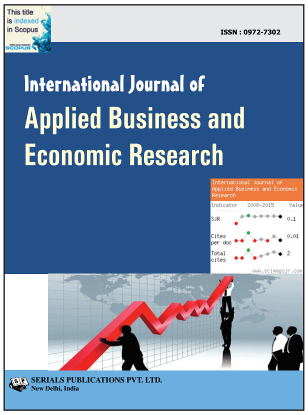

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Management Efficiency in Public Sector Banks of India

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ABSTRACT

Banks are known to be an important part of socio-economic set up of a country. Banks usually direct, develop and control economy of a country, according to programmes and policies of the government. They suck the excess liquidity from a society and invest it in productive programs of the state. They are known as custodians or trustees of public funds. Due to nature of their business a sound and strict regulatory mechanism have to be developed by government to monitor their activities. In India, Reserve Bank of India (RBI) has been entrusted with this job. 'On site' and 'Off site' mechanism has been developed by RBI for efficient monitoring of banking industry. CAMEL analysis is an important tool of this mechanism to evaluate the capital adequacy, asset quality, management efficiency, earning capacity and liquidity position of a bank. In this paper an attempt has been made to analyse and evaluate one aspect of CAMEL analysis i.e management efficiency in public sector banks of India.

Keywords: Management, Efficiency, Banks, Ratios.

1. INTRODUCTION

The success or failure of an organisation depends upon the quality of its management. "Management ensures the smooth functioning of a bank by taking effective decisions to handle risks and to have better control over banks' operations" (Christopoulos, 2011). "Management should make effective and efficient use of bank's resources to increase its income by reducing the cost of managing the operations" (Sangmi and Nazir, 2012). Banking industry is pre-eminently a service oriented industry. "For successful survival and sustainable growth, a bank has to be efficient and effective both in utilisation of resources and providing excellent services to its customers" (Srivastav and Nigam, 2010).

This effectiveness of management in resources utilization in an enterprise can be judged through productivity of the organisation. "Productivity is the relationship between physical output of one or more of the associated physical inputs used in production" (Kopleman, 1986). Banking is a service industry with its product in the form of services. In banks, productivity is linked with various aspects like cost of performing operations, efficiency, profit making ability, services offered to customers, mobility of deposits and in providing credit.

2. PRODUCTIVITY APPROACHES IN BANKS

There are three approaches to measure the productivity of banks. 'Production Approach' considers physical variables (e.g. labour, material, space and system) as inputs and services provided (i.e. deposits and loans) would be output. Operating and interest expenses become inputs according to 'intermediation approach' and creation of income earning assets are considered output. In 'Operating Approach' it is total expenses and total revenues which is considered as input and output.

3. INDICATORS OF PRODUCTIVITY IN BANKS

In banks, due to multiplicity of inputs and outputs and difficulty to quantify some of inputs and outputs and it is not possible to evolve a single indicator of productivity. Therefore, there is necessity of evolving several indicators which could be used as the index of efficiency of the use of various resources available in banks (Ramesh and Reddy, 1995).

4. LITERATURE REVIEW

A lot of studies have been conducted on various aspects of banks in India and abroad. Review of all of them is not possible. However some related to our study have been discussed below:

Nimalathasan B. (2008), in his paper titled, "A Comparative Study of Financial Performance of Banking Sector of Bangladesh – an Application of CAMEL Rating System" found 3 banks were very strong followed by 31 banks as satisfactory 7 banks as fair. 5 banks marginal and 2 banks unsatisfactory.

Sangmi and Nazir (2010), Conducted an analysis of the financial performance of commercial banks of India with help of CAMEL model analysis. They studied only 2 banks i.e. PNB and J&K Bank for a period of 2001-2005. They found that both banks were financially levelled and had adopted prudent policies of bank management.

Chaudhary and Tondon, (2011), conducted a study to compare the performance of public, private and foreign banks and found that though aggregate deposits were much more in public sector banks but share of private sector banks was increasing. Capital adequacy ratio had shown an increasing treads in all banks and NPA₹s have declined in all banks.

Dang (2011), in his study he had taken, American International Assurance, Vietnam was taken as a case to study importance of CAMEL Model analysis in bank supervision. Results of the study showed that in United States CAMEL Model as a tool of analysis for banking supervision was very much effective.

Shiva and Natrajan (2011), analyzed the performance of SBI group banks with the application of CAMEL Model of analysis. State Bank of Bikaner and Jaipur was ranked number one in the overall performance, State Bank of Patiala got second position, last position went to State Bank of India.

Parsad and Ravinder (2012), in their research paper "A Camel Model Analysis of Nationalized Banks of India", observed that CAMEL Model analysis is most suitable tool to evaluate performance of banking industry. Study was conducted for a period of 5 years i.e. 2006-2010. Results of the study showed that Andhra Bank was at first position followed by Bank of Baroda and Punjab and Sind Bank. Canara Bank got last position according to the study.

Reddy (2012), studied relative performance of banks in India for the period 1991-2009 using modified CAMEL approach, He observed that camel analysis is an important tool to access the financial strength of a bank. He found that during the period of study Mashreq Bank, China Trust Commercial Bank and Bank of Ceylon got top rank in overall performance. On the other hand American Express Bank, Development Credit Bank and Catholic Syriyan Bank were at the bottom of the performance ladder.

Kabir M.A and Dey S (2012), conducted a study, 'Performance Analysis through CAMEL rating: A Comparative Study of Selected Private Commercial Banks in Bangladesh'. In this study they examined the financial performance of only two banks i.e. IFIC and EXIM banks and found that both banks were on equal footing.

Mishra and Aspal (2013), conducted a study to analyse performance of State Bank Group using CAMEL Model, with a data for 3 years i.e. 2009-2011. Researchers revealed that was no significant difference between camel ratios.

Ongore and Kesa (2013), studied moderating effect of ownership structure on performance of banks in Kenya. Study revealed that moderating effects of ownership on financial performance of banks was insignificant. The author further found that macroeconomics factors had neglected contribution in these banks performance and it was most affected by management decisions.

Due to changed economic and technological factor, an indepth performance analysis of banking industry in India is again required. Therefore we have planned this study

5. RESEARCH METHODOLOGY

At present India has 27 public sector banks. On the basis of their capitalisation, five banks have been selected for this study. Selected banks are Canara Bank (CNR), Punjab National Bank (PNB), Central Bank of India (CBI), Bank of Baroda (BOB) and Bank of India (BOI). Eight years data i.e. 2008 to 2015 has been taken for the study.

Source of data for all tables is annual reports of selected banks and some data has been taken from RBI publications.

Significance level has been examined at the levels i.e. one percent and five percent. In various tables (*) indicates significance level at five per cent and (**) at one per cent level.

Ranking: Selected banks has been ranked on the basis of their average performance in each parameter studied in descending order except three tables i.e. Table 8, 9 and 12 where ranking is made in ascending order. Based on these ranks consollidated ranking has been made in Table 13.

6. RESULTS

Loan Turnover

Table 1 shows the loan turnover of various public sector banks. Among public sector banks loan turnover in CNB in the year 2008 was 0.15 percent which decreased to 0.12 percent in 2011. In the year 2014, the loan turnover was to 0.15 percent but again fell down to 0.14 percent in 2015. Due to frequent ups and downs bank recorded a non-significant decline in growth rate of 0.39 per cent.

Table 1
Loan Turnover in Different Public Sector Banks

YEAR	*CNB*	*PNB*	*CBI*	*BOB*	*BOI*
2008	0.15	0.15	0.13	0.14	0.14
2009	0.15	0.16	0.14	0.13	0.14
2010	0.14	0.14	0.14	0.12	0.13
2011	0.12	0.13	0.13	0.11	0.11
2012	0.14	0.14	0.14	0.12	0.12
2013	0.14	0.14	0.14	0.11	0.12
2014	0.15	0.13	0.14	0.11	0.11
2015	0.14	0.13	0.14	0.1	0.11
Average	0.14	0.14	0.14	0.12	0.12
C.V.	7.02	7.64	3.37	10.91	10.46
C.G.R.	–0.39	–2.31	0.71	–3.93	–3.56
t-value	0.32	2.97*	1.42	5.63**	4.22**
Rank	2	2	2	4.5	4.5

Source: Compiled from Annual Reports of Selected Banks.

Loan turnover in PNB in 2008 was 0.15 percent which decreased to 0.13 percent in 2011. Again in 2012 it was 0.14 percent and remained same till last year of the study. Loan turnover in PNB declined significantly at rate of –2.31 percent compounded annually.

In CBI loan turnover in 2008 was 0.13 percent and increased to 0.14 percent in 2009. It remained same throughout the period of study except 2011 when it was 0.13 percent. Loan turnover in CBI could not depict any definite trend throughout the period of the study.

Loan turnover in BOB was 0.14 percent in 2008 and decreased to 0.11 percent in 2011 showing a continuous decreasing trend. After some fluctuations in between, in the year 2015 loan turnover decreased to 0.10 percent. Loan turnover in BOB showed significant decline at rate of –3.93 percent compounded annually.

In BOI loan turnover in 2008 and 2009 was 0.14 percent which decreased to 0.11 percent in 2011. After remain at 0.12 percent for two years, in 2014 loan turnover of the bank came down to 0.11 percent and remained same in 2015 also. Loan turnover in BOI declined significantly at rate of –3.56 percent compounded annually.

Ratio of Advances to Loan Funds

Table 2 reveals the ratio of advances to loan funds in different public banks.

Table 2
Advances to Loan Funds Ratio in Different Public Sector Banks

YEAR	*CNB*	*PNB*	*CBI*	*BOB*	*BOI*
2008	71.36	76.19	75.13	75.67	80
2009	78.86	80.15	70.4	81.35	80.2
2010	77.49	77.31	69.9	77.38	74.66
2011	76.71	78.98	71.74	78.56	74.37
2012	71.5	77.17	73.51	78.07	74.14
2013	67.39	72.81	75.84	72.22	75.4
2014	73.07	75.06	70.02	71.78	78.66
2015	69.67	72.73	69.33	68.03	73.27
Average	73.26	76.30	71.98	75.38	76.34
C.V.	5.54	3.51	3.52	5.80	3.69
C.G.R.	-1.23	-1.01	-0.38	-1.87	-0.81
t-value	1.61	2.48*	0.68	3.14*	1.60
Rank	4	2	5	3	1

Source: Compiled from Annual Reports of Selected Banks.

Among public sector banks, advances to loan funds ratio in CNB, was 71.36 percent in 2008 that increased to 78.86 percent in 2009. After a continuous decrease in the advances to loan fund ratio it was 67.39 percent in 2013 and 69.67 percent in 2015. The fluctuations in advances against loan funds turned the decline (–1.23%) to be non-significant.

In PNB, advances to loan funds ratio in the year 2008 was 76.19 percent that increased to 80.15 percent in 2009, but decreased to 77.31 percent in the year 2010. In the year 2011, increased to78.98 percent but decreased to 72.3 percent in 2015. The ratio in PNB declined significantly at rate of –1.01 percent compounded annually.

Advances to loan funds ratio in CBI decreased from 75.13 percent in 2008 to 69.90 percent in 2010, but increased to 75.84 percent in 2013. Again in 2014 advances to loan funds ratio decreased to 70.02 percent and further to 69.33 percent in 2015. The frequent ups and downs in advances against loan funds turned the decline (–0.38%) to be non-significant.

In BOB, the ratio increased from ₹75.67 percent in the year 2008 to 81.35 percent in 2009, but decreased to 77.38 percent in the year 2010. It was 68.03 percent in the year 2015. The ratio in BOB declined significantly at the rate of –1.87 percent compounded annually.

In BOI, the ratio in 2008 was 80.00 percent that increased to 80.20 percent in the year 2009. But it decreased to 74.14 percent in the year 2012. It came down in the year 2015 to 73.27 percent after trending a level of 78.66 percent in 2014. The fluctuations in advances against loan funds turned the decline (–0.81%) to be non-significant.

Earnings per Share

Table 3 elaborates the information regarding earning per share of various public sector banks.

Table 3
Earning Per Share in Selected Public Sector Banks

YEAR	*CNB*	*PNB*	*CBI*	*BOB*	*BOI*
2008	38.17	64.98	11.88	39.41	38.26
2009	50.55	98.03	12.45	61.14	57.26
2010	73.69	123.86	24.87	83.96	33.15
2011	90.88	139.94	28.15	108.33	45.54
2012	74.1	144	5.49	121.79	46.66
2013	64.83	134.31	8.28	106.37	46.14
2014	52.86	92.32	-9.35	105.75	42.45
2015	56.87	82.55	3.66	76.85	25.67
Average	62.74	110.00	10.68	87.95	41.89
C.V.	26.46	26.77	111.61	31.67	22.88
C.G.R.	2.93	1.98	–41.32	10.31	–3.82
t-value	0.65	0.41	1.76	1.93	1.05
Rank	3	1	5	2	4

Source: Compiled from Annual Reports of Selected Banks.

In CNB, earning per share continuously increased from ₹38.17 in the year 2008 to ₹90.88 in the year 2011. But from the year 2012 earnings per share started decreasing and decreased to ₹52.86 till the year 2014. Again in the 2015 it was ₹52.87. Despite fluctuations the ratio increased at 2.93 per cent compounded annually, through the period of the study in this bank.

In PNB, earning per share in the year 2008 was ₹64.98 and it increased continuously to ₹144.00 in 2012. It started decreasing from the year 2013 and decreased to ₹82.55 till the year 2015. The ratio in the PNB increased non-significantly at rate of 1.98 percent per annum.

Earning per share in CBI increased continuously from ₹11.88 in 2008 to ₹28.15 in the year 2011. It decreased to ₹5.49 in the year 2012 but again increased to ₹8.28 in 2013. There was a deficit earning per share (–9.35) in 2014 but increased to ₹3.66 in 2015. Heavy fluctuations in ratio turned the decline (–41.32 percent) in growth rate to be non-significant.

In BOB earning per share increased from ₹39.41 in 2008 to ₹121.79 in the year 2012. It decreased to 76.85 till the year 2015. The analysis revealed that earning per share in BOB increased at compounded growth rate of 10.31 per cent.

Earning per share in BOI increased from ₹38.26 in 2008 to ₹57.26 in 2009. But it decreased to ₹33.15 in 2010 and again it increased to ₹46.66 in the year 2012. It decreased to ₹25.67 in 2015. The decline in growth rate (–3.82 percent) non-significant due to ups and downs in earning per share ratio.

Book Value of Assets

Information contained in Table 4 shows the book value (value at which assets are shown in balanced sheet) of various assets of the public sector banks.

Table 4
Book Value of Assets in Selected Public Sector Banks

YEAR	CNB	PNB	CBI	BOB	BOI
2008	202.33	341.98	86.81	303.18	168.06
2009	244.87	416.74	86.26	352.37	224.39
2010	305.83	514.77	107.96	414.71	243.75
2011	405	632.48	131.2	537.45	292.26
2012	465.57	777.39	121.42	668.34	343.79
2013	515.68	884.03	313.24	758.91	401.38
2014	522.96	952.5	91.31	838.02	465.37
2015	556.68	203.24	94.33	180.13	472.42
Average	402.37	590.39	129.07	506.64	326.43
C.V.	33.78	45.34	59.06	46.04	34.74
C.G.R.	16.16	2.80	4.86	3.29	16.10
t-value	7.76**	0.31	0.68	0.37	14.16**
Rank	3	1	5	2	4

Source: Compiled from Annual Reports of Selected Banks.

Book value of various assets in CNB showed a continuous increasing g trend from 2008 to 2015 as it was 202.33 crore in 2008 and increased to 556.68 crore in 2015. The results revealed that book value of assets increased significantly at rate of 16.16 percent compounded annually.

In PNB, book value of assets increased from ₹341.98 crore in 2008 to ₹952.50 crore in 2014 showing a continuous increasing trend till 2014. But in the year 2015 book value of assets was ₹203.24 crore. Fluctuation in the book value of assets of the bank turned the growth rate (2.80 percent) non-significant.

Book value of assets in CBI increased from ₹86.81 crore in 2008 to ₹131.20 crore in 2011 and to ₹313.24 crore in the year 2013. It was ₹94.33 crore in 2015. compounded growth rate of 0.68 percent was non-significant.

BOB recorded an increasing trend in book value of assets during first seven years of study. It went up from ₹303.18 crore in 2008 to ₹838.02 crore in 2014. In last year of the study book value of assets in this bank fell down to 180.13 crore. Bank recorded a non-significant compounded growth rate of 3.29 percent in book value of assets.

In BOI, book value of assets showed a continuous increasing trend throughout the period of the study as it was ₹168.06 crore in 2008 and increased to ₹472.42 in the year 2015. Book value of assets in BOI increased significantly at rate of 16.10 percent compounded annually.

Interest Income to Total Funds Ratio

Interest income to total funds ratio in various public sector banks is presented in the Table 5.

Table 5
Interest Income to Total Funds Ratio in Selected Public Sector Banks

YEAR	*CNB*	*PNB*	*CBI*	*BOB*	*BOI*
2008	9.08	8.86	7.85	8.14	8.59
2009	9.16	9.89	8.44	8.16	9.15
2010	8.69	9.07	8.21	7.56	7.93
2011	7.69	8.03	7.83	6.87	6.98
2012	8.74	8.73	8.79	7.37	7.77
2013	8.71	8.97	8.85	7.08	7.63
2014	8.82	8.41	8.82	6.45	7.39
2015	8.5	8.05	8.84	6.25	7.29
Average	8.67	8.75	8.45	7.24	7.84
C.V.	5.21	6.95	5.23	9.83	9.12
C.G.R.	–0.61	–1.69	1.67	–3.68	–2.61
t-value	0.71	1.89	2.90^{*}	4.36^{**}	2.65^{*}
Rank	2	1	3	5	4

Source: Compiled from Annual Reports of Selected Banks.

Among public sector banks, interest income to total funds ratio in CNB decreased from 9.08 percent in 2008 to 7.69 percent in 2011. It was 8.74, 8.71, 8.82 and 8.50 percent respectively in 2012, 13, 14 and 2015. Various ups and downs turned the decline in interest income to total funds ratio (–0.61 percent) non-significant.

In PNB, interest income to total funds ratio remained fluctuating between 9.89 percent in 2009 to 8.03 in 2011. It was 8.86 in 2008 and 8.05 in 2015. Frequent variations turned the negative growth rate to be non-significant.

In CBI, interest income to total funds was 7.85 percent in the year 2008. After increasing 8.44 percent in 2009 it decreased to 7.83 percent in the year 2011. It showed an increasing trend from 2012 and reached the level of 8.84 percent in the year 2015. CBI recorded a significant growth of 1.67 per cent compounded annually.

Interest income to total funds ratio in BOB decreased from 8.14 percent in 2008 to 6.87 percent in 2011. It reached the level of 6.25 percent till the year 2015. The ratio declined significantly at the rate of –3.68 percent compounded annually in this bank.

In BOI, Interest income to total funds ratio was 8.59 percent in 2008 but decreased to the level of 6.98 percent in 2011 and the level of 7.29 percent till the year 2015. Analysis revealed that the ratio declined significantly at the rate of -2.61 percent compounded annually.

Net Interest Income to Total Funds Ratio

Net interest income to total funds ratio in various public sector banks has been elaborated in Table 6.

Among public sector banks, net interest income to total fund ratio in CNB showed increasing trend from 2008 (2.84 percent) to 2010 (3.24 percent) but started decreasing after that and reached the level of 1.88 percent in 2015. The ratio decreased significantly at the rate of –7.29 percent compounded annually.

Table 6
Net Interest Income to Total Funds in Selected Public Sector Banks

YEAR	*CNB*	*PNB*	*CBI*	*BOB*	*BOI*
2008	2.84	4.04	2.47	3.24	3.51
2009	2.89	4.34	2.29	3.26	3.74
2010	3.24	4.28	2.37	3.3	3.05
2011	2.58	3.51	2.74	2.76	2.51
2012	2.18	3.22	2.37	2.56	2.27
2013	2.01	3.18	2.32	2.28	2.16
2014	1.99	3.14	2.34	1.98	2.11
2015	1.88	2.88	2.42	1.92	1.9
Average	2.45	3.57	2.42	2.66	2.66
C.V.	20.63	15.89	5.92	21.44	26.03
C.G.R.	–7.29	–5.74	–0.29	–8.37	–9.40
t-value	5.41**	6.02**	0.31	9.59**	8.95**
Rank	4	1	5	2.5	2.5

Source: Compiled from Annual Reports of Selected Banks.

In PNB, net interest to total funds ratio increased from 4.04 in 2008 to 4.34 percent in 4.34 percent. After that it continuously went down to the level of 2.88 percent in 2015. It declined significantly at the rate of –5.74 percent compounded annually.

In CBI the ratio fluctuating continuously from 2.47 percent in 2008 to 2.42 percent in the year 2015. It was highest i.e 2.74 percent in 2011 only. Various ups and downs turned the negative growth rate non-significant.

In BOB recorded an increase in net interest income to total funds ratio from 3.24 percent in 2008 to 3.30 percent in the year 2010, but after that it started decreasing and reached the level of 1.92 percent till the year 2015. The ratio decreased significantly at the rate of –8.37 percent compounded annually.

The ratio in BOB increased from 3.51 percent in 2008 to 3.74 percent in the year 2009, but after that it started decreasing and reached the level of 1.90 percent till the year 2015. The ratio decreased significantly at the rate of –9.40 percent compounded annually.

It is interesting to note that in all banks the ratio increased for first four or three years of study but after that declined continuously.

Non-Interest Income to Total Funds

Information regarding non-interest income to total funds ratio in various public sector banks has been shown in Table 7.

Among public sector banks, non-interest income to total funds ratio in CNB increased from 0.44 percent in 2008 to 0.94 percent in 2011. After that it came down 0.88 percent 2015. The ratio increased significantly at the rate of 36.09 percent compounded annually.

In PNB, the ratio was 0.13 percent in 2008 that increased to 1.08 percent in 2011. After declining for some time it was 1.02 percent in last year of the study. It increased significantly at the rate of 12.29 percent compounded annually.

Table 7
Non-Interest Income to Total Funds in Selected Public Sector Banks

YEAR	CNB	PNB	CBI	BOB	BOI
2008	0.44	0.13	0.28	0.43	0.41
2009	0.46	0.25	0.11	0.35	0.29
2010	0.45	0.16	0.21	0.3	0.22
2011	0.94	1.08	0.65	0.88	0.85
2012	0.83	1.01	0.64	0.85	0.91
2013	0.81	0.9	0.67	0.73	0.9
2014	0.88	0.89	0.69	0.74	0.84
2015	0.88	1.02	0.63	0.64	0.71
Average	0.71	0.68	0.49	0.62	0.64
C.V.	30.90	61.76	49.70	36.80	44.94
C.G.R.	12.29	36.09	24.37	11.52	17.37
t-value	3.43*	3.07*	2.60*	1.93	2.16
Rank	1	2	5	4	3

Source: Compiled from Annual Reports of Selected Banks.

The ratio in CBI decreased from 0.28 percent in 2008 to 0.11 percent in 2009 but after that it started upward forwarding and reached to the level of 0.63 percent in 2015. The ratio in this bank increased significantly at the rate of 24.37 percent compounded annually.

In BOB, the ratio decreased from 0.43 percent in 2008 to 0.30 percent in the year 2010. It touched the level of 0.88 percent in 2011 but ultimately it 0.64 percent in 2015. Bank recorded 11.52 per cent compounded growth rate which was non-significant.

In BOI, non-interest income to total funds ratio was 0.41 percent but decreased to 0.22 percent in 2010. It increased to 0.91 percent in 2012 but it was 0.71 percent in 2015. Various ups and downs turned the compounded growth rate of 17.37 percent non-significant.

Interest Expended to Total Funds Ratio

Table 8 shows the interest expended to total funds ratio in selected public sector banks.

Table 8
Trends in Interest Expended to Total Funds Ratio in Different Public Sector Banks

YEAR	CNB	PNB	CBI	BOB	BOI
2008	6.23	4.86	5.38	4.9	5.1
2009	6.27	5.55	6.15	4.9	5.41
2010	5.45	4.79	5.83	4.25	4.87
2011	5.11	4.52	5.09	4.11	4.47
2012	6.56	5.52	6.42	4.8	5.5
2013	6.7	5.79	6.53	4.8	5.48
2014	6.83	5.27	6.48	4.47	5.28
2015	6.63	5.17	6.41	4.33	5.38

YEAR	CNB	PNB	CBI	BOB	BOI
Average	6.22	5.18	6.04	4.57	5.19
C.V.	10.01	8.39	9.09	6.95	6.92
C.G.R.	2.08	1.13	2.48	-0.95	0.97
t-value	1.33	0.84	2.00	0.87	0.85
Rank	5	2	4	1	3

Source: Compiled from Annual Reports of Selected Banks.

The ratio of interest expended to total funds was 6.23 percent in 2008 in CNB which decreased to 5.11 percent in 2011. The ratio increased during the year 2012 to 2015 and it was 6.63 percent in 2015. The growth rate of interest expended was positive but non-significant.

Similarly in the PNB the ratio was 4.86 percent in year 2008 which decreased to 4.52 during 2011, but increased 5.79 percent in year 2013. Finally ratio was 5.17 percent in year 2015. The growth rate was increasing at a non-significant rate of 1.13 percent compounded annually.

In CBI the ratio was almost at an increasing trend throughout the years under study. The ratio went up from 5.38 percent in 2008 to 6.41 in 2015. The growth rate i.e. 2.48 percent was non-significant.

The BOB recorded a ratio of 4.9 percent in 2009 which came down to 4.33 percent in 2015. The compound growth rate was non-significantly decreasing at 0.95 percent

In BOI the ratio followed fluctuating trend throughout the period of study. The ratio was 5.1, 4.41, 5.5 and 5.38 percent in years 2008, 2011, 2012 and 2015. The compound growth rate was non-significantly increasing at 0.97 percent.

Operating Expenses to Total Funds Ratio

Table 9 presents the operating expenses to total funds ratio in selected banks.

Table 9
Showing Operating Expenses to Total Funds Ratio in Selected Public Sector Banks

YEAR	CNB	PNB	CBI	BOB	BOI
2008	2.04	2.08	1.83	1.94	2.05
2009	1.92	2.18	1.57	1.78	1.82
2010	1.98	2.05	1.49	1.77	2.14
2011	1.43	1.82	2	1.38	1.58
2012	1.28	1.61	1.65	1.21	1.3
2013	1.27	1.68	1.64	1.14	1.23
2014	1.31	1.75	1.79	1.13	1.26
2015	1.33	1.76	1.79	1.07	1.31
Average	1.57	1.87	1.72	1.43	1.59
C.V.	21.94	11.19	9.50	24.45	23.44
C.G.R.	–7.28	–3.49	0.71	–8.96	–7.81
t-value	4.54**	3.19*	0.46	8.99**	4.58**
Rank	2	5	4	1	3

Source: Compiled from Annual Reports of Selected Banks.

The ratio in CNB followed a decreasing trend throughout the period of study. The ratio was 2.04, 1.92, 1.98, 1.43, 1.28, 1.27, 1.31 and 1.33 percent from year 2008 to 2015. The compound growth rate was decreasing significantly at 7.28 percent.

In PNB the ratio was 2.08 percent in year 2008 which increased in next year 2.18 percent. The ratio from 2010 to 2015 was as 2.05, 1.82, 1.61, 1.68, 1.75 and 1.78 percent. The compound growth rate was decreasing at 3.49 percent which was significant.

The ratio was 1.83 percent in year 2008 in CBI. This ratio decreased in next two years and increased to 2 percent in year 2011. Then the ratio started decreasing till year 2015 and it was 1.65, 1.64, 1.79 and 1.79 percent. Compound growth rate was non-significantly increasing at .71 percent

The ratio was decreasing throughout the period under study in BOB. The ratio was 1.94, 1.78, 1.77, 1.38, 1.21, 1.14, 1.13 and 1.07 percent from 2008 to 2015. The compound growth rate was significantly decreasing at 8.96 percent.

In BOI the ratio was almost at decreasing trend. In year 2008 it was 2.05 percent. The ratio increased only once during the period of study i.e., in 2010 when it was 2.14 percent. After that it fell down and it was 1.58, 1.3, 1.23, 1.26 and 1.31 percent till 2015. It recorded a significant decreasing compounded growth rate of 7.81percent.

Net Profit to Total Funds Ratio

Table 10 shows the ratio of net profit to total funds in public sector banks under study.

Table 10
Showing Net Profit to Total Funds Ratio in Selected Public Sector Banks

YEAR	*CNB*	*PNB*	*CBI*	*BOB*	*BOI*
2008	0.92	1.14	0.51	0.89	1.26
2009	1.05	1.4	0.43	1.09	1.5
2010	1.26	1.45	0.65	1.21	0.7
2011	1.35	1.32	0.64	1.35	0.8
2012	0.93	1.17	0.24	1.24	0.73
2013	0.73	1.02	0.41	0.9	0.66
2014	0.54	0.65	-0.46	0.75	0.53
2015	0.53	0.53	0.2	0.49	0.29
Average	0.91	1.09	0.33	0.99	0.81
C.V.	33.34	31.15	109.26	28.98	48.31
C.G.R.	–10.37	–11.62	–26.94	–8.02	–17.10
t-value	3.00*	3.74**	1.58	2.00	5.84**
Rank	3	1	5	2	4

Source: Compiled from Annual Reports of Selected Banks.

The ratio in CNB was 0.92 percent in year 2008. The ratio increased till 2011 when it was 1.35 percent. From 2012 the ratio had a decreasing trend which was 0.93, 0.73, 0.54 and 0.53 percent .The compound growth rate was significantly decreasing at 10.37 percent.

In PNB the ratio was 1.14 percent in year 2008 and it increased to 1.45 percent in 2010. After that it followed negative trend came down to 0.53 percent in year 2015. The growth rate was decreasing at 11.62 percent which was significant.

In CBI the ratio increased from 0.51 percent in year 2008 to 0.65 percent in 2010. The ratio slightly increased to 0.2 percent in 2015. The compound growth rate was non- significantly decreasing at 26.94 percent.

BOB recorded net profit to total funds ratio at 0.89 percent in year 2008 which increased to 1.35 in 2011.The ratio start decreasing from 2012 to 2015, and was 1.24, 0.9, 0.75 and 0.49 percent. The compound growth rate was decreasing at 8.02 percent which was non-significant.

In BOI the ratio of net profit to total funds was 1.26 percent in year 2008 which increased to 1.5 percent in 2009. It was 0.7 and 0.8 in 2010 and 2011. In 2015 the ratio was 0.49 percent. The compound growth rate was significantly decreasing at 17.10 percent.

Credit Deposit Ratio

Table 11 indicates credit deposit ratio of public sector banks under study.

Table 11
Showing Credit Deposit Ratio in Selected Public Sector Banks

YEAR	*CNB*	*PNB*	*CBI*	*BOB*	*BOI*
2008	69.4	70.55	64.63	68.72	73.51
2009	71.99	72.88	65.6	72.78	75.47
2010	72.96	74.34	65.06	73.6	74.24
2011	72.07	76.25	68.85	73.87	72.18
2012	71.52	77.39	73.83	74.76	74.85
2013	69.51	78.13	75.66	71.68	76.88
2014	69.95	78.06	74.93	69.54	76.86
2015	70.55	76.6	73.8	69.54	76.6
Average	70.99	75.53	70.30	71.81	75.07
C.V.	1.87	3.59	6.77	3.20	2.28
C.G.R.	1.34	1.30	2.55	–0.25	0.62
t-value	0.97	4.24**	5.17**	0.48	2.16
Rank	4	1	5	3	2

Source: Compiled from Annual Reports of Selected Banks.

The ratio of credit deposit in CNB increased from 69.4 percent in year 2008 to 72.96 percent in year 2010. After that it decreased to 70.55 percent in last year of the study i.e 2015. The compound growth rate was increasing at 1.34 percent which was non-significant.

In PNB the ratio was 70.55 percent in year 2008 which increased to 78.06 percent in year 2014. The ratio came down to 76.6 percent in 2015. The ratio had an increasing trend. The compound growth rate was increasing at 1.30 percent which was significant.

Credit deposit ratio was 64.63 percent in year 2008 in CBI which increased to 75.66 percent in 2013. The ratio was 73.8 percent in last year of the study i.e. 2015. The compound growth rate was significantly increasing at 2.55 percent.

The ratio was 68.72 percent in year 2008 in BOB which increased to 74.76 percent in 2012. The ratio fell down to 69.54 percent in 2015. The ratio had an decreasing trend. The compound growth rate was non-significantly decreasing 0.25 percent.

In BOI the ratio of credit deposit was 73.51 percent in year 2008. The ratio went up to 75.47 percent in 2009 which decreased to 72.18 percent in year 2011. The ratio increased to 76.6 percent in year 2015. The compound growth rate was increasing at 0.62 percent which was non-significant.

Total Debt to Owners Funds Ratio

Total debts to owners funds ratio of selected public sector banks has been shown in Table 12.

Table 12
Showing Total Debt to Owners Funds Ratio in Selected Public Sector Banks

YEAR	*CNB*	*PNB*	*CBI*	*BOB*	*BOI*
2008	18.57	15.44	35.8	13.77	17
2009	18.62	15.96	37.92	14.99	16.1
2010	18.71	15.36	37.47	15.96	17.95
2011	16.36	15.62	34.13	14.51	18.71
2012	15.86	14.4	22.13	14.01	16.13
2013	15.58	12.53	19.25	14.82	15.96
2014	17.44	13.09	19.6	15.81	15.94
2015	17.91	13.3	16.34	15.5	16.91
Average	17.38	14.46	27.83	14.92	16.84
C.V.	7.41	9.17	33.37	5.40	6.10
C.G.R.	–1.37	–3.20	–12.51	1.00	0.70
t-value	1.25	4.06^{**}	6.76^{**}	1.23	0.74
Rank	4	1	5	2	3

Source: Compiled from Annual Reports of Selected Banks.

The ratio of total debt to own funds in CNB was 18.57 percent in year 2008 which increased to 18.71 percent in year 2010 and decreased to 15.58 percent in year 2013. It was 17.91 percent in year 2015. It had a decreasing trend. The compound growth rate was decreasing at 1.37 percent which was significant.

In PNB the ratio was 15.44 percent in year 2008 which increased to 15.96 percent in 2009. The ratio further decreased to 12.53 percent in 2013 which went up to 13.3 percent in year 2015. The compound growth rate was decreasing at 3.20 percent which was significant.

The ratio was 35.8 percent in year 2008 in CBI which increased to 37.42 percent in year 2010. In year 2011 the ratio fell down to 34.13 percent and again to 16.34 percent in 2015. The compound growth rate was significantly decreasing at 12.51 percent.

The ratio was 13.77 percent in year 2008 in BOB which decreased to 15.96 percent in 2010. The ratio further decreased to 14.01 in 2012 percent but again went up to 15.5 percent in year 2015. The compound growth rate was non-significantly increasing.

BOI recorded a ratio of 17 percent in year 2008. The ratio decreased to 16.1 percent in year 2009 but increased to 18.71 percent in year 2011. It again decreased to 15.94 percent in year2014.The ratio slightly increased to 16.91 percent in 2015. The compound growth rate was increasing at 0.70 percent which was non-significant.

Ranking Pattern of Selected Public Sector Banks

The ranking pattern of different banks in case of management efficiency has been shown in Table 13.

Table 13
Ranking Pattern of Selected Banks in Case of Management Efficiency

Ratio	*CNB*	*PNB*	*CBI*	*BOB*	*BOI*
Table 1	2	2	2	4.5	4.5
Table 2	4	2	5	3	1
Table 3	3	1	5	2	4
Table 4	3	1	5	2	4
Table 5	2	1	3	5	4
Table 6	4	1	5	2.5	2.5
Table 7	1	2	5	4	3
Table 8	5	2	4	1	3
Table 9	2	5	4	1	3
Table10	3	1	5	2	4
Table11	4	1	5	3	2
Table12	4	1	5	2	3
Total	37	20	53	32	38
Rank	3	1	5	2	4

Source: Compiled from Table 1 to Table 12.

On the basis of average rank score, the performance of Central Bank of India was worst in case of management efficiency, followed by Bank of India and CNB. The performance of Punjab National Bank was best in case of management efficiency, followed by Bank Of Baroda.

Recommendation

Performance of CBI was poor in allmost all parameters of managerial efficency. It should redraft its policies and strategies in this respects to do a turn about.

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