

## Performance Analysis of Commercial Bank Groups in India

**Dr. Shradha H. Budhedeo,**

Associate Professor  
Department of Business Economics  
Faculty of Commerce, M. S. University of Baroda,  
Vadodara, India.

### ABSTRACT

*The banking industry has traversed a long way since independence and planning initiatives in India. The entire banking landscape has undergone massive transformation. The banking sector has witnessed various phases of growth and progress over time, right from nationalization, structural and financial reforms, deregulation, consolidation, technology revolution and now digitalization. While in India, there is too much emphasis on the social responsibility of banks, the significance of banks' profitability cannot be neglected. Financial viability and soundness of the banking system is crucial for long-run sustainability of banks and for enabling them to perform their duties towards fulfilling the social objective. In this perspective, the broad objective of the study is to measure, examine and compare the relative performance of three scheduled commercial bank groups (public sector banks, private sector banks, foreign banks) on the basis of parameters as – Productivity, Profitability and Liquidity. Ratio analysis has been employed to measure the performance of bank groups in India for the post global economic crisis period from 2010 to 2017. The performance analysis accomplished in the study reveals that the foreign banks have been leading the industry at the productivity front. In case of profitability, private sector banks as well as foreign banks have shown outstanding performance. The liquidity position of foreign banks reflects that they hold high quantum of liquid assets to total assets and to total deposits, yet their current ratio is poor indicating non compliance of standard prudential measures.*

**Keywords:** Banking, Bank Group, Commercial Bank, Performance, Productivity, Profitability, Liquidity.

### INTRODUCTION:

The banking sector has come a long way since independence and economic planning initiatives in India. From establishment of Reserve Bank of India as the central banking authority, to nationalization of Imperial Bank - the largest commercial bank in the country, to the bank-nationalization of a large number of commercial banks, to the initiation of reforms; the banking sector has witnessed it all.

The Indian banking industry has gone through various phases of growth and progress over the past seven decades: Nationalization, Reforms, Deregulation, Consolidation, Technology Up-gradation and Digitalization. Post-nationalization of 20 major commercial banks, the public sector banks continued to dominate the banking scenario for nearly two decades. Since then, the entire banking landscape has undergone massive transformation. Particularly, the nineties was a phase of economic and financial liberalization which marked radical changes in the Indian banking sector with the entry of private and foreign banks into the industry. The new entrants in the banking industry overshadowed the entire banking system in the country with their performance surpassing that of the government banks. In India, although there is too much stress on the social responsibility of banks, the significance of banks' profitability cannot be ignored. Financial viability of banks is crucial not only for retaining public confidence in the banking system but also for long-run sustainability of firms and for enabling firms to discharge their duties towards fulfilling the social objective of the nation. In this

perspective, the main objective of the study has been established. The broad aim is to study the relative performance of commercial bank groups - public sector banks, private sector banks and foreign banks, in India. More specifically, the study endeavors to measure, examine and compare the relative achievements and performance of the three bank groups in terms of parameters as - Productivity, Profitability and Liquidity. The study has been organized into six sections. The first section is the present introductory section. Second section covers a brief review of literature. The third section throws light on the overall progress of the banking sector established by the growth of commercial banks. The fourth section reveals the sample, source of data, time period and methodology adopted in the study. Fifth section defines the variables selected for analyzing the productivity, profitability and liquidity position of bank groups (public sector banks, private sector banks and foreign banks), reports the results of performance measurement, and involves discussion on the same. The sixth section presents the conclusions and observations of the study.

## **LITERATURE REVIEW:**

Banking being the centre of economic activity and a major determinant of economic growth and development of a nation; strong and efficient banking system is imperative. In this regard, a large number of studies have been carried out on the measurement and analysis of bank performance, from country to country and from time to time. A number of studies have also focused in specific on profitability, productivity, and liquidity aspects of bank performance in India. The purpose of this section is to discuss the research endeavor and output of some of these studies.

Sarkar et al (1998) studied the Indian banking industry from the perspective of ownership-performance relationship in a developing economy. They examined the effect of ownership type on different efficiency measures for two specific years – 1993-94 and 1994-95. Regression analysis was employed in the study for analyzing impact of ownership on profitability and efficiency of banks. The results suggest a weak ownership effect of private banks over public banks. Another important finding was that foreign banks were superior to domestic banks at both profitability and efficiency fronts.

Ram Mohan (2002) evaluated the performance of public sector banks both in absolute and relative terms, in order to understand the factors behind their improved performance. The study was carried out for the bank deregulation phase after reforms set into the banking industry in India. It was observed that the efficiency of the banking system as a whole measured by declining spreads had improved during the analysis period. The performance of public sector banks had improved both in absolute and relative terms.

Das et al (2004) measured the efficiency of Indian banks using data envelopment analysis for the period 1997-2003. They found that despite liberalization measures undertaken in the economy, Indian banks hardly differed in terms of technical and cost efficiencies. However, they did differ in terms of revenue and profit efficiencies.

Shanmugan and Das (2004) examined the performance between different categories of Indian scheduled commercial banks for the post-reform decade from 1992 to 1999. They established that the State Bank group and foreign banks performed better in comparison to others.

Singla (2008) examined the role of financial management in the growth of banking industry. Profitability position of 16 banks was studied for the period 2001-2006. The study found that the profitability position of the banks was relatively reasonable as compared to earlier years.

Azhagaiah and Gejalakshmi (2012) analyzed the financial performance of banking sector in India. 17 private sector banks and 19 public sector banks were assessed using simple regression analysis for estimating the impact of asset management, operational efficiency, and bank size on financial performance. The study concluded that banks with higher deposits, assets and capital do not necessarily imply better financial performance.

Makkar and Singh (2012) employed ratio analysis to compare the profitability and productivity performance of private and public sector banks. They found that though there is no significant difference in profitability of private and public sector banks, the same is not true in case of productivity of these banks.

Rani et al (2013) studied the performance and growth of different commercial bank groups in India for the period 2009-2012, post global economic crisis. In the aftermath of the crisis, the Indian commercial banks were found to show steady positive trends in their performance. The SBI group and private banks were observed to have performed better than other public sector banks.

Rao (2013) primarily examined and compared the productivity, cost and profitability performance of traditional banks against modern banks for the period 2005-2011. The study found the gap between the two to have significantly reduced during the analysis period.

Tripathi et al (2014) undertook a comparison of the financial performance of two private sector banks - Axis Bank and Kotak Mahindra Bank. The CAMELS analysis and t-test were employed for the purpose. The study

could not arrive at any major difference between the financial performance of the two banks.

Narwal and Pathneja (2015) discussed the determinants of productivity and profitability of public and private sector banks in India. The performance has been measured over two different time periods – 2003 to 2008 and 2009 to 2013. The results of the study reveal that private sector banks are more productive than public sector banks, mainly on account of better usage of technology. However, no significant difference was observed in case of profitability of the bank groups.

Yadav and Garima (2015) tried to gauge the overall efficiency and productivity of banks in India. The study analyzed the employee productivity in the Indian banking sector by undertaking a comparative analysis of the same for five different groups of banks using a number of employee productivity parameters, for the period 2008-2012.

Taqi and Mustafa (2018) made an attempt to measure and compare the financial performance of Punjab National Bank and HDFC Bank. The study examined the growth and performance of the two banks for a period of ten years from 2006-2015. Various financial ratios related to banks' efficiency, liquidity and profitability were assessed for both banks. It was found that Punjab National Bank surpassed HDFC Bank in terms of financial soundness, but in the context of deposits and expenditure, HDFC Bank exhibited better management efficiency.

Vadrle and Katti (2018) investigated the profitability performance of selected Indian public and private sector banks during 2001-2015. On the basis of various indicators or ratios of profitability, the study concluded that public sector banks were more stable while private sector banks were more profitable during the period considered for the study.

### **PROGRESS OF BANKING SYSTEM IN INDIA AT A GLANCE:**

The banking system is no longer confined to urban India. The most striking feature of the Indian banking system has been its extensive reach. The bank branches have penetrated the rural and remote corners with financial deepening taking place on a massive scale in the financial system. Financial organizations including banks are undergoing radical changes with the objective of strengthening the financial system, creating an enabling economic environment for trade, business and growth.

The pre-independence period was largely characterized by the existence of private banks organized as joint stock companies. These banks were localized in nature and they often failed. They came under the purview of the Reserve Bank of India that was established as the central bank of the country in 1935.

The study looks more closely at the progress of banking industry in India over three distinct phases:

#### **Phase I - Pre-Nationalization (1947-68):**

The early years of independent India right from 1947 to the time of bank nationalization, posed severe challenges to the economic system. An underdeveloped economy faced issues of unbanked areas and lack of adequate financial assets. In order to secure a better alignment of the banking system to the needs of economic policy, the decade of 1960s witnessed a major development in terms of social control of banks. There was significant consolidation in the Indian banking industry with the number of operating banks reducing from over 500 in 1950s to mere 86 by 1968. During the 1947-1968 period, banks primarily catered to the needs of large industries and business houses. Small-scale industries, rural sector and agriculture lagged behind due to near negligible share in bank credit. The pre-nationalization policy was a major reason for the setback of the agriculture sector in this period. Moneylenders and indigenous bankers continued to exploit the masses. This scenario called for an urgent need for nationalization of commercial banks to serve the cause of economic growth and fulfill social purpose more effectively making credit available to all productive endeavors.

#### **Phase II - Nationalization (1969-90):**

The year 1969 is a landmark in the history of banking industry. The Government of India made a historical initiative of nationalizing 14 major commercial banks each having a minimum aggregate deposit of Rs. 50 crore. Six more banks were nationalized in 1980 with aggregate deposits of Rs. 200 crore or above, to serve the social and development objective of the government. The immediate task for the nationalized banks was large scale mobilization of deposits and pro-active lending for all productive purposes to all sectors and sections of the society, particularly the weaker sections. The idea was to bring the larger segment of the economy under the organized banking system by meeting the credit gaps in agriculture and small-scale industries. In the wake of nationalization, the growth and development of the Indian banking system was phenomenal. The industry witnessed a wide expansion in branch network, mounting deposits and multiplying credit operations. Another important structural development during this period was the formation of 196 Regional Rural Banks (RRBs)

under the RRBs Act 1976, to cater to the un-served rural population and promote financial inclusion. This phase was characterized by rapid branch expansion and financial deepening. This led to a sharp fall in unorganized credit. However, the very same factors that led to spread of institutional credit and targeted social priorities also led to distortions in the process. Banks stifled under the weight of policies such as administered interest rates and the burden of directed lending. Lack of operational flexibility, good governance and profitability led to the failure of banks. The rising NPAs became an unbearable pain for the economy. The weakening trends in the performance of ninety percent of commercial banks since the 1980s became an area of serious concern and set an alarm for the policy makers. The second half of 1980s did witness some corrective measures such as consolidation, diversification and deregulation; being taken to liberalize and improve the health of the banking system. However, these were small steps considering the extent of damage that had taken place. Banking reforms, therefore, became an integral part of the liberalization agenda. Major reforms in the financial sector were round the corner and peeped in with the dawn of 1990s following the structural reforms initiated by the Indian government.

### **Phase III - Liberalization (1991 onwards):**

The Narasimham Committee on financial sector reforms introduced sweeping changes in the Indian financial sector. The prime objective of the reform process in the financial sector was to create a strong and resilient banking system. Efforts were directed towards adoption of international standards in the Indian banking industry. The banking sector reforms were introduced in terms of prudential norms, measures relating to risk management, supervision, corporate governance, transparency and disclosures. One major recommendation of the Committee was reduction of directed credit from the stipulated 40% to 10% in a gradual and phased manner. Developments in the financial sector led to either merging of non-viable bank branches with the existing viable ones or closing down of these bank branches.

Banking sector reforms formed a part of overall structural reforms of the economy. The reforms broadly covered (a) modifying the policy framework, (b) improvement in financial health, (c) creating a competitive environment, and (d) institutional strengthening to address the concerns. Imbalance in banking system existed for a long time with high level of reserve requirements. This was really a consequence of the high fiscal deficit and a high degree of monetization of the deficit. Easing of CRR and SLR constitutes a major part of banking reforms. Prudential norms introduced in India relate to income recognition, asset classification, provisioning for bad and doubtful debts and capital adequacy requirements. For creating a competitive environment, public sector banks were allowed to go to the market and raise funds from public to the extent of 49%. Banks were expected to involve the public in ownership of the bank. A major effort was made to strengthen the banking system through appropriate institution building measures, such as recapitalization of banks which had low capital adequacy ratio, strengthening of the supervisory process, and encouraging new institutions.

The Narasimham Committee aimed at bringing about operational autonomy and functional autonomy so as to enhance productivity, efficiency and profitability. Main recommendations of the committee are: measures to infuse competition in the banking industry by encouraging entry of new private sector banks and foreign banks, introduction of prudential norms to ensure safety and soundness of banks. The main purpose of capital adequacy norms was to strengthen the financial stability of banks. Along with these measures, banks were instructed to follow a revised accounting format to prepare their balance sheet, and profit and loss account.

The Indian approach to financial sector reforms has been marked by gradualism so as to endure a gradual, non-disruptive and transparent approach to the process (Ahluwalia, 2002). While the financial system reform process underwent a systematic and sequenced course, the RBI ensured that the social content and purpose of lending was retained. The target of 40% lending to the priority sector was there to stay. Liberalization measures led to important developments as – introduction of Prime Lending Rate (PLR), improvements in the credit delivery system, freedom of branch licensing to enable banks to rationalize their branch network, Banking Ombudsman Scheme was introduced for expeditious and inexpensive resolution of customers' complaints, and steps were taken towards strengthening of institutional framework.

### **Impact of Reforms:**

Reforms induced vigor in commercial banks to revive and survive. Commercial banks themselves took efforts to improve their performance in key areas both in terms of content and quality aspects. They exhibited tremendous flexibility in adjusting to the new environment and achieving strength. They endeavored to improve their operational efficiency, productivity and profitability.

The initial years of reforms witnessed significant improvement in the financial position and working outcome of scheduled commercial banks. By 1996-97, the banking system recorded operating profits of Rs. 12,239 crore. The gross NPAs of banks declined from 23% in 1992-93 to 17.8% in 1996-97. Banks showed an improvement in their CRAR. By 1996-97, 25 public sector banks and all foreign banks operating in India had complied with the minimum requirement of 8% CRAR. 23 private sector banks had also fulfilled the 4% CRAR norm by 1993-94. The total number of commercial banks went up from 276 in 1991 to 152 in 2016. The increase was triggered mainly by the increase in the number of RRBs. Due to intensive branch licensing policy of RBI, the average population served per bank branch came down from 14,000 in 1991 to 10,300 in 2015. The gap between banks and people has visibly narrowed down over the years.

**Economic Slowdown:**

The restructuring process began with the launching of economic reforms in 1991, followed by financial reforms in 1993. It started taking a gradual course towards fulfilling its aims and objectives. The productivity and efficiency of the Indian economy as a whole enhanced and led the way to increased competitiveness of Indian firms both domestically and internationally. The banking industry became aggressively competitive and recorded unprecedented growth for the next decade and more. This was a decade of rising competition, technology upgradation, digitalization and improved performance for the banking sector. The CAGR of the banking industry stood at 18% against an average 7% GDP growth rate during 2000s.

After nearly two decades of reform impact, the global financial crisis hit the international economy in 2008. Western economies failed to sustain the harmful effects of the crisis. India remained relatively insulated from the effects of global economic meltdown, yet many Indian banks witnessed a downward trend in their performance indicators thereafter. The public sector banks witnessed a drastic fall in their return on equity and net interest margin which fell much below that of their private competitors. The gross NPA of public sector banks exhibited a sharp rise from 2.6% in 2006 to a high of 11% in 2016.

Although slowdown loomed large in the face of the global economy, India managed to avoid any major economic hurdle and prolonged recession. Indian private and foreign banks continued to witness growth in their performance, except for some nagging issues mainly in the government banks related to mounting NPAs. Over the past two years, the government is taking serious efforts towards adopting innovative initiatives to bail out the public sector banks in distress.

**Table 3.1: A Synoptic View of the Growth and Progress of Commercial Banks in India**

Sr. No.	Indicators	1951	1969	1991	2016
1.	Total No. of Commercial Banks	534	89	276	152
2.	No. of Offices of SCBs	2647	8262	60220	134858
3.	No. of Employees of SCBs	79000 <sup>#</sup>	197000 <sup>*</sup>	976931	1300934
4.	Population Served per Bank Office	87000	64000	14000	10300
5.	Assets with Banking Sector (SCBs) (in Rs. Cr)	78.7	380.3	7927	260399
6.	Total Deposits of SCBs (in Rs. Cr)	908.5	4646	201199	9599531
7.	Total Credit of SCBs (in Rs. Cr)	581.4	3599	121865	7522644.7
8.	Deposit to GDP Ratio (%)	8.7	11	33.8	68.2
9.	Credit to GDP Ratio (%)	5.4	8.6	20.4	52.9
10.	Credit to Deposit Ratio (%)	63.9	77.5	60.6	78.2
11.	Share of Priority Sector Advances to Total Advances (%)	N.A.	14	37.7	30.3

# Data pertains to 1956 \* Data is for end of 1968 N.A. – Not Applicable

Table 3.1 presents an overview of the growth and progress of commercial banks in India. These key banking statistics highlight the banking development scenario during the various phases of development of the banking industry post independence. The total number of operating commercial banks was brought down from 534 in 1951 to 89 in 1969. Post reforms, the number of banks increased to 276 which stood at 152 in 2016. As far as the number of offices of scheduled commercial banks is concerned, they have been increasing over all the phases from 2647 in 1951 to over 13 lakhs in 2016. Number of employees of SCBs also ascended from 79000 in 1951 to 60220 in 1991, and then escalating to 1300934 in 2016. The average population served per bank office has been reporting a decline from 87000 in 1951 to only 10300 in 2016. The banking sector assets record

an expansion from around Rs. 78 crore in 1951 to Rs. 9599531 crore in 2016. Total deposits and credit of SCBs has been growing rapidly over the phases. Deposit to GDP ratio has witnessed a record jump from mere 8.7% in 1951 to 33.8% in 1991 and then doubling to 68.2% in 2016. Credit to GDP ratio has simultaneously gone up in a similar manner from 5.4% in 1951 to 52.9% in 2016. The credit-deposit ratio has not revealed any extreme changes over the phases from 1951 to 2016, ranging between 60% and 80%. Share of priority sector advances to total advances has exhibited a substantial increase from only 14% in 1969 to almost 38% in 1991 and then to over 30% in 2016, clearly indicating an increase in accountability of the banking sector towards fulfilling its social responsibility.

#### **SAMPLE, DATA SOURCE, TIME PERIOD AND METHODOLOGY:**

The sample used for the performance analysis of banks includes three bank groups of the scheduled commercial banks in India: Public Sector Banks (27 including the SBI and its associates), Private Sector Banks (21 inclusive of old and new banks), and Foreign Banks (44). The study is conducted on secondary data of bank groups under consideration for different variables related to productivity, profitability and liquidity of banks. The data has been sourced from RBI publications such as Basic Statistical Returns of Scheduled Commercial Banks in India, Statistical Tables Relating to Banks in India, Profile of Banks, Handbook of Statistics on Indian Economy, RBI Bulletin, and Reports on Trends and Progress of Banking in India. The study carries out the performance analysis for the time period 2010-11 to 2016-17. Ratio Analysis has been employed to develop the relevant productivity, profitability and liquidity ratios to study the performance of bank groups.

#### **PERFORMANCE ANALYSIS OF BANK GROUPS: PUBLIC SECTOR, PRIVATE SECTOR AND FOREIGN BANKS:**

The performance analysis has been carried out for three bank groups, namely public sector banks (PSBs), private sector banks (PvtSBs), and foreign banks (FBs). The performance of bank groups has been measured on the basis of three parameters – Productivity, Profitability, and Liquidity. Various ratios have been developed for each of these parameters. The relative performance of bank groups would be observed on the basis of these parameters in the present section. The performance evaluation of bank groups has been carried out for the period 2010 – 2017. This period also coincides with the post global economic crisis phase. Despite the resilience of Indian banking industry, there is greater possibility that the recession that followed the financial crisis of 2008 did affect the banking performance to a certain extent. This is to be seen and analyzed in the ensuing results and discussions.

#### **Productivity:**

The productivity performance of the three bank groups under study has been analyzed on the basis of selected productivity ratios.

#### **Ratios Selected:**

The ratios selected for measuring the productivity performance of bank groups are:

- i. Deposits per Employee: Total Deposits as a ratio of Total No. of Employees
- ii. Advances per Employee: Total Advances as a ratio of Total No. of Employees
- iii. Business per Employee: Total Business as a ratio of Total No. of Employees  
In this study, Total Business has been calculated as sum total of deposits and advances; for each bank group.
- iv. Deposits per Office: Total Deposits as a ratio of Total No. of Bank Offices
- v. Advances per Office: Total Advances as a ratio of Total No. of Bank Offices
- vi. Business per Office: Total Business as a ratio of Total No. of Bank Offices; where Total Business is the sum total of deposits and advances.

#### **Results:**

**Table 5.1.1: Productivity Performance of Bank Groups (as ratio of Total No. of Employees)**

(in Million)

Year	Deposits per Employee			Advances per Employee			Business per Employee		
	PSBs	PvtSBs	FBs	PSBs	PvtSBs	FBs	PSBs	PvtSBs	FBs
2010-11	57.9	53.4	86.7	43.8	42.4	70.4	101.7	95.8	157.1
2011-12	64.6	47.3	106.9	50.1	38.9	88.7	114.7	86.2	195.6
2012-13	72.0	51.1	113.6	56.0	41.9	103.9	128.0	93.0	217.5

Year	Deposits per Employee			Advances per Employee			Business per Employee		
	PSBs	PvtSBs	FBs	PSBs	PvtSBs	FBs	PSBs	PvtSBs	FBs
2013-14	79.3	54.0	142.0	61.4	45.5	117.3	140.8	99.5	259.2
2014-15	85.2	59.2	158.4	64.8	51.1	128.1	150.0	110.3	286.6
2015-16	87.4	57.3	181.9	65.3	51.7	144.2	152.8	109.0	326.1
2016-17	94.0	63.6	187.6	64.7	55.1	133.9	158.7	118.7	321.5
Mean	77.2	55.1	139.6	58.0	46.7	112.4	135.2	101.8	251.9
S.D.	13.0	5.4	38.7	8.4	6.0	26.3	21.2	11.3	64.5
CAGR(%)	8.4	3.0	13.7	6.7	4.4	11.3	7.7	3.6	12.7

**Table 5.1.2: Productivity Performance of Bank Groups (as ratio of Total No. of Bank Offices)**

(in Million)

Year	Deposits per Office			Advances per Office			Business per Office		
	PSBs	PvtSBs	FBs	PSBs	PvtSBs	FBs	PSBs	PvtSBs	FBs
2010-11	3284.1	825.6	7405.1	2481.9	656.6	6015.7	5766.0	1482.2	13420.8
2011-12	3247.4	834.9	8392.4	2517.2	686.9	6965.1	5764.7	1521.8	15357.5
2012-13	3262.2	863.7	8499.8	2539.5	707.4	7778.2	5801.7	1571.1	16278.0
2013-14	3226.0	853.2	10945.9	2497.5	719.8	9041.7	5723.5	1573.0	19987.6
2014-15	3166.0	891.7	12315.4	2410.0	770.1	9957.4	5576.0	1661.8	22272.8
2015-16	2894.1	918.2	13819.3	2162.4	829.1	10950.3	5056.5	1747.3	24769.6
2016-17	840.1	1015.2	15465.9	577.8	878.5	11041.0	1417.9	1893.8	26506.9
Mean	2845.7	886.1	10977.7	2169.5	749.8	8821.3	5015.2	1635.9	19799.0
S.D.	894.3	65.3	3044.0	713.5	80.2	1966.6	1607.4	144.0	4977.7
CAGR(%)	-20.3	3.5	13.1	-21.6	5.0	10.7	-20.8	4.2	12.0

**Discussion:**

Table 5.1.1 shows the performance of Indian scheduled commercial bank groups' in terms of their labor productivity. The table reveals the trends in labor productivity from 2010-11 to 2016-17. Productivity indicators such as deposits, advances and business volume of bank groups are expressed as a ratio of total employees for each bank group. The average labor productivity of foreign bank group is much higher than that of public sector and private sector bank groups. Deposits per employee for PSBs have increased from 57.9 mn in 2010-11 to 94 mn in 2016-17, showing a jump of over 62%. During the same period, PvtSBs witnessed a growth rate of 19% in their deposits per employee ratio. FBs have shown a massive growth of 116.4% in their deposits to employee ratio, increasing from 86.7 mn in 2010-11 to 187.6 mn in 2016-17. The mean of deposits per employee is lowest for the PvtSBs at only 55.1 mn. The same is true for the CAGR.

FBs have registered the highest amount of advances made per employee, from 70.4 mn in 2010-11 to 133.9 mn in 2016-17. The average of advances per employee is highest for FBs at 112.4 mn, followed by PSBs (58 mn) and PvtSBs (46.7 mn) respectively. CAGR for the PvtSBs is very low at 4.4%, preceded by PSBs at 6.7% and FBs at 11.3%.

There has been a growth in total business per employee of 23.9% for PvtSBs, 56% for PSBs, and 104.6% for FBs, from 2010-11 to 2016-17. Overall, the FBs have done the highest amount of average business per employee amounting to 251.9 mn. The PSBs follow suit with business worth 135.2 mn and PvtSBs with 101.8 mn.

Table 5.1.2 shows the average branch productivity or productivity performance of bank groups with their deposits, advances and total business expressed as a ratio of bank offices. The average of deposits per office for the study period shows a huge gap between that of FBs on one side and domestic banks on the other. It stood at 10977.7 mn for FBs whereas 2845.7 mn for PSBs and 886.1 mn for PvtSBs. The mean of advances per office of FBs is nearly four times that of PSBs which amounts to 2169.5 mn. Total business per office for FBs is 19799 mn against 5015.2 mn for PSBs and 1635.9 mn for PvtSBs. The CAGR for PSBs is negative for all the three

branch or office productivity indicators.

**Profitability:**

Various profitability ratios have been measured to determine the profitability of public sector, private sector, and foreign bank groups for the period 2010-11 to 2016-17.

**Ratios Selected:**

The ratios selected for measuring the profitability of bank groups are:

- i. Return on Equity: Net Income as a ratio of Total Equity Capital
- ii. Return on Assets: Net Income as a ratio of Total Assets
- iii. Net Interest Margin: Net Interest (Interest Earned – Interest Expended) as a ratio of Total Assets
- iv. Profit/Loss Ratio: Profit/Loss as a ratio of Total Assets

**Results:**

**Table 5.2.1: Profitability Indicators of Bank Groups**

(in %)

Year	Return on Equity			Return on Assets			Net Interest Margin			Profit/Loss Ratio		
	PSBs	Pvt SBs	FBs	PSBs	Pvt SBs	FBs	PSBs	Pvt SBs	FBs	PSBs	Pvt SBs	FBs
2010-11	10.3	13.7	18.2	1.8	1.4	1.0	3.9	3.1	2.7	0.9	1.3	1.6
2011-12	10.8	15.3	15.1	1.8	1.5	0.9	3.9	3.1	2.6	0.6	1.3	1.6
2012-13	11.5	16.5	12.3	1.9	1.6	0.7	3.8	3.2	3.4	0.7	1.5	1.8
2013-14	9.0	16.2	7.8	1.5	1.7	0.5	3.5	3.3	2.3	0.5	1.5	1.4
2014-15	10.2	15.7	6.4	1.8	1.7	0.4	3.5	3.4	2.2	0.4	1.5	1.7
2015-16	-3.5	13.8	8.0	-0.1	1.5	1.5	2.2	3.4	3.6	-0.2	1.3	1.3
2016-17	-2.1	11.9	9.1	-0.1	1.3	1.6	2.1	3.4	3.1	-0.1	1.2	1.6
Mean	6.6	14.7	10.9	1.2	1.5	0.9	3.3	3.3	2.8	0.4	1.4	1.6
S.D.	6.5	1.7	4.4	0.9	0.1	0.5	0.8	0.1	0.6	0.4	0.1	0.2
CAGR (%)	-0.1*	-2.4	-10.9	1.3*	-1.6	7.9	-9.5	1.5	2.3	-15.5*	-1.3	0.3

\*For calculation of CAGR, 2014-15 is taken as the last year since the values are negative for 2015-16 and 2016-17.

**Discussion:**

The return on equity of FBs and PSBs has been falling over the analysis period. However, it is relatively increasing to stable for PvtSBs. The average of return on equity is the highest at 14.7% for PvtSBs, followed by FBs at 10.9% and then 6.6% for PSBs. PvtSBs also witness the highest average return on assets at 1.5%. The net interest margin average is 3.3% for both PSBs and PvtSBs but only 2.8% for FBs. Average profit ratio of FBs is four times that of PSBs. PvtSBs have arrived at a profit ratio of 1.4% on an average.

CAGR of return on equity is falling for all bank groups during the period under study, which coincides with the phase after financial crisis and the issue of rising NPAs. As compared to PSBs and PvtSBs, FBs show better CAGR for return on assets and net interest margin. The profit of FBs as a ratio of total assets grows at a CAGR of 0.3%. The competing bank groups witness a fall in their CAGR.

Private sector banks and foreign banks achieve higher profitability than public sector banks due to factors such as limited exposure to priority sector lending, broader client base in urban areas, optimum financial services, adoption of advanced technology, extremely competitive environment, government’s policies post-liberalization, and greater involvement in highly profitable activities.

**Liquidity:**

The liquidity status of bank groups has been evaluated on the basis of liquidity ratios computed for all the three bank groups for the seven years analysis period, 2010 - 2016.

**Ratios Selected:**

The ratios selected for measuring the liquidity position of the bank groups are:

- i. Liquid Asset Ratio: Liquid Assets expressed as a ratio of Total Assets



Here, for the purpose of the study, Liquid Assets has been calculated as sum of cash in hand, balance with RBI, balance with banks in India, money at call and short notice, and balance with banks outside India; for each bank group.

- ii. Liquid Asset - Deposit Ratio: Liquid Assets expressed as a ratio of Total Deposits
- iii. Current Ratio: Current Assets expressed as a ratio of Current Liabilities

Here, Current Assets are same as Liquid Assets. Current Liabilities have been computed as sum of bills payable, inter-office adjustments, interest accrued, subordinate debt, deferred tax liabilities and others including provisions; for each bank group.

**Results:**

**Table 5.3.1: Liquidity Position of Bank Groups**

Year	Liquid Asset Ratio (%)			Liquid Asset - Deposit Ratio (%)			Current Ratio		
	PSBs	PvtSBs	FBs	PSBs	PvtSBs	FBs	PSBs	PvtSBs	FBs
2010-11	9.0	8.4	9.7	10.9	11.7	19.8	2.0	1.7	0.6
2011-12	7.6	6.3	9.2	9.1	9.1	19.6	2.1	1.1	0.6
2012-13	7.5	6.6	8.8	9.1	9.5	19.4	2.1	1.3	0.6
2013-14	8.1	7.2	8.9	9.9	10.2	18.9	2.3	1.4	0.5
2014-15	8.4	6.7	10.9	10.2	9.5	20.3	2.2	1.5	0.8
2015-16	8.8	6.3	9.8	10.8	9.2	17.4	2.3	1.5	0.9
2016-17	10.4	8.0	14.0	12.6	11.2	24.4	2.9	1.7	0.9
Mean	8.6	7.1	10.2	10.4	10.1	20.0	2.3	1.4	0.7
S.D.	1.0	0.8	1.8	1.2	1.0	2.1	0.3	0.2	0.2
CAGR(%) (%)	2.4	-0.8	6.3	2.4	-0.7	3.5	5.8	0.2	6.2

**Discussion:**

Table 5.3.1 demonstrates the liquidity situation of the chosen commercial bank groups. The liquid asset ratio of FBs has risen by nearly 44% from 9.7% in 2010-11 to 14% in 2016-17. FBs have a higher share of liquid assets or demand deposits in total deposits. Each of the three bank groups have held on an average 7% to 10% of their total assets in the form of liquid assets. Of the total deposits, those held as liquid assets is 10.4% for PSBs, 10.1% for PvtSBs and 20% for FBs, for the entire period under study. The CAGR for liquid asset ratio as well as liquid asset to deposit ratio has been declining for the PvtSBs.

The average current ratio is 2.3 for the PSBs. Therefore, the ratio of current assets to current liabilities for PSBs is greater than 2, indicating preference for prudent safety margin by government banks. In case of PvtSBs, the current ratio is 1.4 for the entire analysis period. The past current ratios for this bank group show similar trends. PvtSBs do not seem to maintain the standard of 2:1 for current ratio. Only FBs have an average current ratio of  $0.7 < 1$ , in which case liquid assets may not be adequate for FBs to meet their immediate liabilities. Possibly, it is a case of over lending which may pose serious threat to their liquidity position. Probably, FBs have larger number of urban elite long-term depositors.

**CONCLUSIONS AND OBSERVATIONS:**

- i. Labor productivity for FBs is the highest followed by PSBs and PvtSBs. Foreign banks have witnessed substantial jump in deposits per employee, advances per employee, as well as the total business generated per employee between 2010-11 to 2016-17.
- ii. The productivity performance per branch or office of bank groups reveals a similar picture. In fact, per branch productivity of FBs is outstanding. All the three indicators of productivity show that FBs have far surpassed their competitors, with total business per office amounting to 19799 mn, over the period of study.
- iii. The profitability indicators of bank groups point towards a better performance by PvtSBs as compared to its competitors. PvtSBs have outperformed the PSBs and FBs in terms of return on equity, return on assets and net interest margin, over the analysis period. However, when it comes to average profits as a ratio of total assets, it is the FBs that achieve the highest at 1.6%.
- iv. The measures of liquidity position of bank groups reveal that PSBs have a current ratio of 2.3, followed by 1.4 for PvtSBs and 0.7 for FBs. PSBs are following prudential norms and set standard policies, sufficing to the requirement of 2:1 for current ratio.

- v. Although FBs show high ratio of liquid assets to total assets as well as to deposits, their current ratio (0.7 average) is skewed. They are holding lesser proportion of liquid assets in relation to their current liabilities, indicating over lending and poor safety margin standards followed by FBs. On the other hand, FBs have a large customer base, efficient working and operations, and impressive customer service. Their presence is largely prominent over the urban landscape with creditors from industry and elite backgrounds. They work on the model of lost cost to income ratio. With relatively low operating costs, they are able to manage high profits.
- vi. The performance analysis of Indian bank groups reveals that at the productivity front, the foreign banks have been leading the industry. In terms of the profitability indicators, private sector banks as well as foreign banks have shown outstanding performance. The status of liquidity of bank groups shows that foreign banks hold high quantum of liquid assets to total assets and to total deposits, yet their current ratio is poor indicating non-compliance of standard prudential measures.
- vii. It is interesting to note that foreign banks have higher proportion of liquid assets in comparison to other bank groups, but they also bear a higher burden of current liabilities. They need to adopt policy measures wherein they either enhance their volume of current assets or try to reduce their current liabilities for long-run sustainability.

## REFERENCES:

- Ahluwalia, M. S. (2002). Economic Reforms in India since 1991: Has Gradualism Worked?. *Journal of Economic Perspectives*, Vol.16 (3), 67-88.
- Azhagaiah, R., and Gejalakshmi, S. (2012). Financial Performance of Private Sector and Public Sector Banks in India: An Empirical Analysis. *International Center for Business Research*, Vol. 1, December, 19-29.
- Das, A., Nag, A., and Ray, S. C. (2004). Liberalization, Ownership, and Efficiency in Indian Banking: A Nonparametric Approach. *Economics Working Papers, University of Connecticut*. [http://digitalcommons.uconn.edu/econ\\_wpapers/200429](http://digitalcommons.uconn.edu/econ_wpapers/200429)
- Makkar, S., and Singh, A. (2012). Productivity and Profitability of Banking Industry: A Case Study of Selected Commercial Banks in India. *Journal of Business Thought*, Vol. 2 (1).
- Narwal, K. P., and Pathneja, S. (2015). Determinants of Productivity and Profitability of Indian Banking Sector: A Comparative Study. *Eurasian Journal of Business and Economics*, Vol. 8 (16), 35-58.
- Ram Mohan, T. T. (2002). Deregulation and Performance of Public Sector Banks. *Economic and Political Weekly*, Vol. 37 (5), February 2, 393-397.
- Rani, D. S., Kumar, P. V., and Rao, K. R. M. (2013). Studies on Growth and Performance of Indian Commercial Banks during Global Economic Recession. *IJCEM International Journal of Computational Engineering & Management*, Vol. 16, Issue 6, November.
- Rao, K. S. (2013). Productivity, Cost and Profitability Performance of Scheduled Commercial Banks in India- A Comparative Evaluation. *Abhinav International Monthly Refreed Journal of Research in Management & Technology*, Vol. II, March.
- Sarkar, J., Sarkar, S., and Bhaumik, S. K. (1998). Does Ownership Always Matter? Evidence from the Indian Banking Industry. *Journal of Comparative Economics*, Vol. 26, 262-281.
- Shanmugam, K. R., and Das, A. (2004). Efficiency of Indian Commercial Banks during the Reform Period. *Applied Economics*, Vol. 14, 681-686.
- Singla, H. K. (2008). Financial Performance of Banks in India. *ICFAI Journal of Bank Management*, Vol. 7 (1), 50-62.
- Taqi, M., and Mustafa, S. M. (2018). Financial Analysis of Public and Private Sector Banks of India: A Comparative Study of Punjab National Bank and HDFC Bank. *International Academic Journal of Business Management*, Vol. 5, No. 1, 26-47.
- Tripathi, D., Meghani, K., and Mahajan, S. (2014). Financial Performance of Axis Bank and Kotak Mahindra Bank in the Post Reform Era: Analysis on Camel Model. *International Journal of Business Quantitative Economics and Applied Management Research*, Vol. 1, Issue 2, July, 108-141.
- Vadrane, K. S., and Katti, V. P. (2018). Profitability Position of Commercial Banks in India - A Comparative Study. *International Journal on Arts, Management and Humanities*, Vol. 7 (1), 10-16.
- Yadav, S., and Garima. (2015). Employees Productivity in Indian Banks: A Comparative Analysis. *Pacific Business Review International*, Vol. 8, November