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## Financial Performance of Andhra Bank, SBI, ICICI and HDFC Bank: A Comparative Study

**V.Rama Krishna Rao Chepuri, Dr. Krishna Banana**

### Abstract

In an economy Banks, Insurance organisations, Development banks and other financial organisations plays a very important role in mobilization and distribution of funds. The growth of the economy is based on systematic functioning of these financial intermediaries. Bank is the major component in the economy, which offers different varieties of services to the needs of the customers. Traditional Banks play a limited role of mobilization and utilization of funds in an economy. The scope of modern banks are not limited to primary banking operations and extended to fund and fee based services. Performance evaluation of the banking sector is an effective measure and indicator to check the reliability of economic activities of an economy. The present study focuses on the comparative evaluation of the selected banks from public sector (SBI, Andhra Bank) and private sector (ICICI, HDFC) banks. The study adopts an analytical research with data for a period of 10 years i.e., 2007-08 to 2016-17. T-value and one way ANOVA was adopted to study the association between banks. Ten ratios are selected for the study and made an analytical and comparative study. The study revealed that the HDFC bank performed well during the study period, Andhra bank presented a decline in many variables of performance and there is no significant relation between public sector banks.

**Keywords:** Financial system, Intermediary, ratio and one way ANOVA

### Introduction

The banking industry plays a prominent role in the development of an economy. It supplies the funds that supports and enhances growth in all the industries. Growth of the banking sector is measured by the increase in the number of branches, deposits, credit, etc. Analysis of banking sector helps to study the direction in which the country's economy is moving. In 2017, SBI and its associates merged into one. At present 1 SBI, 19 Nationalized Banks, IDBI Bank, 26 Private Banks, 43 Private Foreign Banks, 31 State Co-operative Banks and 56 Regional Rural Banks are in commercial banking business. State Bank of India (SBI) and ICICI Bank are the two largest banks in India in public and private sector. HDFC is the most successful bank and Andhra bank performing worst from couple of years. Two largest banks from public and private sector, one successful and one worst performing bank were selected for comparative study.

### Statement of the problem

Performance and efficiency of commercial banks are the key elements of efficiency and efficacy of national financial system. The broad objective of the banking sector reforms in India has been to increase efficiency and profitability of the banks. Prior to banking reforms, the industry was a near monopoly dominated by public sector banks. However, the banking reforms created an opportunity to increase number of private and foreign banks in the market.

Operational efficiency is an indicator, which will help not only the public but to the management, regulators, and supervisors to understand and judge the relative efficiency of the players competing in the banking sector. Therefore, this study attempts to apply different ratios on SBI, Andhra Bank, HDFC Bank and ICICI Bank in order to compare their efficiency and solvency position.

### Objectives

1. To study the trend & status of financial position of selected banks
2. To study the differences between selected banks

### Research Methodology

**Research Design:** Descriptive Research Design is used for the study and it is essentially a fact finding approach. It aims to explain the characteristics of an individual or group characteristics and to determine the frequency with the same things occurs.

**Sample Design:** Deliberate sampling technique is used for the study. This sampling method involves purposive or deliberate selection of particular units of the banking industry for constituting a sample that represents the population.

**Selection of the Sample Units:** Banking sector in India is considered one of the fastest growing financial institutions in the world. Using purposive sample, State Bank of India, Andhra Bank, HDFC bank and ICICI Bank were selected as the sample units for the study. The sample units selected were considered one of the successful units in the banking sector.

**Data Collection:** The data were collected through annual report from sources that are secondary in nature such as internet, magazines, websites, books, and journals.

**Period of study:** This study covers a period of ten years, i.e., from 2007-08 to 2016-17

**Tools Applied:** The data collected were moderated for the study. The major tools applied for the analysis of the data are ratios, percentages, growth rate, t-test and one-way ANOVA.

### Financial Performance of Banks during 2007-08 to 2016-17

Bench marking is a technique of evaluating the

performance of an entity with reference to a widely accepted standard. An attempt is made here to benchmark four Indian Scheduled commercial banks, against generally accepted International Standards, as per their financial performance during 2007-08 to 2016-17. The following indicators have been selected to assess the performance of the four selected banks during the study period.

1. Capital adequacy ratio
2. Debt equity ratio
3. Coverage ratio
4. Performing assets ratio
5. Business per employee
6. Profit per employee
7. Credit deposit ratio
8. Return on Assets.
9. Income spread to total assets
10. Return on equity

### Capital Adequacy Ratio

A bank's capital ratio is the ratio of qualifying capital to risk adjusted (or weighted) assets. The RBI has set the minimum capital adequacy ratio at 9% for all banks. A ratio below the minimum indicates that the bank is not adequately capitalized to expand its operations. The ratio ensures that the bank do not expand their business without having adequate capital.

$$CAR = \frac{\text{Tier I capital} + \text{Tier II Capital}}{\text{Risk Weighted Assets}} * 100$$

Tier I Capital funds include paid-up equity capital, statutory and capital reserves, and perpetual debt instruments eligible for inclusion in Tier I capital. Tier II capital is the secondary bank capital which includes items such as undisclosed reserves, general loss reserves, subordinated term debt, amongst others.

**Table. 1:** Selected bank wise analysis of Capital Adequacy Ratio during 2007-08 to 2016-17 (In %)

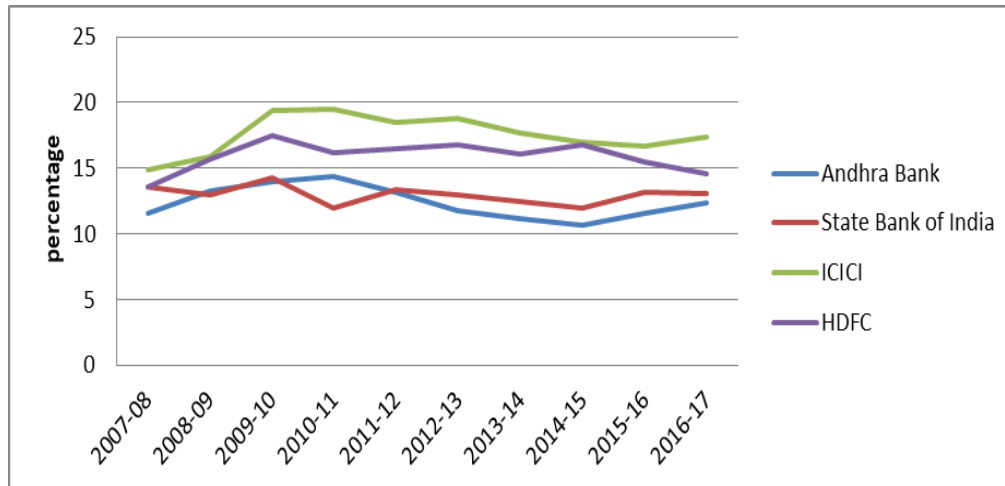
Year	Banks covered in the study			
	Andhra Bank	State Bank of India	ICICI	HDFC
2007-08	11.61	13.54	14.92	13.6
2008-09	13.22 (13.87)	12.97 (-4.21)	15.92 (6.70)	15.69 (15.37)
2009-10	13.93 (5.37)	14.25 (9.87)	19.41 (21.92)	17.44 (11.15)
2010-11	14.38 (3.23)	12.00 (-15.79)	19.54 (0.67)	16.22 (-7.00)
2011-12	13.18 (-8.34)	13.39 (11.58)	18.52 (-5.22)	16.52 (1.85)
2012-13	11.76 (-10.77)	12.92 (-3.51)	18.74 (1.19)	16.80 (1.69)
2013-14	11.18 (-4.93)	12.44 (-3.72)	17.70 (-5.55)	16.07 (-4.35)
2014-15	10.63 (-4.92)	12.00 (-3.54)	17.02 (-3.84)	16.8 (4.54)
2015-16	11.58 (8.94)	13.12 (9.33)	16.64 (-2.23)	15.5 (-7.74)
2016-17	12.38 (6.91)	13.11 (-0.08)	17.39 (4.51)	14.6 (-5.81)
CAGR	0.64%	-0.02%	1.54%	0.71%
t value	1.3093		2.7692	
F value	43.1674			

\* Value significant at 5% level.

Source: Annual Reports of the selected banks.

Note: Figures in brackets show the Annual Growth Rates

Note: Ratios are calculated based on data



Graph 1: Capital Adequacy ratio of selected banks

### Interpretation

Capital plays an important role in the management of liquidity in an organization. The data in the above table revealed that the maintenance of capital is unswerving throughout the study period. The compound annual growth rate of Andhra Bank is 0.64%, State Bank of India presented a negative growth rate of -1.02%, ICICI Bank is 1.54% and HDFC Bank is 0.71%. The banks are maintaining the minimum capital requirement according to the policy of regulatory. The standard deviation of the ICICI Bank stood at a high level of 1.54 and the State Bank of India stood with 0.69 at the least position within the banks under study.

The measure of differences between Andhra Bank and State Bank of India i.e. t value (-1.3092) presented that there is no statistically significant difference between the banks. There is no difference between the changes in capital position of the two public sector banks. The t value

(2.7692) between the two private sector banks i.e. ICICI Bank and HDFC Bank presented a statistically significant difference. There is a difference between the banks in changes in capital position of the two private sector banks. But the comparison between the means of the four banks through one-way ANOVA identified that there is a statistically significant difference.

### Debt – Equity Ratio

The relationship between borrowed funds and owned funds is a popular measure of the long term financial solvency of a firm. This relationship is shown by the debt equity ratios. This ratio reflects the relative claims of creditors and shareholders against the assets of the firm.

$$\text{Debt Equity Ratio} = \frac{\text{Total Debt}}{\text{shareholders Equity}}$$

Total Debt = Deposits + Borrowings + Other Liabilities  
Shareholders Equity = Capital + Reserves & Surplus

Table 2: Selected bank wise analysis of Debt Equity Ratio during 2007-08 to 2016-17 (No. of times)

Year	Andhra Bank	State Bank of India	ICICI	HDFC
2007-08	16.41	13.72	7.60	10.58
2008-09	17.77 (8.29)	15.64 (13.99)	6.66 (-12.37)	11.48 (8.51)
2009-10	19.48 (9.62)	14.97 (-4.28)	6.04 (-9.31)	9.34 (-18.64)
2010-11	15.77 (-19.05)	17.83 (19.10)	6.37 (5.46)	9.93 (6.32)
2011-12	16.33 (3.55)	14.91 (-16.38)	7.10 (11.46)	10.22 (2.92)
2012-13	13.86 (-15.13)	14.84 (-0.47)	7.05 (-0.70)	10.06 (-1.57)
2013-14	18.15 (30.95)	14.16 (-4.58)	7.12 (0.99)	10.36 (2.98)
2014-15	17.39 (-4.19)	14.95 (5.58)	7.03 (-1.26)	8.52 (-17.76)
2015-16	17.18 (-1.21)	15.34 (2.61)	7.03 (0.00)	8.75 (2.70)
2016-17	18.54 (7.92)	13.37 (-12.84)	6.72 (-4.41)	8.66 (-1.03)
CAGR	1.23%	-0.26%	-1.22%	-1.98%
t value	3.3312		-8.7567	
F value	170.5796			

\* Value significant at 5% level.

Source: Annual Reports of the selected banks.

Note: Figures in brackets show the Annual Growth Rates

Note: Ratio's are calculated based on data

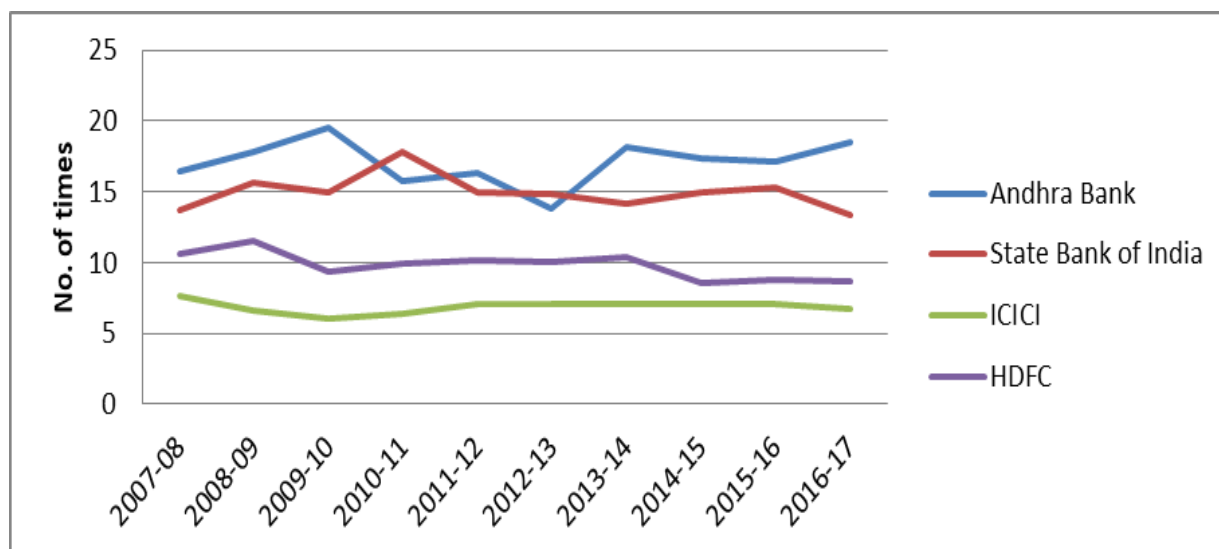


Chart 2: Trends in Debt Equity Ratio

**Interpretation:**

Andhra Bank presented a positive growth rate in debt with 1.23% and the other three banks presented a negative compound growth rate, which indicates a decrease in the portion of debt.

The measure of differences between Andhra Bank and State Bank of India i.e. t value (3.3312) presented that there is a statistically significant difference between the banks. There is a difference between the changes in debt portion of the two public sector banks. The t value (-8.7567) between the two private sector banks i.e. ICICI Bank and HDFC Bank presented a statistically significant difference. There is a difference between the banks in changes in debt

position of the two private sector banks. The study of differences between the means of the four banks through one-way ANOVA (f value – 170.5796) identified that there is a statistically significant difference.

**COVERAGE RATIO**

Coverage ratio is a measure of owner’s contribution to total assets. It is useful to measure to study the relationship between the owners’ equity and total assets.

$$\text{Coverage ratio} = \frac{\text{Net Worth} - \text{Net NPA}}{\text{Total Assets}} * 100$$

Table. 3: Selected bank wise analysis of Coverage Ratio during 2007-08 to 2016-17 (in %)

Year	Andhra Bank	State Bank of India	ICICI	HDFC
2007-08	5.65	5.76	10.73	8.46
2008-09	5.21 (-7.79)	5.00 (-13.19)	11.84 (10.34)	7.90 (-6.62)
2009-10	4.78 (-8.25)	5.22 (4.40)	13.13 (10.90)	9.55 (20.89)
2010-11	5.71 (19.46)	4.31 (-17.43)	12.96 (-1.29)	9.14 (-4.29)
2011-12	5.41 (-5.25)	5.10 (18.33)	11.96 (-7.72)	8.80 (-3.72)
2012-13	4.02 (-25.69)	4.91 (-3.73)	12.01 (0.42)	8.92 (1.36)
2013-14	3.20 (-20.40)	4.86 (-1.02)	11.76 (-2.08)	8.63 (-3.25)
2014-15	3.08 (-3.75)	4.92 (1.23)	11.47 (-2.47)	10.28 (19.12)
2015-16	2.18 (-29.22)	3.75 (-23.78)	10.61 (-7.50)	9.63 (-6.32)
2016-17	0.06 (-97.25)	4.80 (28.00)	9.65 (-9.05)	10.14 (5.30)
CAGR	-36.52%	-1.81%	-1.06%	1.83%
t value	0.0690		5.9915	
F value	98.5671			

\* Value significant at 5% level.  
Source: Annual Reports of the selected banks.

Note: Figures in brackets show the Annual Growth Rates

Note: Ratio's are calculated based on data

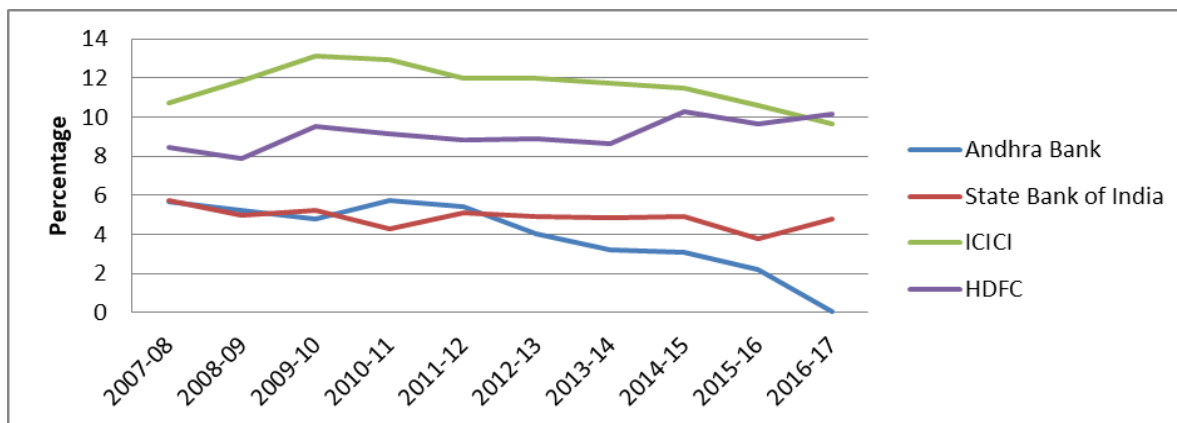


Chart 3: Trends in Coverage ratio of Selected Banks

**Interpretation:** The study clearly revealed that the private sector banks stood at top among the four banks under study. The public sector banks are with low coverage ratio throughout the study period. The Andhra Bank is showing a continuous decline position. The State Bank of India presented consistency in the movement of coverage ratio. The ICICI Bank stood at the top with highest coverage ratio. The ratio in the current period 2016-17 is high in ICICI Bank with 10.14% and least in the case of Andhra bank with only 0.06%.

The measure of differences between Andhra Bank and State Bank of India i.e. t value (0.0690) presented that there is no statistically significant difference between the banks. There is no difference between the changes in coverage ratio of the two public sector banks. The t value (5.9915) between the two private sector banks i.e. ICICI Bank and

HDFC Bank presented a statistically significant difference. There is a difference between the banks in changes in coverage ratio of the two private sector banks. The study of differences between the means of the four banks through one-way ANOVA (f value 98.5671) identified that there is a statistically significant difference.

**Performing Assets Ratio**

Performing assets ratio is a measure of standard assets to total assets of the bank. It is useful to know the proportion of standard assets available within the bank. Higher the ratio, higher is the performance and lower the ratio, lower will be the performance.

$$\text{Performing Assets Ratio} = \frac{\text{Standard Assets}}{\text{Total Assets}} * 100$$

Table. 4: Selected bank wise analysis of Performing Assets Ratio during 2007-08 to 2016-17 (in %)

Year	Andhra Bank	State Bank of India	ICICI	HDFC
2007-08	98.92	96.92	96.64	98.57
2008-09	99.17 (0.25)	97.10 (0.19)	95.51 (-1.17)	97.99 (-0.59)
2009-10	99.14 (-0.03)	96.91 (-0.20)	94.69 (-0.86)	98.56 (0.58)
2010-11	98.62 (-0.52)	96.65 (-0.27)	95.33 (0.68)	98.94 (0.39)
2011-12	97.88 (-0.75)	95.43 (-1.26)	96.23 (0.94)	98.99 (0.05)
2012-13	96.29 (-1.62)	95.10 (-0.35)	96.68 (0.47)	99.04 (0.05)
2013-14	94.71 (-1.64)	94.91 (-0.20)	96.88 (0.21)	99.02 (-0.02)
2014-15	94.69 (-0.02)	95.64 (0.77)	96.07 (-0.84)	99.01 (-0.01)
2015-16	91.62 (-3.24)	93.29 (-2.46)	93.86 (-2.30)	99.05 (0.04)
2016-17	87.75 (-4.22)	92.85 (-0.47)	90.83 (-3.23)	98.94 (-0.11)
CAGR	-1.19%	-0.43%	-0.62%	0.04%
t value	0.3803		-6.0134	
F value	5.4376			

\* Value significant at 5% level.  
Source: Annual Reports of the selected banks.

Note: Figures in brackets show the Annual Growth Rates

Note: Ratio's are calculated based on data

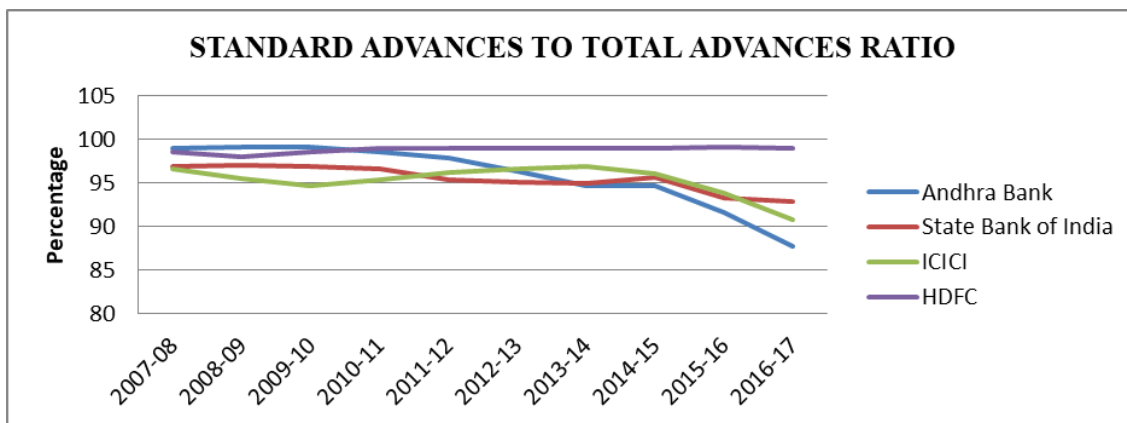


Chart 4: Performing Ratio for Selected Banks

**Interpretation:**

The study observes that Andhra Bank, State Bank of India and ICICI Bank presented a negative growth rate. The Andhra Bank represented a negative compound growth rate of 1.19%, State Bank of India presented a negative compound growth rate of 0.43% and ICICI bank presented a negative growth rate of 0.62%. The HDFC Bank is maintaining a consistence in the standard assets and presented a positive compound annual growth rate of 0.04%. The measure of differences between Andhra Bank and State Bank of India i.e. t value (0.3093) presented that there is no statistically significant difference between the banks. There is no difference between the changes in proportion standard advances to total advance of the two public sector banks. The t value (-6.0134) between the two private sector banks i.e. ICICI Bank and HDFC Bank

presented a statistically significant difference. There is a difference between the banks in changes in proportion of standard advances to total advances of the two private sector banks. The study of differences between the means of the four banks through one-way ANOVA (f value 5.4376) identified that there is a statistically significant difference.

**Business Per Employee**

The efficiency of management is measured through different variable and ratios. Business per employee is one of the very important variables to be considered to measure the productivity and efficiency of the employees.

$$\text{Business per employee} = \frac{\text{Deposits} + \text{Advances}}{\text{No. of employees}}$$

Table. 5: Selected bank wise analysis of Business per Employee during 2007-08 to 2016-17

Year	Rs. In lakhs			
	Andhra Bank	State Bank of India	ICICI	HDFC
2007-08	540.23	456	1008	506
2008-09	625.78 (15.84)	556 (21.93)	1154 (14.48)	446 (-11.86)
2009-10	769.32 (22.94)	636 (14.39)	765 (-33.71)	590 (32.29)
2010-11	959.45 (24.71)	704 (10.69)	735 (-3.92)	653 (10.68)
2011-12	1153.88 (20.26)	798 (13.35)	708 (-3.67)	654 (0.15)
2012-13	1222.40 (5.94)	944 (18.30)	735 (3.81)	750 (14.68)
2013-14	1223.35 (0.08)	1064 (12.71)	747 (1.63)	890 (18.67)
2014-15	1367.40 (11.78)	1234 (15.98)	832 (11.38)	1010 (13.48)
2015-16	1511.58 (10.54)	1411 (14.34)	943 (13.34)	1139 (12.77)
2016-17	1661.44 (9.91)	1624 (15.10)	989 (4.88)	1236 (8.52)
CAGR	11.89%	13.54%	-0.19%	9.34%
t value	0.9463		0.7565	
F value	1.9096			

\* Value significant at 5% level.  
Source: Annual Reports of the selected banks.

Note: Figures in brackets show the Annual Growth Rates

Note: Ratio's are calculated based on data



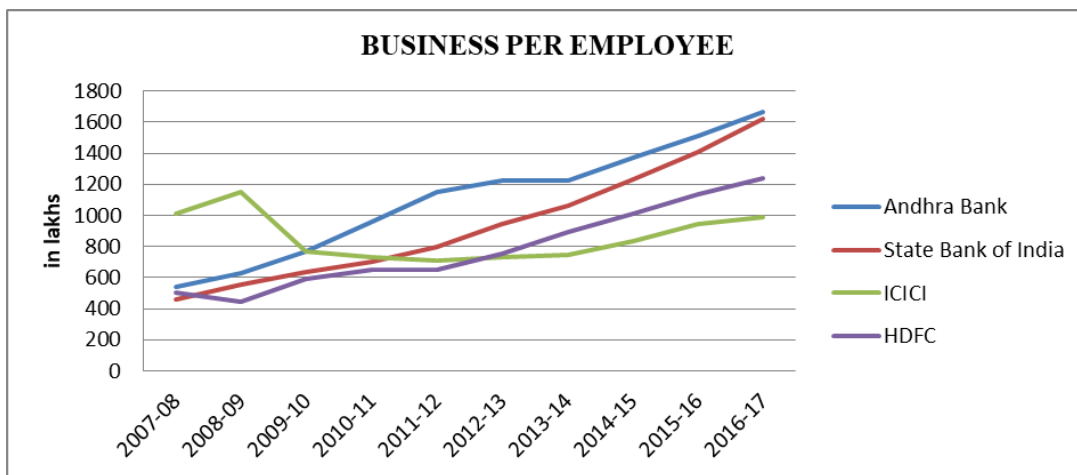


Chart 5: Business per employee of selected Banks

**Interpretation:**

The business (deposits plus credit) per employee increased from 540.23 (2007-08) lakhs to 1661.44 lakhs (2016-17) in Andhra Bank, increased from 456 lakhs (2007-08) to 1624 lakhs (2016-17) in State Bank of India, increased from 506 lakhs (2007-08) to 1236 lakhs (2016-17) in HDFC Bank. The ICICI Bank depicted a downtrend in the productivity which is decreased from 1008 lakhs (2007-08) to 989 lakhs (2016-17). The rise in business per employee was observed in major banks.

The measure of differences between Andhra Bank and State Bank of India i.e. t value (0.9463) presented that there is no statistically significant difference between the banks. The t value (0.7565) between the two private sector banks i.e. ICICI Bank and HDFC Bank presented that there is no

statistically significant difference. The study of differences between the means of the four banks through one-way ANOVA (f value 1.9096) identified that there is no statistically significant difference. The four banks under study are presented no difference in business per employee.

**Profit per Employee (in lakhs)**

Profit per employee is a measure of studying the average profit after taxes gained by the employees of the bank. Profit per employee is a ratio of profit after taxes to total number of employees.

$$\text{Profit per employee} = \frac{\text{Profit after Taxes}}{\text{Total Number of Employees}}$$

Table. 6: Selected bank wise analysis of Profit per Employee during 2007-08 to 2016-17

Year	Rs. In Lakhs			
	Andhra Bank	State Bank of India	ICICI	HDFC
2007-08	4.30	3.73	10	4.97
2008-09	4.58 (6.51)	4.74 (27.08)	11 (10.00)	4.18 (-15.90)
2009-10	7.32 (59.83)	4.46 (-5.91)	9 (-18.18)	5.98 (43.06)
2010-11	8.99 (23.81)	3.85 (-13.68)	10 (11.11)	7.37 (23.24)
2011-12	8.91 (-0.89)	5.31 (37.92)	11 (10.00)	8.00 (8.55)
2012-13	7.80 (-12.46)	6.45 (21.47)	14 (27.27)	10.00 (25.00)
2013-14	2.33 (-70.13)	4.85 (-24.81)	14 (0.00)	12.00 (20.00)
2014-15	3.45 (48.07)	6.02 (24.12)	16 (14.29)	10.00 (-16.67)
2015-16	2.89 (-16.23)	4.70 (-21.93)	14 (-12.50)	15.00 (50.00)
2016-17	0.90 (-68.86)	5.11 (8.72)	12 (-14.29)	16.00 (6.67)
CAGR	-14.48%	3.20%	1.84%	12.40%
t value	0.2353		1.8734	
F value	15.7228			

\* Value significant at 5% level.  
Source: Annual Reports of the selected banks.

Note: Figures in brackets show the Annual Growth Rates

Note: Ratio's are calculated based on data

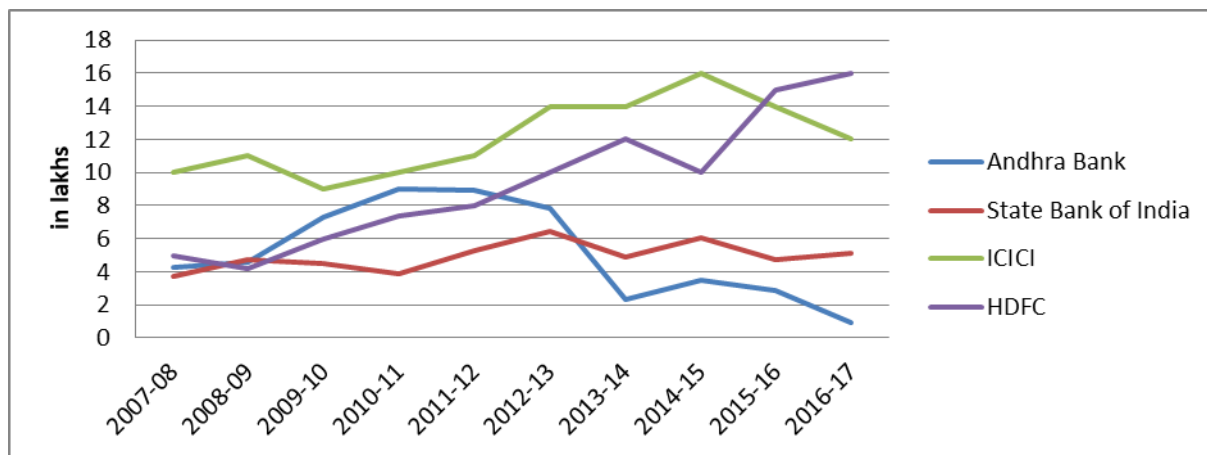


Chart 6: Profit per Employee of Selected Banks

**Interpretation**

The statistics identifies a different result in the four banks. In case of Andhra Bank it was increased for four years and later it started decreasing drastically in between 2011-12 to 2013-14. The State Bank of India presented a compound annual growth rate of 3.2%. The changes in number represented a simple wave with two turnings in the study period. The ICICI bank presented a growth rate up to 2014-15 and started decreasing in the last two years. The HDFC is the only one which is presented a positive growth rate. The amount of profit per employee is abnormally decreased from 4.3 lakhs to 0.9 lakhs.

The measure of differences between Andhra Bank and State Bank of India i.e. t value (0.2353) presented that there is no statistically significant difference between the banks. There is no difference between the changes in profit per employee of the two public sector banks. The t value (1.8734) between the two private sector banks i.e. ICICI

Bank and HDFC Bank presented that there is a statistically significant difference. There is a difference between the banks in changes in profit per employee of the two private sector banks. The comparison four banks under study are presented a difference in profit per employee.

**Credit Deposit Ratio**

The loan-to-deposit ratio (LTD) is a commonly used statistic for assessing a bank's liquidity by dividing the bank's total loans by its total deposits. This number is expressed as a percentage. If the ratio is too high, it means that the bank may not have enough liquidity to cover any unforeseen fund requirements, and conversely, if the ratio is too low, the bank may not be earning as much as it could be.

$$\text{Credit deposit ratio} = \frac{\text{Total Advances}}{\text{Total Deposits}} * 100$$

Table. 7: Selected bank wise analysis of Credit Deposit Ratio during 2007-08 to 2016-17 (in %)

Year	Andhra Bank	State Bank of India	ICICI	HDFC
2007-08	70.41	77.55	108.34	62.94
2008-09	74.68 (6.06)	73.11 (-5.73)	100.02 (-7.68)	69.24 (10.01)
2009-10	73.02 (-2.22)	78.58 (7.48)	111.48 (11.46)	75.17 (8.56)
2010-11	78.29 (7.22)	81.02 (3.11)	104.27 (-6.47)	77.11 (2.58)
2011-12	80.12 (2.34)	83.13 (2.60)	100.70 (-3.42)	80.60 (4.53)
2012-13	80.88 (0.95)	86.94 (4.58)	100.82 (0.12)	83.46 (3.55)
2013-14	78.06 (-3.49)	86.76 (-0.21)	98.00 (-2.80)	85.87 (2.89)
2014-15	83.54 (7.02)	82.45 (-4.97)	93.30 (-4.80)	81.08 (-5.58)
2015-16	82.75 (-0.95)	84.57 (2.57)	96.82 (3.77)	85.02 (4.86)
2016-17	69.78 (-15.67)	76.83 (-9.15)	105.56 (9.03)	86.16 (1.34)
CAGR	-0.09%	-0.09%	-0.26%	3.19%
t value	-1.8575		7.7786	
F value	39.9868			

\* Value significant at 5% level.  
Source: Annual Reports of the selected banks.

Note: Figures in brackets show the Annual Growth Rates

Note: Ratio's are calculated based on data



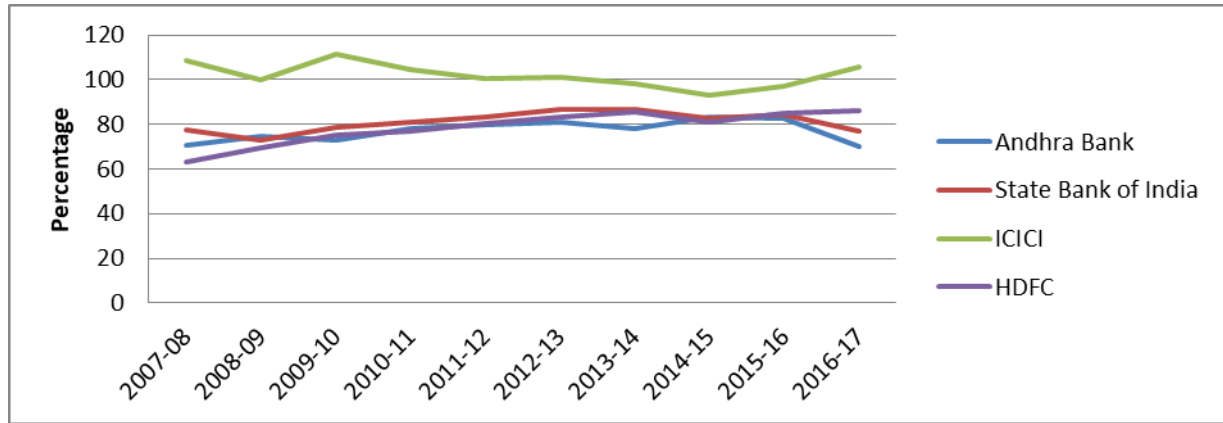


Chart 7: Credit Deposit Ratio of Selected Banks

**Interpretation**

Credit Deposit Ratio plays a significant role in the operations of the banking business. It is the ratio of total advances to total deposits. The higher the C-D ratio the greater is said to be the lending performance of a banking institution. The banks should try to turn deposits into loans for improving the return. The C-D ratio of the selected banks was in between 65% to 110% from 2007-08 to 2016-17. The lowest C-D ratio of Andhra Bank is 69.78 in the year 2016-17 and the highest ratio is 83.54 in the year 2014-15. In case of ICICI bank, in most of the years the bank is able to sanction more loans than the deposit amount. It has highest ratio of 111.48 in the year 2009-10 and lowest ratio of 93.30 in the year 2014-15. ICICI bank has negative growth rate of -0.09% in the study period. The

t-value identified that there is a difference between the changes in credit deposit ratio of the two public sector banks. The t value (7.7786) between the two private sector banks identified that there is a difference between the banks in changes in credit deposit ratio of the two private sector banks. The comparison four banks under study are presented a difference in credit deposit ratio.

**Return on assets (ROA):** Returns on asset ratio is the net income (profits) generated by the bank on its total assets (including fixed assets). The higher the proportion of average earnings assets, the better would be the resulting returns on total assets. Similarly, ROE (returns on equity) indicates returns earned by the bank on its total net worth.

$$ROA = \frac{Net\ Profit}{Average\ Total\ Assets} * 100$$

Table 8: Selected bank wise analysis of Return on Assets Ratio during 2007-08 to 2016-17 (in %)

Year	Andhra Bank	State Bank of India	ICICI	HDFC
2007-08	1.16	1.01	1.12	1.32
2008-09	1.09 (-6.03)	1.04 (2.97)	0.98 (-12.50)	1.28 (-3.03)
2009-10	1.39 (27.52)	0.88 (-15.58)	1.13 (15.31)	1.53 (19.53)
2010-11	1.36 (-2.16)	0.71 (-19.32)	1.35 (19.47)	1.58 (3.27)
2011-12	1.19 (-12.50)	0.88 (23.94)	1.50 (11.11)	1.77 (12.03)
2012-13	0.99 (-16.81)	0.97 (10.23)	1.70 (13.33)	1.90 (7.34)
2013-14	0.29 (-70.71)	0.65 (-32.99)	1.78 (4.71)	2.00 (5.26)
2014-15	0.38 (31.03)	0.68 (4.62)	1.86 (4.49)	2.02 (1.00)
2015-16	0.28 (-26.32)	0.46 (-32.35)	1.49 (-19.89)	1.89 (-6.44)
2016-17	0.08 (-71.43)	0.41 (-10.87)	1.35 (-9.40)	1.88 (-0.53)
CAGR	-23.46%	-8.62	1.89%	3.60%
t value	0.2985		-2.2870	
F value	18.5283			

\* Value significant at 5% level.  
Source: Annual Reports of the selected banks.

Note: Figures in brackets show the Annual Growth Rates

Note: Ratio's are calculated based on data

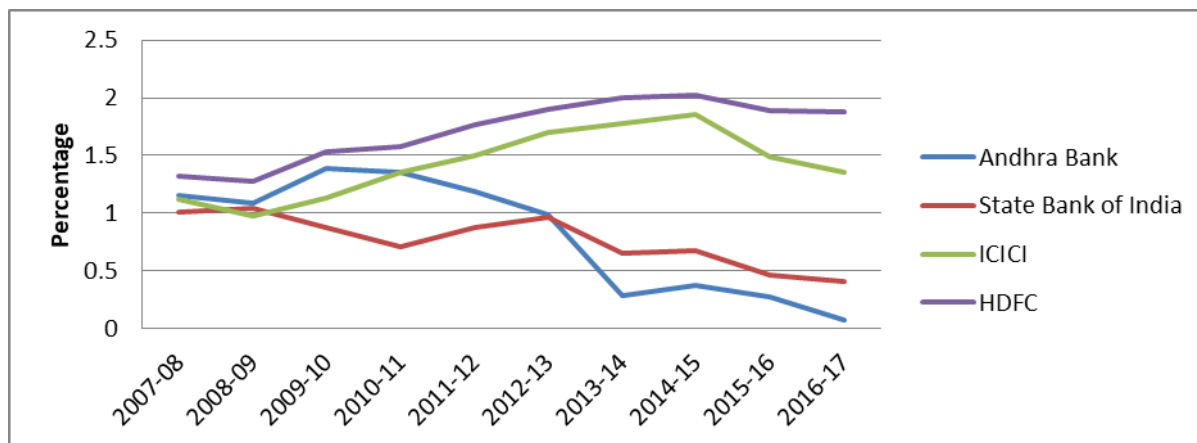


Chart 8: Return on Assets of Selected Banks

**Interpretation**

Return on assets measures what proportion of returns is receiving by the banks out of its total assets. The data reveals that the public sector banks are not performing well as its ratio is decreasing continuously in the both the case of Andhra Bank and State Bank of India. The compound growth rate is negative in both public sector banks. Andhra Bank presented a negative growth rate of -23.46% at the last among selected banks and HDFC stood at the first position with the positive compound annual growth rate of 3.6%.

The measure of differences between Andhra Bank and State Bank of India i.e. t value (0.2985) presented that there

is no statistically significant difference between the banks. The t value (-2.2870) between the two private sector banks i.e. ICICI Bank and HDFC Bank presented that there is a statistically significant difference. The study of differences between the means of the four banks through one-way ANOVA (f value 18.5283) identified that there is a statistically significant difference in return on assets.

**Income Spread To Total Assets Ratio**

Income spread is the difference between interest income and interest expenditure. The ratio is a measure of income spread to total assets of the bank. It measures what amount of spread available compared to its total assets.

$$\text{Income spread to total assets ratio} = \frac{\text{Interest Earned} - \text{Interest Spended}}{\text{Total Assets}} * 100$$

Table. 9: Bank wise analysis of Spread to Total Assets Ratio during 2007-08 to 2016-17 (In %)

Year	Andhra Bank	State Bank of India	ICICI	HDFC
2007-08	2.50	2.35	1.83	3.92
2008-09	2.37 (-5.20)	2.16 (-8.09)	2.21 (20.77)	4.04 (3.06)
2009-10	2.42 (2.11)	2.24 (3.70)	2.23 (0.90)	3.78 (-6.44)
2010-11	2.95 (21.90)	2.65 (18.30)	2.22 (-0.45)	3.81 (0.79)
2011-12	3.00 (1.69)	3.24 (22.26)	2.19 (-1.35)	3.83 (0.52)
2012-13	2.56 (-14.67)	2.83 (-12.65)	2.58 (17.81)	3.96 (3.39)
2013-14	2.23 (-12.89)	2.74 (-3.18)	2.77 (7.36)	3.79 (-4.29)
2014-15	2.45 (9.87)	2.68 (-2.19)	2.95 (6.50)	3.85 (1.58)
2015-16	2.66 (8.57)	2.42 (-9.70)	2.94 (-0.34)	3.72 (-3.38)
2016-17	2.40 (-9.77)	2.28 (-5.79)	2.82 (-4.08)	3.83 (2.96)
CAGR	-0.41%	-0.30%	4.42%	-0.23%
t value	-0.0380		-10.9314	
F value	52.9800			

\* Value significant at 5% level.  
Source: Annual Reports of the selected banks.

Note: Figures in brackets show the Annual Growth Rates  
Note: Ratio's are calculated based on data

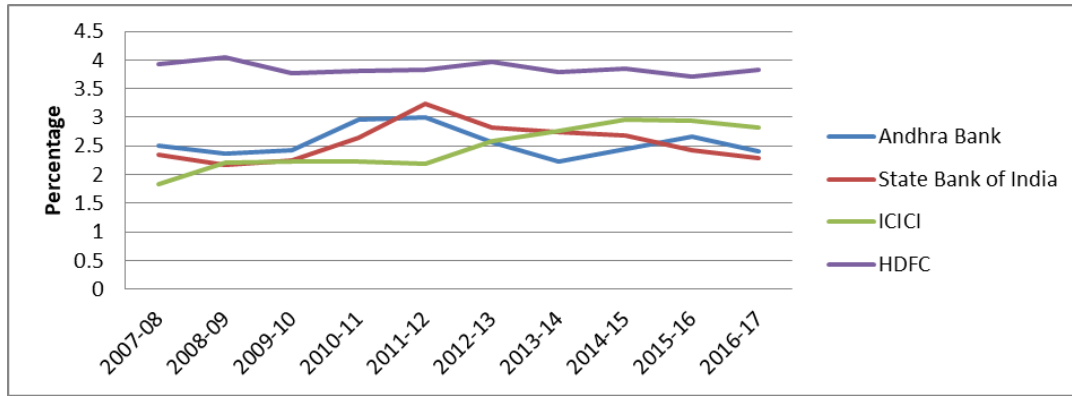


Chart 9: Income Spread to Total Assets Ratio of Selected Banks

### Interpretation

Public sector banks under study have been presented similar movement of ratio. The ICICI Bank presented a continuous improvement in the study period as it is 1.83 in 2007-08 and increased to 2.82 in the year 2016-17. The HDFC Bank stood at highest position among the selected bank with high value of ratio throughout the study period. It has a ratio of 4.04% in the year 2008-09. The consistency of the HDFC Bank is also good, as the standard deviation is only 0.09. The ICICI Bank presented a good compound annual growth rate of 4.42% and it is the only bank with positive growth rate.

The measure of differences between Andhra Bank and State Bank of India i.e. t value (-0.0380) presented that there is no statistically significant difference between the banks. The t value (-10.9314) between the two private

sector banks i.e. ICICI Bank and HDFC Bank presented that there is a difference between the banks. The study of differences between the means of the four banks through one-way ANOVA (f value 52.9800) identified that there is a statistically significant difference in spread to total assets.

### Return on Equity (ROE)

The return on equity, defined as the ratio of net profits after tax to total equity capital, is, therefore, used as an alternative measure of profitability. The ratio is widely used by equity investors in their decision making. Higher value of the ratio is indicative of higher profitability, and hence, productivity.

$$\text{Return on Equity} = \frac{\text{Net Profit after Taxes}}{\text{Total Equity Capital}} * 100$$

Table 10: Selected bank wise analysis of Return on Equity during 2007-08 to 2016-17 (In %)

Year	Andhra Bank	State Bank of India	ICICI	HDFC
2007-08	17.72	17.82	11.1	3.92
2008-09	17.90 (1.02)	15.07 (-15.43)	7.7 (-30.63)	4.04 (3.06)
2009-10	23.71 (32.46)	14.04 (-6.83)	7.9 (2.60)	3.78 (-6.44)
2010-11	19.51 (-17.71)	12.84 (-8.55)	9.6 (21.52)	3.81 (0.79)
2011-12	17.98 (-7.84)	14.36 (11.84)	11.1 (15.63)	3.83 (0.59)
2012-13	15.27/ (-15.07)	15.94 (11.00)	12.9 (16.22)	3.96 (3.39)
2013-14	4.99 (-67.32)	10.49 (-34.19)	13.7 (6.20)	3.79 (-4.29)
2014-15	6.33 (26.85)	11.17 (6.48)	14.3 (4.38)	3.85 (1.58)
2015-16	4.91 (-22.43)	7.74 (-30.71)	11.3 (-20.98)	3.72 (-3.38)
2016-17	1.53 (1.02)	7.25 (-15.43)	10.3 (-30.63)	3.83 (3.06)
CAGR	-21.73%	-8.60%	-0.75%	-0.23%
t value	0.1167		10.1011	
F value	9.4901			

\* Value significant at 5% level.

Source: Annual Reports of the selected banks.

Note: Figures in brackets show the Annual Growth Rates

Note: Ratio's are calculated based on data

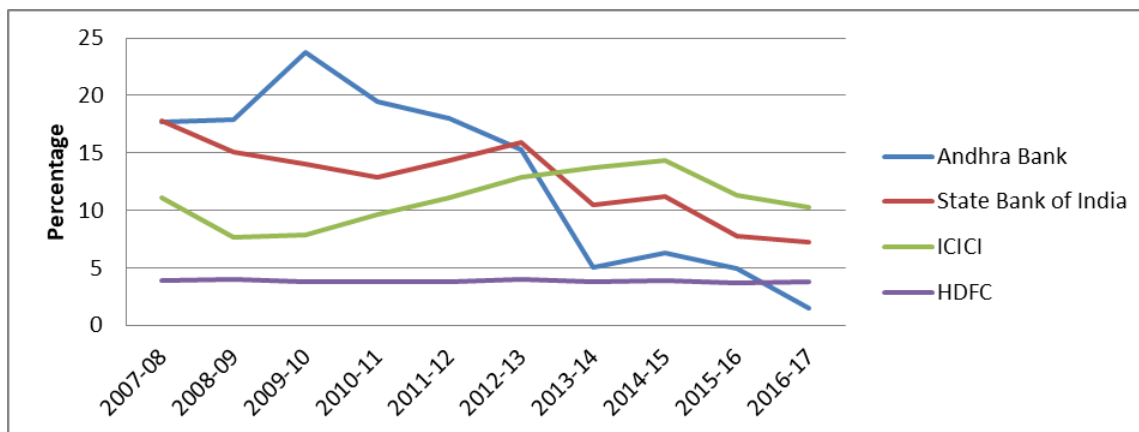


Chart 10: Return on Equity of Selected Banks

**Interpretation:** The return on equity is negative in all the banks which are not a good sign of efficiency. The Andhra Bank stood at a very high decline in the ratio, from 17.72% to 1.53%. The ROE of State Bank of India is also declined from 17.82% to 7.25% and the other private sector banks are also presented the same tendency. The measure of differences in means between Andhra Bank and State Bank of India i.e. t value (0.1167) presented that there is no statistically significant difference between the banks. There is no difference between the changes in return on equity of the two public sector banks. The t value (10.1011) between the two private sector banks i.e. ICICI Bank and HDFC Bank presented that there is a statistically significant difference. There is a difference between the banks in changes in return on equity of the two private sector banks. The study of differences between the means of the four banks through one-way ANOVA (f value 9.4901) identified that there is a statistically significant difference in return on equity.

### Conclusion

The study of financial performance and trend helps to understand the progress of the banks. The study identified that there is a significant difference in performance between Andhra Bank and State Bank of India. The productivity of both public sector banks presented the same trend but in return on equity and profit per employee decreased year to year. The proportion of performing assets is also decreasing year by year. The study identified that there is a significant difference in performance of ICICI Bank and HDFC Bank. In case of ICICI bank the proportion of performing assets presented a decreasing trend. The HDFC bank performance is optimum and identified a growth in profit per employee, consistency in proportion of performing assets and symmetry in return on equity. In a comparison of four banks the financial performance of HDFC bank stood at top and the performance of Andhra Bank stood at a low level.

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