Original Article
ISSN (Online): 2582-7472

ShodhKosh: Journal of Visual and Performing Arts
May 2024 5(5), 312–334

THE FINANCIAL PERFORMANCE APPRAISAL OF SELECTED PRIVATE SECTOR BANKS IN INDIA: AN EMPIRICAL EVIDENCE

Vyomkesh Bhatt [1], Dr. Mehak Arora [2]

[1] Research Scholar, Quantum School of Business, Quantum University, Roorkee, Uttarakhand, India- 247167
[2] Associate Professor, Quantum School of Business, Quantum University, Roorkee, Uttarakhand, India- 247167

ABSTRACT

Banking Institutions work as a strong catalyst for maintaining a sound financial system in a country. Banking Institutions act as a financial intermediary in the financial system of the country. In India the banking sector comprises of public sector banks, private sector banks, regional rural banks and foreign banks mainly. The present study focuses upon the financial performance of selected private banks – HDFC Bank, ICICI Bank, Axis Bank, Kotak Mahindra Bank, Induslnd Bank and Federal Bank for a period of 11 years from 2011 to 2021. The study is based upon secondary data. The financial performance is analyzed from the viewpoint of return ratio, profitability position, efficiency and market prospect. The study depicts that all the selected bank except for Federal Bank and Induslnd Bank performance is at satisfactory level. Descriptive statistics is used along with one way ANOVA test which determined that there is significant difference in the variables of selected private banks.

Keywords: Financial Performance, Return Ratio, Profitability, Efficiency, Market Prospect Ratio

Corresponding Author
Vyomkesh Bhatt
vyomkesh3696@gmil.com

DOI
10.29121/shodhkosh.v5.i5.2024.1872

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

1. INTRODUCTION

1.1 ROLE OF BANKING INSTITUTION IN FINANCIAL SYSTEM

Financial System of every country is central to its development and acts as a catalyst for the acceleration in economic activities which results in economic growth and development. The basic underlying function of an efficient Financial System is to mobilize the savings and direct it towards investing activities which will then foster economic development in a country [Bhole, L. & Mahakud, J. 2017]. Financial System comprises of Financial Intermediaries, Financial Markets Financial Assets and Financial Services. These four are the main pillars on which the entire financial ecosystem of a country is based upon. All these components are entangled with one another in a financial ecosystem and it is difficult to determine the raking in order of importance of the components of financial system [Saha, S. 2020].

The Classical Prior Saving Theory stress upon saving as an essential for investment and emphasize upon the formulation of polices to promote savings and effectively mobilize it for capital formation. An effective financial system is a bridge

which is linking saving on one side and investment on the other side and facilitate the meeting of these which result in capital formation which is the building block for economic development [Pathak, B. 2018].
Financial Intermediaries can be differentiated to Capital Market Intermediary and Money Market Intermediaries. Capital Market Intermediary are those lending financial institutions which provide long term funds to individuals and companies such as LIC, UTI, IDBI, etc. in India while Money Market Intermediary are those institutions which are providing short term funds to individuals and companies. These Money Market Intermediary consists of commercial banks, co-operative banks, etc. [Khanna. M et al. 2013].

The preset study focuses upon one such critical area of the financial intermediaries the Private Sector Banks which are part of the Commercial Banks in India. The role of Banks in the financial system holds paramount importance and is one of the robust indicators of the healthy financial system of a country [Koundal, V. 2012]. Banks are key link between the savers and investors facilitating the financial transactions of both and in the process contributing towards the capital formation in economy [Limbore et al. 2014].

Role of Banking Institutions in Financial System

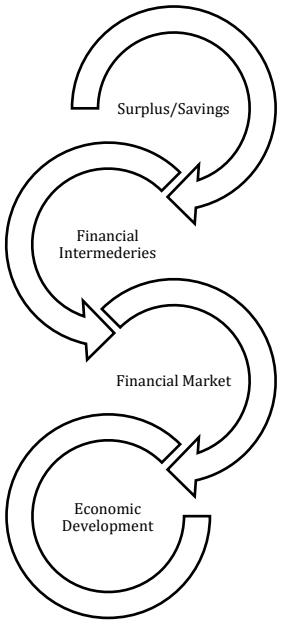

Fig. 1 Source Author Computation

Figure 1 demonstrate a simple working model of financial system underlying the role of the banking institutions contribution to the financial eco system. Surplus Savings is deposited to Bank using non-marketable financial assets provided by the bank such as bank deposits, pension funds, national saving certificates, etc. These funds accumulated by the banks are provided to the individuals and corporations in need of the fund for investing purposes in the Financial Markets. The investors after acquiring the funds will use it for the investing activities which will result in increased economic activities and thus economic development.

Role of banking institutions in the Indian financial system thus can be summed up as institutions which promote savings among the general populations collect them and transfer them to the investors in need of the fund. Investors in turn uses these funds for investment in avenues that results in increased economic production and ultimately economic development. The concept of modern banking has been traced to medieval Florence in 1397 [Malyadri, P 2015].

1.2 INDIAN BANKING INDUSTRY

In India the modern banking system started in 18th Century with the establishment of "Bank of Hindustan" by British. Subsequently, "General Bank of India", "Bank of Bengal", "Bank of Bombay" and "Bank of Madras" was established in the years 1786, 1809, 1840 and 1843 respectively. These banking institutions were later on merged to formulate "Imperial Bank of India", renamed to State Bank of India in 1949 [Malhotra, N 2015].

The progression of Banking Industry can be summed up to three distinctive stages as shown in Fig. 2 namely formulation of Reserve Bank of India and passing of Banking Regulations Act 1949, Nationalization of Banks and 1991 reforms [Paul, P 2015]. However of late a fourth phase and fifth phase has started where fourth phase can be pegged to the Merger of Public Sector Banks in Indian Banking Landscape where by the focus is on creating few large banking institutions and the infusion of new age disruptive technology into the banking industry as fifth phase [] Mittal, S et al. 2013].

Evolution of Post- Independent Indian Banking Industry

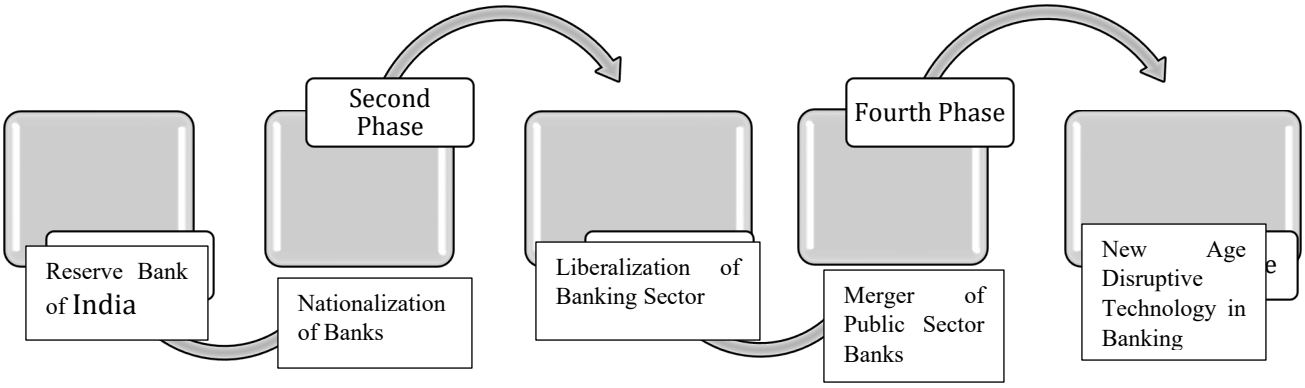

Fig. 2 Source: Author Computation

1.3 PRIVATE BANKING SECTOR

The role of private banking sector in the Post- Independent Indian Banking landscape can be traced to its early periods of evolution in 1951 where the number of private banks operating in the country pegged to 566 of which 474 were classified as non-scheduled banks and 92 as scheduled banks based upon the market capital size. However due to the participation of Government of India in the banking industry through State Bank of India and public sector banks followed by nationalization of banks in 1969 and 1980 diminished the role of private banks [Moniska, H et al. 2012].

During the period from 1969 till the issue of Narasimham Committee Guidelines 1991 no new banks were allowed to be set up in the private phase [Narasimham, M. 1988]. Post the issue of guidelines Central Bank continued to follow a conservative approach towards establishment of new private banks and only 12 Banks were allowed to be formulated under these guidelines. At present there are 22 private sector banks operating in the country.

Private Banking Sector is a significant part of Indian Banking Industry and since 1994, private banks have captured a 38 per cent Compounded Annual Growth Rate (CAGR) in advances as compared to a 19 per cent for Public Sector Banks as of 2018. The share of credit stands at 33 per cent as of 2018 [Singh, Y 2013]. The credit deposit ratio which signifies how much lending has been made out of the deposits mobilized by the banks stood at 86.91 per cent and 88.26 per cent for the year 2017-18 and 2018-19 respectively signifying that private sector banks was making more amount of funds available to lender and investing it [Biresh,K 2011].

The private banking sector focused upon retail lending as compared to the strategy of corporate maximized lending of commercial banks as a result their share in NPA is quite less as compared to the their public sectors counterparts [Balaji,C et al. 2016] However at present the private sector banks are still lagging behind the public sector banks in terms of reach in semi urban and rural areas in terms of Banking facilities provided to rural population. Private Sector banks are majority based in metropolitan, urban areas and to some extent in semi urban areas [Duncan, E. et al. 2004]. However, private sector banks are adopting the new technology much faster and are now transitioning towards faceless, paperless, branchless banking system preparing for the fifth phase in a much efficient and effective manner as compared to their peers.

1.4 SELECTED PRIVATE BANKS FOR THE STUDY

The present study focuses upon the financial performance analysis of the 6 selected Private Banks based on their market capital from the period of March 2011 to March 2021. An appraisal of selected private banks is made from the aspect of earning, profitability, rate of return on investments, performance per branch and structural financial soundness in the present study.

Housing Development Finance Corporation Bank Ltd. (HDFC)

HDFC Bank Ltd. was founded in 1994 during the third stage of Indian Banking Evolution. It is the largest private sector bank in India in terms of Market Capital size as on March 2021 which was pegged to Rs. 833445 Cr. HDFC Bank has a total of 5608 branches across the country and providing ATMs services in 2902 cities through its 16087 ATMs [HDFC Bank. 2021].

Industrial Credit and Investment Corporation of India Bank Ltd. (ICICI)

ICICI Bank Ltd. was established at the same time around the establishment of HDFC Bank in 1994.The bank has grown itself to be the second largest private sector bank in India with a market capitalization of Rs. 451678 Cr. The bank is disseminating its services through a network of 5275 branches including online banking and currently have 15589 ATMs across the country [ICICI Bank. 2021].

Kotak Mahindra Bank Ltd.

Kotak Mahindra Bank Ltd. is the third largest bank in India having a market capital of Rs. 357295 Cr. It was established in 2003 and is a new generation private bank. The bank was founded by Mr. Uday Kotak and the institution is currently providing banking services through its 1600 branches and more than 2500 ATMs across the country [Kotak Mahindra Bank 2021].

Axis Bank Ltd.

Axis Bank Ltd. is fourth largest private sector bank established in 1993 having a market capitalization of Rs. 228773 Cr. It has more than 4800 branches and 11333 ATMs across the country. The bank is promoted jointly by Specified Undertaking of Unit Trust of India, Life Insurance Corporation, General Insurance Corporation, National Insurance Company Ltd, United Insurance Company Ltd. and Oriental Insurance Company Ltd [Axis Bank. 2021].

Induslnd Bank Ltd.

Induslnd Bank Ltd. was founded in the year 1994 during the third phase of Indian Banking Industry by Hinduja Group. The bank at present has the market capital of Rs. 78211 Cr. and have more than 1600 branches and 2500 ATMs across the country. The bank is recognized for its unique services such as My Account My Number, 365 days banking, Choice of money at ATMs withdrawal, etc [IndusInd Bank. 2021].

Federal Bank Ltd.

Federal Bank Ltd. formerly known as Travancore Federal Bank Ltd. is a private bank established in the year 1931 and become a scheduled commercial bank in the year 1959. The bank at present has a market capital of Rs. 17148 Cr. The bank is disseminating its services through a network of more than 1200 branches and more than 2000 ATMs including online banking. [Federal Bank. 2021].

2. REVIEW OF LITERATURE

Vithalbhai V. (2020) [Vithalbhai, V. 2020] in the paper entitled "Financial Performance of Banks in India: A Study of Selected Private Sector Banks" analyzed the performance of Yes Bank, HDFC Bank, ICICI Bank, SBI Bank, J&K Bank, Axis Bank, CUB Bank and IBL Bank for the period from 2012 to 2019.The study concluded that HDFC was outperforming its counterparts and was in a relative sound financial position while the performance of Yes Bank has deteriorated among the banking sector to the lowest level. The study stated that Axis Bank and ICICI Bank are witnessing a decline trend in the banking sector.

Saranya. C and Sridevi V (2019) [Saranya,C. et al. 2019] in the paper entitled "Financial Performance of Selected Banks in India" evaluated the selected commercial banks in India using CAMEL rating system from the period of 2014 to 2018. The banks selected for the study were ICICI Bank, HDFC Bank, Yes Bank, Axis Bank and Federal Bank. The study concluded that while HDFC bank held the top rank in terms of capital adequacy ratio, asset quality parameter, earning quality parameter and liquidity parameter Yes Bank was ranked lowest for capital adequacy ratio and earning capacity, ICICI was ranked lowest for asset quality. Overall analysis of selected bank showed that HDFC and Axis Bank were the leading banks.

Agarwal P (2019) [Agarwal, P 2019] conducted a study entitled " Profitability of Indian Public and Private Sector Banks: A Comparative Study" where the profitability analysis from the view point of Return on Assets, Return on Equity, Net Interest Margin and Operating Profits of both Public Sector and Private Sector Banks was conducted for the period of 2005-2017.The study concluded that due to growing NPAs in Public Sector Banks there was an increased progression of negative return on their assets which were effecting the Public Sector Banks profitability. The Private Sector Bank was found to be in better profitable position as compared to Public Sector Banks.

Kathiriya J and Shah P (2018) [Kathiriya, J et al. 2018] in the paper entitled " A Study on Profitability of Selected Private Banks of India" analyzed the profitability performance of Axis Bank, HDFC Bank and ICICI Bank for the period ranging from 2008 to 2017. The study concluded that the selected private banks performance has become more efficient in the last five year time of the study from 2013 to 2017 as compared to the previous selected period of 2008 to 2012.ICICI Bank was found to have a higher ratio value during the selected period as a result of its consistent performance during the selected period of study.

In the year 2018 Vadrale K and Katti [Vadrale, K 2018] conducted a study entitled "Profitability Position of Commercial Banks in India- A Comparative Study" where profitability analysis of selected private and public sector banks was done from the period of 2001 to 2015 using SPREAD Analysis. The study stated that profitability of private sector banks was in better position as compared to public sector banks due to satisfactory return on advances.

Vanlazawna C. (2016) [Vanlalzawna. C] in the thesis entitled "A Study of Financial Performance Evaluation of Banks in India" used the comparative analysis of selected banks using ratio analysis and CAMEL model. The banks selected for the study were SBI Bank, PNB Bank, HDFC Bank and ICICI Bank during the time period of 2005-06 to 2014-15.The study concluded that ICICI Bank achieved the top rank while HDFC Bank was ranked last when the basis of average ratio is taken as parameter for overall CAMEL Model.

Dsouza J. (2016) [Dsouza, J. 2016] in the study entitled "Financial Performance of Public Sector Banks in India- An Evaluation" analyzed the performance of public sector banks in India from the time period of 2002-2011 from the view point of liquidity, profitability and priority sector advances during the selected time period of the study. The study concluded that each public sector bank is financial sound and in a better position in terms of liquidity and profitability and are lending to the priority sectors in sufficiently good amounts. However, the study pointed towards the exposure to sensitive sector where out of the total credit 19.6 per cent accounted to the sensitive sectors and steps should be taken towards sensitive lending.

3. RESEARCH GAP

Financial Performance of any banking institution can be analyzed and studied from different viewpoints. In the studies reviewed it was found that analysis of the private banking institutions was confined to profitability and earning capacity but a detailed analysis using the different parameter measuring the efficiency of different aspects of banking was not carried out. Therefore, the present study analyzes different key aspects of banking institutions such as Return on Capital Employed, Return on Asset, Return on Equity, CASA, Net Profit Margin, Operating Profit Margin, Cost to Income, Earning Yield, Income per Branch and Income per Employee. The study will provide and strengthen the fundamental analysis of selected Private Sector Banks.

4. OBJECTIVES OF THE STUDY

The study is guided by the following objectives:

1. To analyze the rate of return of the selected Private Banking Institutions in India using different rate of return ratios.
2. To analyze the profitability of selected Private Banking Institutions in India using different profitability indictors.
3. To analyze the operating efficiency of selected Private Banking Institutions in India using different parameters.
4. To analyze the market prospect ratio of selected Private Banking Institutions during the period of study.
5. To test the significance of the difference between the variables of the selected private banks.

5. RESEARCH METHODOLOGY

The present study follows a descriptive research methodology and is empirical in nature. The study focuses upon an appraisal of financial performance of selected Private Banks in India for a period of 11 years from 2011 to 2021. The study uses various indicators for through fundamental analysis including Return on Capital Employed, Return on Assets, Return on Equity, Net Profit Margin, Operating Profit Margin, Net Interest Margin, Cost to Income, Earning Yield, Earning Per Share, Dividend Per Share, Interest Income per Branch and Income per Employee.

The study is based upon the secondary data compiled using annual reports of the banking institutions and from other reliable sources as per the requirement. Purposive Sample Technique is used for selecting the Private Banking Institutions for the study. 6 leading Private Bank were selected based upon the market capital size which were HDFC Bank, ICICI Bank, Axis Bank, Kotak Mahindra Bank, Induslnd Bank and Federal Bank.

In the present study one way ANOVA test and Descriptive Statistics has been used using MS Excel to test the difference between variables of selected Private Banking Institutions.

6. HYPOTHESES

Hypotheses formulated for the study are:

H_1: There is a significant difference between the variables of selected Private Banks. The alternative hypotheses can be shown as:

$\mu_{1\neq}\ \mu_{2\neq}\ \mu_{3\neq}\ \mu_{4\neq}\ \mu_{5\neq}\ \mu_{6\neq}\ \mu_{7\neq}\ \mu_{8\neq}\ \mu_{9\neq}\ \mu_{10\neq}\ \mu_{11\neq}\ \mu_{12\neq}\ \mu_{13\neq}$

7. DATA ANALYSIS AND INTERPRETATION

7.1 RETURN ANALYSIS

RETURN ON CAPITAL EMPLOYED (ROCE)

Return on Capital Employed is an indicator which helps to determine how much profit a particular banking institutions is earning on the basis of capital employed. It is calculated on the basis of Earning before Interest and Taxes (EBIT) and Capital Employed. The higher is the ratio the higher is the management efficiency in earning maximum profit from the capital employed [N.P. Srinivasan et al. 2010]. In Table 1 Return on Capital Employed is shown of the 6 selected banks for the period of 11 years ranging from 2011 to 2021. Table 1 indicates that HDFC Bank has registered the highest mean of all other selected banks during the period at 3.193. Federal Bank registered the minimum ROCE for the time period at 1.59 per while the maximum ROCE was for Induslnd Bank at 3.62 per cent during the time period of study.

The Federal Bank has also registered the lowest mean of all the selected banks at 2.001. The Skewness Value is less than -1 for all the selected bank except for Federal Bank indicating that the distribution is left skewed for all others and right skewed for Federal Bank. Kurtosis Value is greater than 1 for Kotak Mahindra Bank and Federal Bank indicating that the distribution is leptokurtic while for HDFC Bank, ICICI Bank, Axis Bank and Induslnd Bank it is less than 1 indicating that the distribution is platykurtik.

Table 1 Descriptive Statistics of ROCE

Name of the Bank						
Year	HDFC	ICICI Bank	Axis Bank	Kotak Mahindra Bank	Induslnd Bank	Federal Bank
2011	3.11	2.31	2.73	2.77	2.46	2.85
2012	2.97	2.27	2.68	2.2	2.46	2.55
2013	3.12	2.61	2.82	2.96	2.58	2.11
2014	3.18	2.96	3.1	3.05	3.07	2.04
2015	3.11	3.2	2.99	2.66	2.93	2.01
2016	3.17	3.47	3.15	2.62	3.11	1.59

2017	3.18	3.59	3.05	2.9	3.21	1.71
2018	3.2	2.91	2.34	2.8	3.11	1.68
2019	3.34	2.52	2.47	2.77	3	1.77
2020	3.33	2.67	2.68	2.86	3.62	1.8
2021	3.42	3.1	2.7	3.32	3.34	1.91
Mean	3.193636	2.873636	2.791818	2.81	2.99	2.001818
Standard Error	0.038335	0.133262	0.078333	0.084466	0.110231	0.116555
Standard Deviation	0.127143	0.441979	0.259801	0.280143	0.365595	0.38657
Sample Variance	0.016165	0.195345	0.067496	0.07848	0.13366	0.149436
Kurtosis	0.084267	-0.997	-0.77571	2.138437	-0.45778	1.246449
Skewness	0.267476	0.221922	-0.20305	-0.48165	-0.14845	1.326095
Minimum	2.97	2.27	2.34	2.2	2.46	1.59
Maximum	3.42	3.59	3.15	3.32	3.62	2.85
Count	11	11	11	11	11	11
Confidence Level(95.0%)	0.085416	0.296926	0.174536	0.188203	0.24561	0.259701

Source: Author Computation

The ANOVA Table 2 indicates that F Value of ROCE is 22.1994 and P value is 0.000 while F Critical value is 2.38607. As the F value is greater the F Critical value and P value is less than 0.05 the null hypotheses $\mu_{1=}$ is rejected and alternative hypotheses $\mu_{1\neq}$ is accepted stating that the difference in mean value of ROCE of the selected private banks is statistically significant.

Table 2 ANOVA

Source of Variation	*Sum of Squares*	*df*	*Means Square*	*F*	*P-value*	*F critical*
Between Groups	10.15906	5	2.031812	22.1994	0.000	2.38607
Within Groups	4.94238	54	0.091526			
Total	15.10144	59				

Source: Author Computation

RETURN ON ASSET(ROA)

Return on Asset shows how efficiently a company is using its assets for generating earnings. The higher ROA per cent shows the higher efficiency of asset utilization for earning generation [Patoliya, R., 2020]. Table 3 shows that mean ROA of Kotak Mahindra Bank is highest at 1.595 while for Federal Bank mean ROA is lowest at 0.927 during the time period of study. The maximum ROA is of Kotak Mahindra Bank at 1.81 per cent while Federal Bank registered the minimum ROA at 0.52 per cent during the time period of study.

The Skewness Value is less than -1 for all the selected bank indicating that the distribution is left skewed while Kurtosis Value is greater than 1 for HDFC Bank, ICICI Bank, Kotak Mahindra Bank and Induslnd Bank indicating that the distribution is leptokurtic while for Axis Bank and Federal Bank it is less than 1 indicating that the distribution is platykurtik.

Table 3 Descriptive Statistics of ROA

Name of the Bank						
Year	HDFC	ICICI Bank	Axis Bank	Kotak Mahindra Bank	Induslnd Bank	Federal Bank

2011	1.41	1.26	1.39	1.6	1.26	1.14
2012	1.52	1.36	1.48	1.65	1.39	1.28
2013	1.68	1.55	1.52	1.62	1.44	1.17
2014	1.72	1.64	1.62	1.71	1.61	1.12
2015	1.73	1.72	1.59	1.76	1.64	1.21
2016	1.73	1.34	1.56	1.08	1.63	0.52
2017	1.68	1.26	0.61	1.58	1.6	0.72
2018	1.64	0.77	0.03	1.54	1.62	0.63
2019	1.69	0.34	0.58	1.55	1.18	0.78
2020	1.71	0.72	0.17	1.65	1.43	0.85
2021	1.78	1.31	0.66	1.81	0.78	0.78
Mean	1.662727	1.206364	1.019091	1.595455	1.416364	0.927273
Standard Error	0.032252	0.128114	0.185102	0.057515	0.07949	0.079328
Standard Deviation	0.106966	0.424906	0.613913	0.190754	0.263639	0.2631
Sample Variance	0.011442	0.180545	0.376889	0.036387	0.069505	0.069222
Kurtosis	2.47311	0.19501	-1.57514	6.031169	2.533598	-1.60653
Skewness	-1.64929	-0.9294	-0.49827	-2.13149	-1.54675	-0.08059
Minimum	1.41	0.34	0.03	1.08	0.78	0.52
Maximum	1.78	1.72	1.62	1.81	1.64	1.28
Count	11	11	11	11	11	11
Confidence Level(95.0%)	0.071861	0.285456	0.412432	0.128151	0.177115	0.176753

Source: Author Computation

Table 4 shows the F Value at 7.884622 while P Value is 0.000 less than 0.05 and F critical is at 2.38607. Hence as P value is less than 0.05 and F value is greater than F critical null hypotheses $\mu_{2=}$ is rejected and alternative hypotheses $\mu_{2\neq}$ is accepted signifying that the difference in mean value of ROA of the selected private banks is statistically significant.

Table 4 ANOVA

Source of Variation	*Sum of Squares*	*df*	*Mean Square*	*F*	*P-value*	*F critical*
Between Groups	5.211513	5	1.042303	7.884662	0.000	2.38607
Within Groups	7.13846	54	0.132194			
Total	12.34997	59				

Source: Author Computation

RETURN ON EQUITY(ROE)

Return on Equity can be defined as the return equity shareholders are getting on the respective investments made in the company [Rao, M 2014]. Table 5 shows that mean of HDFC Bank is highest at 16. 51182 while the mean for ICICI Bank was lowest at 9.899091. The maximum ROE is of HDFC Bank at 19.5 per cent while Axis Bank registered the minimum ROE at 0.43 per cent during the time period of study.

All the selected banks except for Induslnd Bank has Skewness value of less than 1 showing that the distribution is left skewed while for Induslnd Bank it is right skewed. Kotak Mahindra Bank and Induslnd Bank has Kurtosis Value greater than 1 showing that the distribution is leptokurtic while for HDFC Bank, Axis Bank, ICICI Bank and Federal Bank the distribution is platykurtik.

Table 5 Descriptive Statistics of ROE

Name of the Bank						
Year	HDFC	ICICI Bank	Axis Bank	Kotak Mahindra Bank	Induslnd Bank	Federal Bank
2011	15.47	9.35	17.83	11.97	15.09	11.49
2012	17.26	10.7	18.59	13.59	17.74	13.61
2013	18.57	12.48	15.64	14.37	14.3	13.16
2014	19.5	13.39	16.26	12.23	16.28	12.06
2015	16.47	13.89	16.46	13.19	17.49	12.99
2016	16.91	11.19	15.46	8.72	13.2	5.87
2017	16.26	10.11	6.59	12.35	14.14	9.29
2018	16.45	6.63	0.43	10.89	15.35	7.2
2019	14.12	3.19	7.01	11.47	12.52	9.37
2020	15.35	6.99	1.91	12.25	12.84	10.63
2021	15.27	10.97	6.48	11.01	6.54	9.86
Mean	16.51182	9.899091	11.15091	12.00364	14.13545	10.50273
Standard Error	0.463688	0.966424	2.029461	0.457774	0.924967	0.749884
Standard Deviation	1.53788	3.205266	6.730962	1.518264	3.067769	2.487083
Sample Variance	2.365076	10.27373	45.30585	2.305125	9.411207	6.185582
Kurtosis	0.294884	0.45891	-1.57782	1.30346	3.405539	-0.46863
Skewness	0.59039	-0.8704	-0.4513	-0.66138	-1.47441	-0.55664
Minimum	14.12	3.19	0.43	8.72	6.54	5.87
Maximum	19.5	13.89	18.59	14.37	17.74	13.61
Count	11	11	11	11	11	11
Confidence Level(95.0%)	1.033162	2.153327	4.521922	1.019984	2.060955	1.670845

Source: Author Computation

Table 6 shows the F Value at 5.222049 while P Value is 0.000 less than 0.05 and F critical is at 2.38607. Hence as P value is less than 0.05 and F value is greater than F critical null hypotheses $\mu_{3=}$ is rejected and alternative hypotheses $\mu_{3\neq}$ is accepted signifying that the difference in mean value of ROE of the selected private banks is statistically significant.

Table 6 ANOVA

Source of Variation	*Sum of Squares*	*df*	*Means Square*	*F*	*P-value*	*F critical*
Between Groups	341.2672	5	68.25345	5.222049	0.000556	2.38607
Within Groups	705.7931	54	13.07024			
Total	1047.06	59				

Source: Author Computation

7.2 PROFITABILITY ANALYSIS

NET PROFIT MARGIN (NPM)

Net Profit Margin shows how much revenue generated by a banking institution is converted into profit [Saluja, J et al. 2010]. It is expressed in terms of percentage. Table 7 shows that the mean of NPM among selected bank is highest for HDFC Bank at 21.14273 while it is lowest for Federal Bank at 11.49818 during the period of study. The maximum NPM was registered by HDFC Bank at 25.74 per cent while the minimum was registered by Axis Bank at 0.6 per cent.

All the selected banks except for HDFC Bank has Skewness value of less than 1 showing that the distribution is left skewed while for HDFC Bank it is right skewed. HDFC Bank and Kotak Mahindra Bank has Kurtosis Value greater than 1 showing that the distribution is leptokurtic while for Axis Bank, ICICI Bank, Induslnd Bank and Federal Bank the distribution is platykurtik.

Table 7 Descriptive Statistics of NPM

Name of The Banks						
Year	HDFC	ICICI Bank	Axis Bank	Kotak Mahindra Bank	Induslnd Bank	Federal Bank
2011	19.7	19.83	22.35	19.52	16.08	14.48
2012	18.93	19.27	19.28	17.55	14.97	13.97
2013	19.18	20.77	19.05	16.91	15.19	13.58
2014	20.61	22.2	20.29	17.13	17.05	12.07
2015	21.07	22.76	20.73	19.19	18.5	13.55
2018	21.79	12.33	0.6	20.68	20.86	9.01
2019	21.29	5.3	8.5	20.32	14.82	10.89
2020	22.86	10.6	2.59	22.08	15.34	11.67
2021	25.74	20.46	10.35	25.94	9.78	11.55
Mean	21.14273	17.27727	13.82364	19.21273	16.56636	11.49818
Standard Error	0.573695	1.65595	2.394331	1.005107	0.948113	0.756146
Standard Deviation	1.90273	5.492165	7.941096	3.333563	3.144536	2.507851
Sample Variance	3.620382	30.16388	63.06101	11.11264	9.888105	6.289316
Kurtosis	2.813982	0.864516	-1.36075	1.654274	0.936463	0.605171
Skewness	1.429264	-1.29212	-0.56808	0.121414	-0.67215	-0.90791
Minimum	18.93	5.3	0.6	12.75	9.78	6.14
Maximum	25.74	22.76	22.35	25.94	20.86	14.48
Count	11	11	11	11	11	11
Confidence Level(95.0%)	1.278271	3.689687	5.334901	2.239518	2.112528	1.684797

Source: Author Computation

Table 8 shows the F Value at 5.015326while P Value is 0.001 less than 0.05 and F critical is at 2.437693. Hence as P value is less than 0.05 and F value is greater than F critical null hypotheses $\mu_{4=}$ is rejected and alternative hypotheses $\mu_{4\neq}$ is accepted signifying that the difference in mean value of NPM of the selected private banks is statistically significant.

Table 8: ANOVA

Source of Variation	*Sum of Squares*	*df*	*Means Square*	*F*	*P-value*	*F critical*
Between Groups	571.8174	5	114.3635	5.015326	0.001084	2.437693
Within Groups	957.7176	42	22.8028			
Total	1529.535	47				

Source: Author Computation

OPERATING PROFIT MARGIN (OPM)

Operating Profit Margin is calculated by dividing the earnings achieved after paying for variable and fixed cost but before paying for interest and taxes [Srinivasan, P 2017] .Table 9 shows Operating Profit Margin during the period of study where HDFC Bank has registered the highest mean at 1.888182 while the lowest mean was registered by Axis Bank at -

10.9045. The maximum operating profit margin during the period was registered at 5.6 per cent by Kotak Mahindra Bank and the minimum was registered at -23.35 by Axis Bank.

The Skewness Value is less than -1 for all the selected bank indicating that the distribution is left skewed while Kurtosis Value is greater than 1 only for Kotak Mahindra Bank indicating that the distribution is leptokurtic while for HDFC Bank, ICICI Bank, Induslnd Bank, Axis Bank and Federal Bank it is less than 1 indicating that the distribution is platykurtik.

Table 9 Descriptive Statistics of OPM

	Name of the Bank					
Year	HDFC	ICICI Bank	Axis Bank	Kotak Mahindra Bank	Induslnd Bank	Federal Bank
2011	-2.05	-5.76	-8.2	0.89	-3.79	1.73
2012	-0.28	-3.09	-5.35	1.74	-3.9	4.39
2013	-0.36	-0.05	-5.04	2.48	-4.32	2.81
2014	1.35	-1.39	-3.87	1.17	-5.84	2.08
2015	2.51	-2.03	-2.83	-1.67	-6.29	1.71
2016	2.56	-10.61	-2.8	-3.18	-8.72	-4.01
2017	3.25	-17.91	-17.98	-0.37	-9.04	-2.89
2018	2.82	-19.36	-23.35	0.16	-6.62	-2.87
2019	3.48	-17.58	-15.37	1.09	-10.53	-0.93
2020	2.6	-11.38	-22.2	2.13	-8.8	-2.94
2021	4.89	-3.5	-12.96	5.6	-12.83	-2.57
Mean	1.888182	-8.42364	-10.9045	0.912727	-7.33455	-0.31727
Standard Error	0.611753	2.189246	2.354167	0.68969	0.877337	0.879498
Standard Deviation	2.028955	7.260907	7.807888	2.287444	2.909798	2.916964
Sample Variance	4.116656	52.72077	60.96311	5.232402	8.466927	8.508682
Kurtosis	-0.04834	-1.52735	-1.38482	1.321053	-0.53758	-1.63548
Skewness	-0.6946	-0.47229	-0.51894	0.213466	-0.45677	0.255372
Minimum	-2.05	-19.36	-23.35	-3.18	-12.83	-4.01
Maximum	4.89	-0.05	-2.8	5.6	-3.79	4.39
Count	11	11	11	11	11	11
Confidence Level(95.0%)	1.36307	4.877943	5.24541	1.536726	1.954829	1.959643

Source: Author Computation

Table 10 shows the F Value at 13.02604 while P Value is 0.000 less than 0.05 and F critical is at 2.38607. Hence as P value is less than 0.05 and F value is greater than F critical null hypotheses $\mu_{5=}$ is rejected and alternative hypotheses $\mu_{5\neq}$ is accepted signifying that the difference in mean value of OPM of the selected private banks is statistically significant.

Table 10: ANOVA

Source of Variation	*Sum of Squares*	*df*	*Means Square*	*F*	*P-value*	*F critical*
Between Groups	1626.739	5	325.3478	13.02604	0.000	2.38607
Within Groups	1348.744	54	24.97673			
Total	2975.483	59				

Source: Author Computation

NET INTEREST MARGIN

Net Interest Margin is the measurement which shows the interest income a banking institution generates as compared to the interest it pays to the depositors [Bharathi, N 2010]. Table 11 shows that the highest mean value was registered by Kotak Mahindra Bank at 3.843636 while the lowest mean value was registered by ICICI Bank at 2.736364. The maximum Net Interest Margin percent was 4.24 per cent achieved by Kotak Mahindra Bank while the lowest was 2.21 per cent registered by ICICI Bank during the period of the study.

The Skewness Value is less than -1 for HDFC Bank, ICICI Bank, Axis Bank and Kotak Mahindra Bank indicating that the distribution is left skewed while the value is greater than 1 for Induslnd Bank and Federal Bank indicating that the distribution is right skewed. Kurtosis Value is less than 1 for all the selected banks indicating that the distribution is platykurtik.

Table 11 Descriptive Statistics of NIM

Name of the Bank						
Year	HDFC	ICICI Bank	Axis Bank	Kotak Mahindra Bank	Induslnd Bank	Federal Bank
2011	3.8	2.21	2.7	4.12	3.01	3.39
2012	3.63	2.26	2.8	3.82	2.95	3.22
2013	3.94	2.58	2.83	3.83	3.04	2.77
2014	3.75	2.77	3.11	4.24	3.32	2.98
2015	3.79	2.94	3.07	3.98	3.13	2.87
2016	3.89	2.94	3.2	3.58	3.22	2.73
2017	3.83	2.81	3	3.78	3.39	2.65
2018	3.76	2.61	2.69	3.59	3.38	2.59
2019	3.87	2.8	2.71	3.6	3.18	2.62
2020	3.67	3.02	2.75	3.74	3.92	2.57
2021	3.71	3.16	2.93	4	3.72	2.74
Mean	3.785455	2.736364	2.89	3.843636	3.296364	2.83
Standard Error	0.028488	0.090346	0.054805	0.066418	0.090426	0.080521
Standard Deviation	0.094484	0.299642	0.181769	0.220285	0.299909	0.267058
Sample Variance	0.008927	0.089785	0.03304	0.048525	0.089945	0.07132
Kurtosis	-0.62153	-0.27152	-1.27936	-0.73441	0.592528	0.628789
Skewness	-0.03718	-0.65119	0.473898	0.448757	1.048827	1.218822
Minimum	3.63	2.21	2.69	3.58	2.95	2.57
Maximum	3.94	3.16	3.2	4.24	3.92	3.39
Count	11	11	11	11	11	11
Confidence Level (95.0%)	0.063475	0.201302	0.122114	0.147989	0.201482	0.179412

Source: Author Computation

Table 12 shows the F Value at 49.30049 while P Value is 0.000 less than 0.05 and F critical is at 2.38607. Hence as P value is less than 0.05 and F value is greater than F critical null hypotheses $\mu_{6=}$ is rejected and alternative hypotheses $\mu_{6\neq}$ is accepted signifying that the difference in mean value of NIM of the selected private banks is statistically significant.

Table 12: ANOVA

Source of Variation	*Sum of Squares*	*df*	*Means Square*	*F*	*P-value*	*F critical*
Between Groups	11.64747	5	2.329494	49.30049	0.000	2.38607

Within Groups	2.55155	54	0.047251			

Source: Author Computation

7.3 OPERATING EFFICIENCY

COST TO INCOME (CTI)

Cost to Income shows how much cost is involved in earning the income by the banking institutions .It is a measure of efficiency of operation of the banking institutions. A lower ratio indicates that bank is conducting its operations efficiently [Kheechee, D 2011]. Table 13 shows that the mean of CTI among selected bank is highest for Axis Bank at 40.98273 while it is lowest for Federal Bank at 32.00455 during the period of study. The maximum CTI was registered by Axis Bank at 51.64 per cent while the minimum was registered by Federal Bank at 26.36 per cent.

All the selected banks except for HDFC Bank has Skewness value of less than 1 showing that the distribution is left skewed while for HDFC Bank it is right skewed. HDFC Bank has Kurtosis Value greater than 1 showing that the distribution is leptokurtic while for Axis Bank, ICICI Bank, Kotak Mahindra Bank, Induslnd Bank and Federal Bank the distribution is platykurtik.

Table 13 Descriptive Statistics of CTI

Name of the Bank						
Year	HDFC	ICICI Bank	Axis Bank	Kotak Mahindra Bank	Induslnd Bank	Federal Bank
2011	45.13	32.22	39.45	41.44	35.15	36.69
2012	38.03	28.67	33.54	33.59	30.03	28.05
2013	38.02	28.67	32.72	32.65	30.36	26.36
2014	36.53	31.3	34.53	35.57	33.25	27.27
2015	36.84	32.7	34.74	37.33	33.32	27.15
2016	36.69	39.4	35.7	39.07	37.15	32.99
2017	37.84	42.68	46.42	38.68	39.65	33.85
2018	39.62	46.51	51.64	39.91	39.22	35.4
2019	38.41	48.98	44.28	38.52	40.1	33.54
2020	38.52	45.79	50.03	40.01	40.83	33.26
2021	40.37	42.57	47.76	42.83	48.51	37.49
Mean	38.72727	38.13545	40.98273	38.14545	37.05182	32.00455
Standard Error	0.732046	2.29366	2.166544	0.9483	1.630395	1.2261
Standard Deviation	2.427921	7.607209	7.185615	3.145156	5.407409	4.066513
Sample Variance	5.894802	57.86963	51.63306	9.892007	29.24008	16.53653
Kurtosis	5.028527	-1.79442	-1.79636	-0.40239	0.646656	-1.57987
Skewness	2.053007	0.030875	0.269953	-0.49731	0.660649	-0.25865
Minimum	36.53	28.67	32.72	32.65	30.03	26.36
Maximum	45.13	48.98	51.64	42.83	48.51	37.49
Count	11	11	11	11	11	11
Confidence Level(95.0%)	1.6311	5.110592	4.827362	2.112945	3.632747	2.731921

Source: Author Computation

F Value is at 3.46127 while P Value is 0.008 less than 0.05 and F critical is at 2.38627 as shown in Table 14. Hence as P value is less than 0.05 and F value is greater than F critical null hypotheses $\mu_{7=}$ is rejected and alternative hypotheses $\mu_{7\neq}$ is accepted signifying that the difference in mean value of Cost to Income (CTI) of the selected private banks is statistically significant.

Table 14: ANOVA

Source of Variation	*Sum of Squares*	*df*	*Means Square*	*F*	*P-value*	*F critical*
Between Groups	493.4217	5	98.68434	3.46127	0.00817	2.36827
Within Groups	1710.661	60	28.51102			
Total	2204.083	65				

Source: Author Computation

CURRENT ACCOUNT AND SAVING ACCOUNT RATIO (CASA)

CASA measures the deposits in current account and saving accounts to the total deposits of the banking institutions. A higher CASA ratio shows that bank has to incur low costs in order to obtain funds [Thakarshibhai, L 2014]. Table 11 shows that the highest mean value was registered by ICICI Bank at 45.80182 while the lowest mean value was registered by HDFC Bank and Federal Bank at 30.89273 respectivly. The maximum CASA percent was 60.4 per cent achieved by Kotak Mahindra Bank while the lowest was 26.86 per cent registered by HDFC Bank and Federal Bank during the period of the study.

Kurtosis Value is less than 1 for all the selected banks except for ICICI Bank indicating that the distribution is platykurtik while for ICICI Bank it is leptokurtic.

Table 15 Descriptive Statistics of CASA

Name of the Bank						
Year	HDFC	ICICI Bank	Axis Bank	Kotak Mahindra Bank	Induslnd Bank	Federal Bank
2011	52.69	45.05	41.09	30.04	27.15	26.86
2012	48.39	43.45	41.53	32.18	27.29	27.53
2013	47.43	41.89	44.37	29.23	29.32	27.16
2014	44.81	42.89	45.01	31.87	32.54	31.24
2015	44.03	45.46	44.78	36.35	34.12	30.75
2016	43.24	45.82	47.33	38.06	35.18	32.9
2017	48.03	50.36	51.41	43.99	36.85	32.81
2018	43.49	51.68	53.75	50.75	44	33.65
2019	42.37	49.61	44.37	52.49	43.14	32.4
2020	42.23	45.11	41.19	56.16	40.37	30.71
2021	46.1	42.5	42	60.4	41.8	33.81
Mean	30.89273	45.80182	45.16636	41.95636	35.61455	30.89273
Standard Error	0.784905	1.005473	1.259374	3.414165	1.863018	0.784905
Standard Deviation	2.603237	45.80182	4.17687	11.3235	6.178933	2.603237
Sample Variance	6.776842	1.005473	17.44625	128.2217	38.17921	6.776842
Kurtosis	-1.16616	45.80182	0.514958	-1.47009	-1.43374	-1.16616
Skewness	-0.63209	1.005473	1.131215	0.424891	-0.05354	-0.63209
Minimum	26.86	41.89	41.09	29.23	27.15	26.86
Maximum	33.81	51.68	53.75	60.4	44	33.81
Count	11	11	11	11	11	11
Confidence Level(95.0%)	1.748878	2.240334	2.80606	7.607233	4.151063	1.748878

Source: Author Computation

F Value is at 10.82632 while P Value is 0.000 less than 0.05 and F critical is at 2.38607 as shown in Table 16. Hence as P value is less than 0.05 and F value is greater than F critical null hypotheses $\mu_{8=}$ is rejected and alternative hypotheses $\mu_{8\neq}$ is accepted signifying that the difference in mean value of CASA of the selected private banks is statistically significant.

Table 16: ANOVA

Source of Variation	*Sum of Squares*	*df*	*Means Square*	*F*	*P-value*	*F critical*
Between Groups	1798.749	5	359.7498	10.82632	0.000	2.38607
Within Groups	1794.376	54	33.22919			
Total	3593.125	59				

Source: Author Computation

INTEREST INCOME PER BRANCH (IIPB)

Interest Income per Branch is an indicator that shows how much interest income is generated by each branch of the banking institutions and is an indicator of efficiency of operations at branch level [Naser, A 2014]. Table 17 shows that the highest mean value was registered by Kotak Mahindra Bank at 151400619.6 while the lowest mean value was registered by Federal Bank at 72641188.58 respectivly. The maximum Interest Income per Branch was Rs. 215510389.6 achieved by HDFC Bank while the lowest was Rs. 54536047.11 registered by Federal Bank during the period of the study.

The Skewness Value is less than -1 for all the selected bank except for Federal Bank indicating that the distribution is left skewed while the value is greater than 1 for Federal Bank indicating that the distribution is right skewed. Kurtosis Value is less than 1 for all the selected banks except for HDFC Bank and Axis Bank indicating that the distribution is platykurtik while for HDFC Bank and Axis Bank it is leptokurtic.

Table 17 Descriptive Statistics of IIPB

Year	HDFC	ICICI Bank	Axis Bank	Kotak Mahindra Bank	Induslnd Bank	Federal Bank
2011	100343465	102704835	109027379	130521869	119645246	54536047.11
2012	107257671.8	121884637.4	135602018.5	174091160.6	133979815	56834278.12
2013	114516243	129276119	139612606.1	184038663.6	139664646	55916280.15
2014	120880204.5	117714236.1	127565176.5	144910998.4	137101900.3	59165933.56
2015	120752128.6	121212691.1	137035912.3	142103318.7	120998300.9	59498538.09
2016	13323325.62	118515583.8	141143376	122912106.5	115806589	61858562.3
2017	146990366.5	111662431.6	134812826.6	129283658.9	120047252.5	69308175.72
2018	167623469.8	112935878.8	123630333	142280227.7	123433919.3	77898272.36
2019	193948756.6	130080411.6	135767335.1	159621384	133700603.6	91279172.66
2020	211987907.9	140492705.9	138328527.8	168310088.8	150616587.7	104598205
2021	215510389.6	150243583.4	138540032.7	167333339.8	143919586.6	108159609.3
Mean	137557629.9	123338464.9	132824138.5	151400619.6	130810404.3	72641188.58
Standard Error	17740042.08	4079525.217	2852119.147	6131794.447	3459933.09	6027877.193
Median	120880204.5	121212691.1	135767335.1	144910998.4	133700603.6	61858562.3
Standard Deviation	58837063.35	13530254.47	9459409.067	20336861.47	11475299.86	19992206.93
Sample Variance	3.4618E+15	1.83068E+14	8.94804E+13	4.13588E+14	1.31683E+14	3.99688E+14
Kurtosis	0.728204177	0.357532678	3.57156647	-1.321365697	-1.172791016	-0.631433824
Skewness	-0.555096417	0.653064294	-1.881015139	0.159957061	0.295975981	0.971182926

Range	202187064	47538748.36	32115997.03	61126557.09	34809998.65	53623562.17
Minimum	13323325.62	102704835	109027379	122912106.5	115806589	54536047.11
Maximum	215510389.6	150243583.4	141143376	184038663.6	150616587.7	108159609.3
Sum	1513133929	1356723114	1461065524	1665406816	1438914447	799053074.4
Count	11	11	11	11	11	11
Confidence Level(95.0%)	39527277	9089748.634	6354917.481	13662489.44	7709211.344	13430947.37

Source: Author Computation

Table 18 shows the F Value at 10.95591 while P Value is 0.000 less than 0.05 and F critical is at 2.38607. Hence as P value is less than 0.05 and F value is greater than F critical null hypotheses $\mu_{9=}$ is rejected and alternative hypotheses $\mu_{9\neq}$ is accepted signifying that the difference in mean value of IIPB of the selected private banks is statistically significant.

Table 18: ANOVA

Source of Variation	*Sum of Squares*	*df*	*Means Square*	*F*	*P-value*	*F critical*
Between Groups	3.79608E+14	5	7.59E+15	10.95591	0.000	2.38607
Within Groups	3.74206E+16	54	6.93E+14			
Total	7.53813E+16	59				

Source: Author Computation

NET PROFIT PER EMPLOYEE (NPE)

Net Profit per Employee is measurement of net profit attributed to per employee in a banking institutions and is an indicator of efficiency of employee of the banking institutions [Ibrahim, M. S 2011]. Table 19 shows that the highest mean value was registered by HDFC Bank at 1558153 while the lowest mean value was registered by Federal Bank at 864578.9 respectively. The maximum Net Profit per Employee was Rs. 2591036 achieved by HDFC Bank while the lowest was Rs. 387642.4 registered by ICICI Bank during the period of the study.

The Skewness Value is less than -1 for all the selected bank indicating that the distribution is left skewed. Kurtosis Value is less than 1 for all the selected banks indicating that the distribution is platykurtik.

Table 19 Descriptive Statistics of NPE

Name of the Bank						
Year	HDFC	ICICI Bank	Axis Bank	Kotak Mahindra Bank	Induslnd Bank	Federal Bank
2011	704261.9	904242	1281820	743801.9	823808.9	709895
2012	781992.1	1109420	1336633	904210.8	856576.2	888278.4
2013	973906.4	1341412	1366569	1007939	922607.2	833251.4
2014	1243802	1358303	1465739	939074.4	903157.2	801459.5
2015	1339160	1684888	1742317	1036655	938086.6	915900.7
2016	1404399	1347598	1640304	665322.8	991522.2	404462.7
2017	1725424	1183121	649854.1	775340.4	1132928	716629.2
2018	1981432	819281.3	46244.39	816860.7	1426193	725599.2
2019	2149495	387642.4	755022.3	1165265	1190057	1017329
2020	2244771	798519.2	219478.7	1188628	1440279	1234620
2021	2591036	1639765	841368	1347164	956269.9	1262943
Mean	1558153	1143108	1031395	962751	1052862	864578.9
Standard Error	189219.4	117619.2	171115.5	63539.95	65459.13	74097.98
Median	1404399	1183121	1281820	939074.4	956269.9	833251.4
Standard Deviation	627569.6	390098.6	567525.8	210738.2	217103.4	245755.2

Sample Variance	3.94E+11	1.52E+11	3.22E+11	4.44E+10	4.71E+10	6.04E+10
Kurtosis	-1.16541	-0.15664	-0.88216	-0.6364	-0.23439	0.394345
Skewness	0.186983	-0.43606	-0.55232	0.397298	1.021073	0.084686
Range	1886774	1297245	1696073	681840.9	616470.4	858479.9
Minimum	704261.9	387642.4	46244.39	665322.8	823808.9	404462.7
Maximum	2591036	1684888	1742317	1347164	1440279	1262943
Sum	17139680	12574191	11345350	10590262	11581485	9510368
Count	11	11	11	11	11	11
Confidence Level(95.0%)	421607	262071.8	381269	141575.8	145852	165100.6

Source: Author Computation

Table 20 shows the F Value at 4.339469 while P Value is 0.002161 less than 0.05 and F critical is at 2.38607. Hence as P value is less than 0.05 and F value is greater than F critical null hypotheses $\mu_{10=}$ is rejected and alternative hypotheses $\mu_{10\neq}$ is accepted signifying that the difference in mean value of IIPB of the selected private banks is statistically significant.

Table 20: ANOVA

Source of Variation	*Sum of Squares*	*Df*	*Means Square*	*F*	*P-value*	*F critical*
Between Groups	3.67E+12	5	7.34E+11	4.339469	0.002161	2.38607
Within Groups	9.13E+12	54	1.69E+11			
Total	1.28E+13	59				

Source: Author Computation

7.4 MARKET PROSPECT RATIO

EARNINGS PER SHARE (EPS)

Earnings per Share is attained by dividing the banking institutions net profit into the number of share outstanding [Prasad, R.G 2014]. Table 21 shows that the highest mean value was registered by Axis Bank at 51.52364 while the lowest mean value was registered by Federal Bank at 16.77182. The maximum Earnings per Share was Rs. 132.56 achieved by Axis Bank while the lowest was Rs. 1.13 was also registered by Axis Bank during the period of the study.

The Skewness Value is less than -1 for all the selected bank except for Federal Bank indicating that the distribution is left skewed and for Federal Bank it is right skewed. Kurtosis Value is less than 1 for all the selected banks indicating that the distribution is platykurtik.

Table 21 Descriptive Statistics of EPS

Name of the Bank						
Year	HDFC	ICICI Bank	Axis Bank	Kotak Mahindra Bank	Induslnd Bank	Federal Bank
2011	17	45.27	82.95	11.35	13.16	34.32
2012	22.11	56.11	102.94	14.69	17.2	45.41
2013	28.49	72.2	119.67	18.31	21.83	49
2014	35.47	84.99	132.56	19.62	26.85	9.81
2015	42.15	19.32	31.18	24.2	33.99	11.75
2016	48.84	16.75	34.59	11.42	39.68	2.77
2017	57.18	15.31	15.4	18.57	48.06	4.83
2018	67.76	10.56	1.13	21.54	60.19	4.62
2019	78.65	5.23	18.2	25.52	54.9	6.28
2020	48.01	12.28	5.99	30.88	63.75	7.76

2021	56.6	24.01	22.15	35.17	38.75	7.94
Mean	45.66	32.91182	51.52364	21.02455	38.03273	16.77182
Standard Error	5.745941	8.242432	14.59568	2.274601	5.219877	5.218884
Standard Deviation	19.05713	27.33705	48.40838	7.543998	17.31237	17.30908
Sample Variance	363.1742	747.3146	2343.371	56.91191	299.7182	299.6042
Kurtosis	-0.64274	-0.46578	-1.2509	-0.26356	-1.25756	-0.17449
Skewness	0.120371	0.970423	0.722356	0.520222	0.083655	1.251076
Minimum	17	5.23	1.13	11.35	13.16	2.77
Maximum	78.65	84.99	132.56	35.17	63.75	49
Count	11	11	11	11	11	11
Confidence Level(95.0%)	12.80275	18.36528	32.52119	5.068127	11.63061	11.6284

Source: Author Computation

Table 22 shows the F Value at 2.97085 while P Value is 0.018 less than 0.05 and F critical is at 2.36827. Hence as P value is less than 0.05 and F value is greater than F critical null hypotheses $\mu_{11=}$ is rejected and alternative hypotheses $\mu_{11\neq}$ is accepted signifying that the difference in mean value of EPS of the selected private banks is statistically significant.

Table 22: ANOVA

Source of Variation	*Sum of Squares*	*Df*	*Means Square*	*F*	*P-value*	*F critical*
Between Groups	10175.39	5	2035.079	2.97085	0.018402	2.36827
Within Groups	41100.94	60	685.0157			
Total	51276.34	65				

Source: Author Computation

DIVIDEND PER SHARE (DPS)

Dividend per Share refers to the dividend paid by the banking institution to every ordinary share outstanding [Chaudhary, K 2011]. Table 23 shows that the highest mean value was registered by HDFC Bank at 8.377273 while the lowest mean value was registered by Kotak Mahindra Bank at 0.636364. The maximum Dividend per Share was Rs. 23 paid by ICICI Bank while the lowest was Rs. 0 during the period of the study.

The Skewness Value is less than -1 for all the selected bank except for Federal Bank indicating that the distribution is left skewed and for Federal Bank it is right skewed. Kurtosis Value is less than 1 for all the selected banks except for Kotak Mahindra Bank indicating that the distribution is platykurtik while it is leptokurtic for Kotak Mahindra Bank.

Table 23 Descriptive Statistics of DPS

Year	HDFC	ICICI Bank	Axis Bank	Kotak Mahindra Bank	Induslnd Bank	Federal Bank
2011	16.5	14	14	0.5	2	8.5
2012	4.3	16.5	16	0.6	2.2	9
2013	5.5	20	18	0.7	3	9
2014	6.85	23	20	0.8	3.5	2
2015	8	5	4.6	0.9	4	2.2
2016	9.5	5	5	0.5	4.5	0.7
2017	11	2.5	5	0.6	6	0.9
2018	13	1.5	0	0.7	7.5	1

2019	15	1	1	0.8	7.5	1.4
2020	2.5	0	0	0	0	0
2021	0	2	0	0.9	5	0
Mean	8.377273	8.227273	7.6	0.636364	4.109091	3.154545
Standard Error	1.570891	2.551616	2.360277	0.076601	0.701356	1.119607
Standard Deviation	5.210056	8.462753	7.828154	0.254058	2.326136	3.713318
Sample Variance	27.14468	71.61818	61.28	0.064545	5.410909	13.78873
Kurtosis	-0.86963	-1.1362	-1.52665	3.570218	-0.42416	-0.84444
Skewness	0.050563	0.782168	0.565559	-1.61695	-0.01752	1.063124
Minimum	0	0	0	0	0	0
Maximum	16.5	23	20	0.9	7.5	9
Sum	92.15	90.5	83.6	7	45.2	34.7
Count	11	11	11	11	11	11
Confidence Level(95.0%)	3.500163	5.685355	5.259026	0.170678	1.562719	2.494641

Source: Author Computation

Table 24 shows the F Value at 3.760624 while P Value is 0.004 less than 0.05 and F critical is at 2.36827. Hence as P value is less than 0.05 and F value is greater than F critical null hypotheses $\mu_{12=}$ is rejected and alternative hypotheses $\mu_{12\neq}$ is accepted signifying that the difference in mean value of EPS of the selected private banks is statistically significant.

Table 24: ANOVA

Source of Variation	*Sum of Squares*	*Df*	*Means Square*	*F*	*P-value*	*F critical*
Between Groups	561.922	5	112.3844	3.760624	0.004994	2.36827
Within Groups	1793.07	60	29.88451			
Total	2354.992	65				

Source: Author Computation

EARNING YIELD (EY)

Earning Yield is the Earnings per Share of a banking institutions divided by the current market price of share. A high ratio indicates that stock is overvalued while a low ratio shows that the stock is undervalued [Malik.S 2014].Table 25 shows that the highest mean value was registered by Federal Bank at 0.091818 while the lowest mean value was registered by Kotak Mahindra Bank at 0.022727. The maximum Earning Yield was 0.19 for Federal Bank while the minimum was Rs. 0 for Axis Bank during the period of the study.

The Skewness Value is less than -1 for HDFC Bank, ICICI Bank and Axis Bank indicating that the distribution is left skewed and Kotak Mahindra Bank, Induslnd Bank and Federal Bank it is right skewed. Kurtosis Value is less than 1 for HDFC Bank, ICICI Bank, Axis Bank and Kotak Mahindra Bank indicating that the distribution is platykurtik while it is leptokurtic for Induslnd Bank and Federal Bank.

Table 25 Descriptive Statistics of EY

Name of the Bank						
Year	HDFC	ICICI Bank	Axis Bank	Kotak Mahindra Bank	Induslnd Bank	Federal Bank
2011	0.04	0.04	0.06	0.02	0.05	0.08
2012	0.04	0.06	0.09	0.03	0.05	0.11
2013	0.05	0.07	0.09	0.03	0.05	0.1
2014	0.05	0.07	0.09	0.03	0.05	0.1
2015	0.04	0.06	0.06	0.02	0.04	0.09

2016	0.05	0.07	0.08	0.02	0.04	0.06
2017	0.04	0.06	0.03	0.02	0.03	0.05
2018	0.04	0.04	0	0.02	0.03	0.05
2019	0.03	0.01	0.02	0.02	0.03	0.07
2020	0.06	0.04	0.02	0.02	0.18	0.19
2021	0.04	0.04	0.03	0.02	0.04	0.11
Mean	0.043636	0.050909	0.051818	0.022727	0.053636	0.091818
Standard Error	0.002439	0.005633	0.009983	0.001408	0.012882	0.011895
Standard Deviation	0.00809	0.018684	0.033111	0.004671	0.042725	0.039451
Sample Variance	6.55E-05	0.000349	0.001096	2.18E-05	0.001825	0.001556
Kurtosis	0.636574	0.762397	-1.61517	-0.76389	9.91834	3.442729
Skewness	0.537903	-0.94685	-0.11403	1.189373	3.087683	1.530852
Minimum	0.03	0.01	0	0.02	0.03	0.05
Maximum	0.06	0.07	0.09	0.03	0.18	0.19
Count	11	11	11	11	11	11
Confidence Level(95.0%)	0.005435	0.012552	0.022245	0.003138	0.028703	0.026503

Source: Author Computation

Table 26 shows the F Value at 6.755457 while P Value is 0.000 less than 0.05 and F critical is at 2.36827. Hence as P value is less than 0.05 and F value is greater than F critical null hypotheses $\mu_{13=}$ is rejected and alternative hypotheses $\mu_{13\neq}$ is accepted signifying that the difference in mean value of EY of the selected private banks is statistically significant.

Table 26: ANOVA

Source of Variation	*Sum of Squares*	*Df*	*Means Square*	*F*	*P-value*	*F critical*
Between Groups	0.027667	5	0.005533	6.755457	0.000	2.36827
Within Groups	0.049145	60	0.000819			
Total	0.076812	65				

Source: Author Computation

8. CONCLUSION

The preset study focuses upon the financial performance of selected private banks, part of the Commercial Banks in India which act as a financial intermediaries the financial system of the country. Banks are the key components of the financial system of the country which acting as a catalyst capital formation which ultimately leads to economic progression.

The data analysis and interpretation of the different parameters of financial performance of selected private banks can be summarized in the four parameters. In terms of Return Ratio HDFC Bank has the highest mean in terms of Return on Capital Employed and Return on Equity while Kotak Mahindra Bank has the highest mean in terms of Return on Assets. Other selected bank mean values was also satisfactory during the period of study except for Federal Bank which has the lowest mean value in Return on Capital Employed and Return on Assets while Axis Bank had the lowest mean in Return on Equity.

In terms of Profitability Position HDFC Bank had registered the highest mean in terms of Net Profit Margin and Operating Profit Margin and falls close to second in terms of Net Interest Margin where Kotak Mahindra Bank registered the highest mean while Federal Bank registered the lowest mean in terms of Net Profit Margin, Axis Bank for operating profit margin and ICICI Bank for net interest margin.

In terms of Operational Efficiency ICICI Bank had the highest mean CASA Ratio followed by Axis Bank while HDFC Bank and Federal Bank had the lowest mean CASA Ratio during the period of time. However the Cost to Income was highest

for Axis Bank signifying that bank is incurring more cost to earn income when compared to other selected banks during the period of study while the lowest mean Cost to Income was registered by Federal Bank. Income per Branch mean indicates that Kotak Mahindra Bank is earning highest income as compared to counterparts while HDFC is earning highest income over net profit per employee.

In terms of market prospect Federal Bank had the highest earning yield mean while Kotak Mahindra Bank had the lowest mean Earning Yield. Axis Bank provided highest mean Earning per Share and HDFC Bank followed by ICICI Bank provided highest mean Dividend per Share. During this period of study Federal Bank had the lowest mean earning per Share and had the lowest Dividend per Share. In new generation private banks HDFC Bank, ICICI Bank, Axis Bank and Kotak Mahindra Bank is found at satisfactory level. However from the above analysis the performance of Induslnd Bank and Federal Bank is found less satisfactory as compared to other selected private banks.

The ANOVA test findings lead to rejection of all the null hypotheses $\mu_{1=}\ \mu_{2=}\ \mu_{3=}\ \mu_{4=}\ \mu_{5=}\ \mu_{6=}\ \mu_{7=}\ \mu_{8=}\ \mu_{9=}\ \mu_{10=}\ \mu_{11=}\ \mu_{12=}\ \mu_{13=}$ while alternative hypotheses $\mu_{1\neq}\ \mu_{2\neq}\ \mu_{3\neq}\ \mu_{4\neq}\ \mu_{5\neq}\ \mu_{6\neq}\ \mu_{7\neq}\ \mu_{8\neq}\ \mu_{9\neq}\ \mu_{10\neq}\ \mu_{11\neq}\ \mu_{12\neq}\ \mu_{13\neq}$ were accepted indicating that difference in mean values of selected banks is statistically significant.

9. PRACTICAL IMPLICATIONS

The practical implication of the study is that it undertakes an appraisal of leading private sector banks in India over a period of 11 years, from 2011 and concluding in 2021. This ensures the robustness of evaluations and subsequent conclusions that are formulated as a result of the study. The study evaluates the banks scrupulously, looking at variables pertaining to their returns, profitability, operational efficiency, and market potential.

The stability and growth of a nation's economy rests in large part on the shoulders of its banking system. What was formerly a public sector bank-dominated landscape in India's banking system is beginning to see an uptick in private sector institutions. The current study will provide both internal and external stakeholders with a comprehensive view that will aid them in the formulation of effective decisions and policies as a result of this predicament. According to the findings of the study, despite the fact that private sector banks as a whole are in good financial health, the performance of Induslnd and federal banks needs to be rejuvenated.

10. LIMITATIONS/FURTHER SCOPE OF THE STUDY

The research is confined to only six private sector banks from FY 2011 to FY 2021. However, a wider variety of carefully selected institutions would provide a more accurate reflection of the broader landscape. Since the Covid-19 scenario and the effect of the loan moratorium on the banks' financials were not taken into account in the analysis, the generic nature of the conclusions can be backed up in future research to look at the effect when data about it becomes available.

Some other indicators used to gauge financial performance might be the focus of a potential future study. Researching additional factors affecting private sector banks and its subsequent comparisons with public sector banks will allow for a more comprehensive assessment in future research.

DATA AVAILABILITY

The data used to support this study are available from the corresponding author upon request.

CONFLICT OF INTERESTS

The authors declare that they have no conflicts of interest.

ACKNOWLEDGMENTS

None.

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