 2011-2012. The selected Public Sector Banks are—State Bank of India, Bank of Baroda, Bank of India, Punjab National Bank, and Canara Bank and Private Sector Banks are ICICI Bank, HDFC Bank, Axis Bank, Federal Bank and Jammu & Kashmir Bank. Spread, Burden and Profitability ratios are evaluated by Mean, Standard Deviation and CAGR (Compound Annual Growth Rate).

5. Results and Discussion

Table 2: Trends in Spread as a percentage of Average Working Funds (S/AWFs) of Selected Banks for the period 2000 to 2016 (in %)

Year/ Bank	SBI	BOB	BOI	PNB	Canara Bank	ICICI Bank	HDFC Bank	Axis Bank	Federal Bank	J&K Bank
2000	2.86	3.09	2.35	3.22	2.80	1.95	3.82	1.71	2.30	3.17
2001	2.86	3.18	2.86	3.47	3.12	2.54	3.71	1.13	2.89	3.07
2002	2.74	2.80	2.84	3.37	2.63	0.96	3.21	1.59	2.91	3.20
2003	2.76	2.86	2.78	3.93	2.89	1.35	3.07	1.90	3.04	3.34
2004	2.85	3.18	2.73	3.84	2.95	1.62	3.68	2.58	3.09	3.26
2005	3.21	3.31	2.49	3.51	3.00	1.94	3.79	2.36	3.15	2.61
2006	3.27	3.05	2.54	3.44	2.95	2.25	4.08	2.47	3.20	2.61
2007	3.03	2.95	2.71	3.58	2.70	2.23	4.50	2.55	3.20	2.79

2008	2.64	2.42	2.64	3.06	2.04	1.96	4.66	2.83	3.01	2.64
2009	2.48	2.52	2.72	3.15	2.36	2.15	4.69	2.87	3.69	2.84
2010	2.35	2.35	2.30	3.12	2.35	2.19	4.13	3.05	3.42	2.79
2011	2.86	2.76	2.49	3.50	2.56	2.34	4.22	3.10	3.67	3.32
2012	3.38	2.56	2.26	3.21	2.17	2.44	4.00	3.04	3.49	3.32
2013	3.06	2.28	2.16	3.17	2.00	2.70	4.28	3.09	3.00	3.51
2014	2.93	1.98	2.11	3.14	1.98	2.91	4.14	3.30	3.06	3.57
2015	2.86	1.92	1.91	2.87	1.86	3.07	4.14	3.37	3.02	3.43
2016	2.64	1.84	1.91	2.41	1.77	3.11	4.25	3.41	2.87	3.47
Mean	**2.87**	**2.65**	**2.46**	**3.29**	**2.48**	**2.22**	**4.02**	**2.61**	**3.12**	**3.11**
SD	**0.27**	**0.47**	**0.31**	**0.36**	**0.44**	**0.58**	**0.44**	**0.68**	**0.33**	**0.33**
CAGR	**-0.47%**	**-3.00%**	**-1.21%**	**-1.69%**	**-2.66%**	**2.78%**	**0.63%**	**4.14%**	**1.31%**	**0.53%**

Source: Performance Highlights of Public and Private Sector Banks, 1999-2000 to 2015-16, IBA Publications

Note: (i) SD stands for Standard Deviation (ii) CAGR stands for Compound Annual Growth Rate

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The perusal of Table 2 shows the ratio of **Spread as a percentage to Average Working Funds** for selected Public and Private Sector banks for the period 1999-2000 to 2015-2016. Among **Public Sector Banks**, the highest average spread ratio is depicted by PNB (3.29%), followed by SBI (2.87%), BOB (2.65%), CanaraBank (2.48%) and BOI (2.46%). BOB (0.47) shows the maximum deviation from the Mean, followed by Canara Bank (0.44), PNB (0.36), BOI (0.31), whereas SBI (0.27) poses the minimum deviation from the Mean value. Public Sector Banks show negative Compound Annual Growth Rate, the lowest is in BOB (-3.00%), proceeded by Canara Bank (-2.66%), PNB (-1.69%), BOI (-1.21%) and SBI (-0.47%).

Among **Private Sector Banks**, HDFC bank (4.02%) has indicated the maximum average spread ratio, followed by Federal Bank (3.12%), J&K Bank (3.11%), Axis Bank (2.61%) and ICICI Bank (2.22%). The highest Standard Deviation can be seen in Axis Bank (0.68), followed by ICICI Bank (0.58), HDFC Bank (0.44), and the lowest can be seen in both Federal and J&K Bank (0.33). Every Private Sector Bank is showing positive Compound Annual Growth Rate, the maximum CAGR can be seen in Axis Bank (4.14%), followed by ICICI Bank (2.78%) Federal Bank (1.31%), HDFC Bank (0.63%) and J&K Bank (0.53%). Positivity in Compound Annual Growth Rate indicates the increase in spread of Private Sector Banks over the years under study.

Bank-wise analysis shows that PNB is having the highest spread ratio among Public Sector Banks and HDFC Bank has the largest spread ratio among Private Sector Banks, whereas BOI and ICICI Bank are having the least spread ratio in Public and Private Sector Banks, respectively due to considerable increase in average interest income than interest expenditure over the years under study. Deshwal et al. (2010) and Kumar and Singh (2013), in their study agreed that HDFC Bank is more profitable bank in terms of earning or spread. Specifically, it has an edge over ICICI Bank and SBI.

Sector-wise analysis indicates that Private Sector Banks have been performing better as compared to Public Sector Banks in terms of Spread ratio. Vadrale and Katti (2018) in their comparative study of Public and Private Sector Banks have justified that Private Sector Banks have more spread due to their wide gap of cost of funds and return on advances. Therefore, overall performance in Private Sector Banks is more satisfactory than Public Sector Banks.

Table 3: Trends in Burden as a percentage of Average Working Funds (B/AWFs) of Selected Banks for the period 2000 to 2016

Year/ Bank	SBI	BOB	BOI	PNB	Canara Bank	ICICI Bank	HDFC Bank	Axis Bank	Federal Bank	J&K Bank
2000	1.13	1.19	1.11	1.59	1.00	-0.43	0.58	-0.49	0.57	0.60
2001	1.48	1.48	1.53	1.86	1.24	0.72	0.91	-0.39	0.61	0.72
2002	0.91	0.85	0.66	1.20	0.24	0.08	0.43	-1.67	-0.31	-0.17
2003	0.61	0.53	0.01	1.01	0.31	-1.09	0.44	-0.52	-0.11	-0.17
2004	0.42	0.11	-0.05	0.53	-0.19	-0.43	0.91	-0.55	-0.11	-0.17
2005	0.68	0.75	0.86	1.14	0.54	-0.08	0.93	0.54	0.64	1.05
2006	0.90	1.21	0.90	1.29	0.85	0.39	0.91	0.19	0.79	0.92
2007	1.14	1.07	0.82	1.48	0.75	0.26	1.10	0.33	0.52	0.77
2008	0.61	0.61	0.33	0.85	0.33	-0.18	1.30	0.39	0.26	0.52
2009	0.35	0.40	0.02	0.58	0.88	-0.14	1.42	-0.03	0.16	0.64
2010	0.53	0.40	0.42	0.42	0.26	-0.44	0.96	-0.14	0.35	0.40
2011	0.63	0.81	0.51	0.82	0.54	-0.01	1.13	0.07	0.67	0.85
2012	0.92	0.81	0.43	0.67	0.49	0.08	1.09	0.22	0.80	0.84
2013	0.91	0.47	0.37	0.84	0.51	0.13	1.19	0.12	0.79	0.77
2014	1.02	0.44	0.47	0.93	0.48	-0.02	0.92	0.14	1.03	1.04
2015	0.80	0.48	0.65	0.80	0.52	-0.11	0.92	0.20	0.96	1.05
2016	0.63	0.57	0.93	0.49	0.48	-0.39	0.96	0.15	1.24	1.33
Mean	**0.80**	**0.72**	**0.59**	**0.97**	**0.54**	**-0.10**	**0.95**	**-0.08**	**0.52**	**0.65**
SD	**0.29**	**0.36**	**0.42**	**0.41**	**0.33**	**0.40**	**0.27**	**0.52**	**0.43**	**0.45**
CAGR	**-3.38%**	**-4.24%**	**-1.04%**	**-6.69%**	**-4.23%**	**-0.57%**	**3.01%**	**-193.27%**	**4.68%**	**4.79%**

Source: Performance Highlights of Public and Private Sector Banks, 1999-2000 to 2015-16, IBA Publications

Note: (i) SD stands for Standard Deviation

(ii) CAGR stands for Compound Annual Growth Rate

Burden Ratio is the difference between ratio of non-interest expenditure and ratio of non-interest income to average working funds. Table 3 highlights the ratio of **Burden to Average Working Funds** for selected banks during the study period. In **Public Sector Banks**, Canara Bank (0.54%) has shown the least average burden, followed by BOI (0.59%), BOB (0.72%), SBI (0.80%) and PNB (0.97%). BOI (0.42) has the maximum Standard Deviation followed by PNB (0.41), BOB (0.36), whereas SBI (0.29) has the minimum Standard Deviation. All Public Sector Banks have negative Compound Annual Growth Rate due to reduction in burden in the year 2016 since the year 2000. BOI presents the highest negative CAGR (-1.04%), followed by SBI (-3.38%), Canara Bank (-4.23%), BOB (-4.24%) and PNB (-6.69%).

If we have a look at **Private Sector Banks**, we can observe some negative values of burden ratios. Here, negative burden means non-interest income is greater than non-interest expenditure, which is a favourable situation. ICICI Bank, Axis Bank, Federal and J&K Bank have been in this situation for some years. Federal Bank has the least burden as represented in its average burden ratio i.e., 0.52%, followed by J&K Bank (0.65%) and HDFC Bank (0.95%). Overall, ICICI Bank (-0.10%) and Axis Bank (-0.08%) are in the exemplary situation of excess of non-interest income upon non-interest expenditure. As far as the Standard Deviation is concerned, Axis Bank (0.52) shows the maximum variation from Mean, followed by J& K Bank (0.45), Federal Bank (0.43), ICICI Bank (0.40), whereas HDFC Bank (0.27) discloses the least variation from the Mean value. Burden is increasing day by day; as it can be seen in CAGR of these three banks, HDFC Bank presents the CAGR of 3.01%, whereas Federal and J&K Bank appeared with the values such as 4.68% and 4.79%, respectively. CAGR of ICICI Bank (-0.57%) and Axis Bank (-193.27%) are negative due to reverse trends in initial years and last years.

Bank-wise analysis indicates that PNB has the maximum burden in Public Sector Banks, whereas HDFC Bank is burdened the most among Private Sector Banks. Canara Bank in Public Sector Banks has the least burden, whereas ICICI and Axis Bank in Private Sector Banks have managed their burden very well by their hiring policy and rationalization of workforce and reduced it to negative. PNB and HDFC Bank must reduce their non-interest expenditure to decrease their burden ratio.

Sector-wise analysis shows that Public Sector Banks are trying hard to reduce their burden and up to some extent they have become successful in managing their burden. Private Sector Banks are managing their burden in better ways as compared to Public Banks. Sawhney (2008) advocated the similar results about efficient management of burden by Private Sector Banks as they have augmented their incomes by adopting newer strategies and have substantially reduced the operating expenditure by adopting technology intensive measures. Profitability can be increased either by increasing spread or reducing burden. As interest rates are based on RBI's base rates and repo rates, scope of increasing spread is restricted. Therefore, burden ratio can be reduced either by increasing interest income or decreasing non-interest expenditure or both.

Table 4: Trends in Net Profits as a percentage of Total Assets (NP/TA)

of Selected Banks for the period 2000 to 2016

(in %)

Year/ Bank	SBI	BOB	BOI	PNB	Canara Bank	ICICI Bank	HDFC Bank	Axis Bank	Federal Bank	J&K Bank
2000	0.75	0.85	0.31	0.75	0.43	0.87	1.84	0.77	0.62	2.57
2001	0.50	0.45	0.44	0.73	0.43	0.82	1.62	0.80	0.69	2.34
2002	0.70	0.81	0.78	0.77	1.03	0.67	1.48	0.93	0.53	1.77
2003	0.86	1.05	1.16	1.01	1.24	1.13	1.52	1.17	0.86	2.01
2004	0.94	1.02	1.25	0.53	1.34	1.31	1.45	1.42	0.90	1.92
2005	0.99	0.75	0.38	1.12	1.01	1.59	1.47	1.21	0.54	0.47
2006	0.89	0.79	0.68	1.09	1.13	1.30	1.38	1.18	1.28	0.67
2007	0.84	0.72	0.88	1.03	0.98	1.09	1.33	1.10	1.38	0.96
2008	1.01	0.89	1.50	1.15	0.92	1.12	1.32	1.24	1.34	1.09
2009	1.04	1.09	1.49	1.39	1.06	0.98	1.28	1.44	1.48	1.09
2010	0.88	1.21	0.70	1.44	1.30	1.13	1.53	1.67	1.15	1.20
2011	0.71	1.33	0.82	1.34	1.42	1.35	1.58	1.68	1.34	1.22
2012	0.88	0.24	0.72	1.19	0.95	1.50	1.77	1.68	1.41	1.56
2013	0.97	0.90	0.65	1.00	0.77	1.70	1.90	1.70	1.35	1.70
2014	0.65	0.75	0.51	0.54	0.64	1.78	2.00	1.78	1.20	1.74
2015	0.68	0.49	0.27	0.53	0.55	1.86	2.02	1.83	1.32	0.70
2016	0.46	-0.78	-0.94	-0.61	-0.52	1.49	1.92	1.72	0.57	0.57
Mean	**0.81**	**0.74**	**0.68**	**0.88**	**0.86**	**1.28**	**1.61**	**1.37**	**1.06**	**1.39**
SD	**0.17**	**0.48**	**0.56**	**0.48**	**0.47**	**0.35**	**0.25**	**0.35**	**0.35**	**0.63**
CAGR	**-2.83%**	**-199.50%**	**-206.74%**	**-198.79%**	**-201.12%**	**3.22%**	**0.25%**	**4.84%**	**-0.49%**	**-8.48%**

Source: Performance Highlights of Public and Private Sector Banks, 1999-2000 to 2015-16, IBA Publications

Note: (i) SD stands for Standard Deviation.

(ii) CAGR stands for Compound Annual Growth Rate.

Table 4 reveals the ratio of **Net Profit as a percentage to Total Assets,** which is one of the most important indicator to the degree of asset utilization by banks or also known as Return on Advances for the selected banks over the study period. Among **Public Sector Banks** the highest Mean ratio can be seen in PNB (0.88%), followed by Canara Bank (0.86%), SBI (0.81%), BOB (0.74%) and BOI (0.68%). BOI (0.56) has the highest Standard Deviation, abided by PNB and BOB (both 0.48), Canara Bank (0.47), whereas SBI (0.17) has the lowest Standard Deviation. All Public Sector Banks are showing negative CAGR described as SBI (-2.83%), PNB (-198.79%), BOB (-199.50%), Canara Bank (-201.12%) and BOI (-206.74 %).

Among **Private Sector Banks**, HDFC Bank has the maximum average net profit ratio i.e., 1.61% preceded by J&K Bank (1.39%), Axis Bank (1.37%), ICICI Bank (1.28%) and Federal Bank (1.06%). J&K Bank (0.63) shows the highest Standard Deviation from the Mean value, Axis, ICICI and Federal Bank (0.35 for all three) are the followers, whereas HDFC Bank (0.25) represents the lowest Standard Deviation. Axis, ICICI and HDFC Bank have positive CAGR values described as 4.84%, 3.22% and 0.25%, whereas Federal and J&K Bank have negative CAGR such as -0.49% and -8.48%, respectively.

Bank-wise analysis shows that PNB has the most Net Profit percentage to Total Assets in Public Sector Banks and HDFC Bank has the highest percentage in Private Sector Banks, whereas BOI and Federal Bank have the least Net Profit to Total Assets in Public and Private Sector Banks, respectively. Jegadeeshwaran and Sendhivelan (2011) in their study also viewed that profitability of the HDFC Bank is good during the period of study due to its strong financial position, geographical spread and highly motivated staff. It is well placed to meet the future challenges and is a leader in the expanded and transformed financial system in India.

Sector-wise analysis shows that Private Sector Banks have comprised better Net Profits to Total Assets Ratio or ROA as compared to Public Sector Banks. BOB, BOI, PNB and Canara Bank in Public Sector Banks have net loss in the year 2016. That means in the year 2016, these banks have insufficient assets or it can be said that return on assets is lower than return paid on liabilities. The main reason behind the negative swing for four Public Sector Banks in the year 2016 is increase in NPAs (almost double than previous year and surge in provisions on year on year basis (ET Prime, 2016). Thus, it can be inferred that Public Sector Banks must focus on reducing their non-performing assets.

Table 5: Trends in Net Profits as a percentage of Total Income (NP/TI) of Selected Banks for the period 2000 to 2016

(in%)

Year/ Bank	SBI	BOB	BOI	PNB	Canara Bank	ICICI Bank	HDFC Bank	Axis Bank	Federal Bank	J&K Bank
2000	7.96	8.57	3.12	6.93	4.15	10.07	32.81	8.89	4.58	12.18
2001	3.54	4.24	4.07	6.87	4.36	11.78	30.09	8.18	8.23	14.47
2002	7.15	7.85	7.53	7.31	9.50	9.78	14.58	8.40	8.69	16.22
2003	3.57	9.82	11.24	9.56	12.47	9.78	25.15	14.44	7.93	19.69
2004	9.66	12.29	13.28	11.35	14.73	13.73	31.54	18.90	9.29	22.28
2005	10.88	8.74	4.73	13.67	12.17	16.04	33.73	22.19	6.41	7.05
2006	10.20	9.97	11.21	13.01	13.31	14.49	30.20	18.94	13.62	9.69
2007	9.67	9.68	15.49	13.38	11.03	11.36	33.77	24.48	14.44	13.32
2008	11.53	10.35	17.62	12.69	9.47	12.99	28.58	23.98	13.14	13.34
2009	11.92	12.47	15.50	13.89	10.60	15.79	24.33	24.53	13.44	12.61
2010	10.66	15.67	8.49	15.63	13.88	20.71	32.04	31.20	11.57	14.75
2011	7.65	17.17	7.23	14.48	15.63	26.41	34.86	34.44	13.35	15.08
2012	9.69	15.12	8.41	12.02	9.71	27.97	34.86	33.60	13.17	15.53
2013	10.39	11.54	7.70	10.29	7.71	31.76	36.08	37.08	16.61	15.93
2014	7.03	10.46	6.46	6.99	5.60	36.09	39.97	42.70	17.73	16.52
2015	7.48	7.17	3.58	5.86	5.59	39.97	43.27	47.57	21.60	6.64
2016	5.18	-10.99	-16.94	-7.31	-5.75	39.65	43.57	50.61	18.38	5.66
Mean	**8.48**	**9.42**	**7.57**	**9.80**	**9.07**	**20.49**	**32.32**	**26.48**	**12.48**	**13.59**
SD	**2.60**	**6.17**	**7.69**	**5.40**	**5.22**	**10.85**	**7.03**	**13.23**	**4.57**	**4.43**
CAGR	**-2.50%**	**-201.47%**	**-210.46%**	**-200.31%**	**-201.94%**	**8.40%**	**1.68%**	**10.77%**	**8.52%**	**-4.41%**

Source: Performance Highlights of Public and Private Sector Banks, 1999-2000 to 2015-16, IBA Publications

Note: (i) SD stands for Standard Deviation.

(ii) CAGR stands for Compound Annual Growth Rate.

Selected Public and Private Sector Bank-wise **Net Profits as percentage of Total Income** is given in Table 5. The ratio indicates the income generating capacity of the banks, it is the sum of both interest and non-interest income. Among **Public Sector Banks (PSBs)**, average Net Profit Ratio is the highest in case of PNB (9.80%), followed by BOB (9.42%), Canara Bank (9.07%), SBI (8.48%) and BOI (7.57%). The value of Standard Deviation is the highest in case of BOI (7.69), followed by BOB (6.17), PNB (5.40), Canara Bank (5.22) and Standard Deviation is the lowest in case of SBI (2.60). Compound Growth Rate analysis shows that all Public Sector Banks such as SBI (-2.50%), BOB (-201.47%), PNB (-200.31%), Canara Bank (-201.94%) and BOI (-210.46%) hold negative growth rate. BOB, BOI, PNB and Canara Bank have shown net loss in the year 2016 due to their mounting bad loans and surge on provisioning on year on year basis (ET Prime, 2016).

Among **Private Sector Banks**, HDFC Bank is indicating the highest Net Profit to Total Income Ratio which is 32.32%, Axis Bank, ICICI Bank, J&K Bank and Federal Bank are followers with the ratios such as 26.48%, 20.49%, 13.59% and 12.48%, respectively. Axis Bank (13.23) displays the maximum variation from the Mean, followed by ICICI Bank (10.85), HDFC Bank (7.03), whereas J&K Bank (4.43) shows the minimum variation from the Mean value. As far as the CAGR analysis is concerned, J&K Bank represents the negative growth rate with the value -4.41%, on the other hand four Private Sector Banks, Axis Bank (10.77%), Federal Bank (8.52%), ICICI Bank (8.40%) and HDFC Bank (1.68%) have positive growth rates.

Bank-wise analysis depicts that PNB is the top performer bank and BOI is the worst performer bank among PSBs, whereas HDFC Bank is the top performer bank and Federal Bank is the worst performer bank in Private Sector Banks. Public Sector Banks especially SBI, BOB, BOI, and Canara Bank need to revive their profits either by reducing their NPAs and provisions or by lowering cost of funds and operating expenses.

Thus, it can be concluded by **Sector-wise analysis** that in terms of average ratio, performance of Private Sector Banks is far better from Public Sector Banks. PSBs should formulate innovative and unique strategies so as to compete with aggressive practices of Private Sector Banks to enhance their profits.

6. Conclusion

Bank profitability and distribution of funds to key segments have become most contentious issues after the introduction of Basel III Norms. On one hand, there are Domestically Systemic Important Banks (DSIBs) such as SBI, ICICI Bank, and HDFC Bank, which are expected to keep large portions of their capital for Capital Adequacy Ratio and on the other hand, expectations of bank regulators and economy have grown up for profitability of the banks. Therefore, it has become considerable for bankers to keep vigil on profits of banks.

In this study, I try to analyse and compare spread, burden and profitability ratios of selected Public and Private Sector Banks. Sector-wise analysis has also been done on the basis of ratios of selected banks. As far as Spread Ratio is concerned, on an average, HDFC Bank, Federal Bank and J&K Bank have maximum Spread in Private Sector Banks, whereas PNB and State Bank of India carry the highest Spread among Public Sector Banks but their spread is lesser than Spread of Private Sector Banks. Burden Ratio has significantly come down for Public Banks, Old Private Sector Banks have been depicting increase in burden over the years, whereas, top three banks ICICI, HDFC and Axis Bank have contributed a lot in reducing their burden by reducing their operating costs and increasing their fee incomes. ICICI and Axis Bank have remarkably incentivised their fee incomes and subdued their burden.

Profits in relation to Total Assets have decreased heavily in case of Public Sector Banks throughout the study period. BOB, BOI, PNB and Canara Bank have suffered losses in the year 2016, whereas SBI has remained in the profit zone. Private Sector Banks, viz. HDFC, Axis, ICICI Bank, J&K Bank and Federal Bank have portrayed phenomenal average ratios in relation to Total Assets. Profit in relation to Total Income shows that Private Sector Banks are healthier than their Public Counterparts. HDFC and Axis Bank are more profitable than other Private Sector Banks, whereas PNB and BOB have managed their profits well as compared to other Public Sector Banks.

Banks can either expand their spread by increasing their interest income or can reduce their burden by controlling their non-interest expenditure to sustain the profitability position of banks. Therefore, Public Sector Banks must focus on increasing their profitability ratios at par with Private Sector Banks to be more competitive and sustain in cut throat competition with their unique and healthy practices.

Limitations of the Study

The sample size used for the study is restricted to ten large Public and Private Sector Banks. Another limitation is that the detailed spread (interest income and interest paid) and burden ratios (non-interest income and non-interest expenditure) could not be shown due to voluminous nature of data.

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