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Financial Performance Analysis of Private Sector Banks in India: An EAGLE Model Approach

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Abstract
Healthy economy is depend upon financial service sector of a nation. Sheduled commercial banks occupy an important place in this sector by lending funds and creating saving habits of people. The aim of this study to evaluate financial performance of selected private sector banks of india by using EAGLE model. Private sector banks such as Axis Bank, HDFC Bank, ICICI Bank, Indusind Bank and Kotak Mahindra Bank was selected on the basis of market capitalisation. To achive this objective financial data of selected sample was retrived from bank's annual reports for the period from 2009-10 to 2018-19. Ranking the banks with the help of EAGLE model and ANOVA test was used to measure variance amongs the financial variables of a banks. The finding of this study shows that HDFC bank secured first rank in terms of earning, assets, liquidy and equity parameters where as kotak mahindra bank also secured first rank in terms of earning, growth and equity. Indusind bank also secured first rank in term of growth. ICICI bank earned last rank in terms of earing, assets and growth overall HDFC bank secured first rank followed by Kotak mahindra bank, Indusind Bank, Axis bank and ICICI Bank. All the selected private sector banks has been maintained the capital adequacy ratio as per RBI norms. The tabulated values of all the variables are less than significant value 0.05 at 95% confidence level so null hypothesis of variables of this study are rejected, that means there are statistically significant difference in all the selected samples.

Keywords: *Financial Performance, EAGLE Model, Private Sector Banks*

1. Introduction

Financial Sector play a pivotal role for continuous development and growth of an economy in which banking sector play a very important role. In recent years indian banking sector facing some the major problems in terms of assets liability, recognisation of NPAs, poor dicision making and banking fraud and this major problems is slowing down the economy of india. As per the RBI data indian banks has 1.8 trillion ruppes of gross NPA and total fraud of 71,543 crores in 2018-19 and increasing 74% to comparing with previous year and these major problems slowing down the profitability of indian banks. The financial crisis of US banks in 2008-09 and failure of large banks in US had hurt many economics beyong geographical borders and forcing many banks in bankruptcy and snatching away the livelihood of millions across the globe (Jain, Bhimaraya, & K.P., 2019). Private sector banks fall under sheduled commercial banks and play a very critical role for smooth and healthy economy by providing resources to individuals, farmers and industrialist. Private sectors banks is known as their smooth banking services to compare with public sector banks. In recent years private sector banks of india faces problems in terms of assets quality, earingng and growth and its arise obstacles for profitablity of private sector banks. Its time to evaluate financial performance of private sector banks because of these major problem. This research paper is analysed financial performance of selected five private sector banks by EAGLE model. Dr. John Vong is the founder of EAGLE model and his views, articles and journals about banking profitability has been published and presented in US and Europe. Earning ability, Assets quality, Growth, Liquidity and Eaquity are the main parameters of EAGLE model and every main parameters has sub-parameters.

2. Literature Review

(Baidoo, Amankwah, & Tobazza, 2014) evaluate financial performance of seven banks of Ghana by the level of capital adequacy, assets, management, earnings, liquidity and sensitivity. They found that the level of capital adequacy and assets in most cases influences the level of loans and advances the bank would give out to its clients and business and a bank with better capital adequacy can afford to invest in other ventures and meet its client 's financial requirement in terms of making loans available to them. They also indicated that rate of growth and competition amongs the banks can make banks to increse investment rate to attract more public deposits. (Dr.Srinivasan & Saminathan, 2016) judged the financial performance of total twenty five public sector banks, eighteen private sector banks and eight foreign sector banks from 2012-2014 with CAMEL model with the t test, rank test and anova test as a statastical tools and

indicated that banks with low ranking need to improve their financial performance to come up in competition with top ranked banks. Their study also suggested that banks with least ranking need to improve their performance to come up to the desired standars. (Williams, 2011) determined capital adequancy pattern with error correction model and indicated that capital adequacy can be improved if better attention is given to mactro economic factors of a country. (Ebrahimi, Bahraminasab, & Fard, 2017) estimated performance assessment of bank listed on tehran stock exchange from 2010 to 2015 and indicated that capital and assets have significant impact on financial performance of banks and liquidity has negetive impact on banks financial performance. (Ebrahimi, Bahraminasab, & Fard, 2017) also suggested that stock return and Tobin's Q shoud also be used for ranking of a banks on the basis of financial performance. (Bokan, Gerali, Gomes, Jacquinot, & Pisani, 2018) used EAGLE-FLI A macroeconomic model of banking and financial institutions in euro area and concluded that banking sector can be sorces of business cycle lopsided and overabundance across countries in a monetory union. (Sonaje & Nerlekar, 2017) used CAMEL model to evaluate financial performance of selected indian banks and conclude that private sector bank have outperformed then public sector bank on all the parameters of CAMEL rating model. (Annapurna & Manchala, 2017) empirically evaluated the performance of top three public sector banks in india namely state bank of india, bank of baroda and punjab national bank using balanced scorecard framework during the period from 2006 to 2015. Profitability of the samples was measured in terms of return on assets and return on equity. Their study showed there is a statistically significant relationship between return on assets and capital adequacy ratio, net non performing assets ratio, numbers of ATMs, number of skilled employees. Their study found that the overall performance of the select public sector banks during the study period was not remarkable as traditional methods of financial performance analysis are lopsided and focus on short term earning, the management of public sector banks shoud focus on holistic performance measure for measuring the overall performance. (Jain, Metri, & Rao, 2019) examined the effect of determinants influencing the performance of 45 commercial banks in india post the global financial crisis for the period from 2010 to 2016. Their study used random effect model on balanced panel data. Their resarch study conclude that the bank specific explanatory variables like the management efficiency, asset quality, earning quality and liquidity are able to explain significant part of profitability in indian commercial banks and also banks shoud pay attention towards employing funds in more profitable instruments while maintaining investments to total assets. Their result suggested that private sector banks performed better than public sector banks. (Budhedeo & Pandya, 2018) examined financial performance of all twenty seven public sector banks and evaluated on the basis of financial parameters like bank profitability, productivity, efficiency, bank health and bank credit quality in two phases period from 1995-96 to 2006-07 and 2007-08 to 2016-17. Their study finded that banks profitability fell drastically with prominent oscillations over the post financial crisis phase and during the post global financial crisis phase the steep escalation in the burden of NPAs over stressed the public sector bank group and adversely affected its overall performance.

3. Objectives of the Study

The main purpose of this research study is to rank the private sector banks on the bases of EAGLE model and also analyze, evaluate and compare the financial performance of selected private sector bank with different parameters like earning, assets, growth, liquidity and equity.

4. Methodology

This present study has been done on five private sector banks namely Axis bank, HDFC bank, ICIC bank, Indusind bank and kotak mahindra bank and selected on the basis of market capitalisation. This research period cover total ten years starting from 2009-10 to 2018-19 for selected private sector bank. Secondary data has been used for this research study and retrived from annual reposts of the banks. Ratio analysis has been used as accounting tools and one way anova test has been used as statistical tool. We tested all financial parameters of EAGLE model at 95% confidence level. These all selected private sector banks were ranked on the basis of parametrs and sub parameters of EAGLE model.

5. Hypothesis of the study

(H0) There is no significant difference among the performance of Axis bank,HDFC bank,ICICI bank, Indusind bank and Kotak mahindra bank in terms of

[1] Earning ratios - return on assets, interest income to total income and interest income to total assets.
[2] Asset Quality ratios – gross NPA, net NPA and government securities to total investment ratio.
[3] Growth ratios – growth of deposits and growth of advances.
[4] Liquidity ratios – liquid assets to total assets, current assets to total assets and government securities to total assets.
[5] Equity ratios – capital adequacy ratio and total advances to total assets.

6. Analysis and Result

6.1 Earning

The earning of banks reflects business of a banks, profitability and growth of bank. Table 1 shows that return on assets of sample over the period from 2009-10 to 2018-19. All banks except Indusind Bank earned continuous RoA 1.14% to 1.90% from 2009-10 to 2014-15 after that ICICI bank shows continuous decrease in RoA from 1.10% to 0.34% in the period from 2015-16 to 2018-19 because of decrease in net profit of a bank and secured fifth rank in terms of RoA. Indusind bank earned maximum RoA 2.37% in 2009-10 and also secured first rank in terms of RoA. In 2017-18 Axis bank earned least RoA 0.06% because of huge decrease in net profit of a bank. Kotak Mahindra bank secured first position in RoA parameter at last ten year average (1.93%) followed by HDFC bank (1.63%), Indusind bank (1.55%), Axis bank (1.18%) and ICICI bank (1.09%).

Table 1: Return on Assets (RoA)

Year	RoA				
	Axis	**HDFC**	**ICICI**	**Indus.**	**Kotak**
2009-10	1.37	1.34	0.95	1.14	2.37
2010-11	1.37	1.43	1.14	1.46	2.12
2011-12	1.47	1.53	1.26	1.57	1.98
2012-13	1.53	1.68	1.42	1.63	1.88
2013-14	1.63	1.73	1.47	1.81	2.01
2014-15	1.59	1.76	1.48	1.90	2.04
2015-16	1.56	1.75	1.10	1.63	1.43
2016-17	0.64	1.70	1.03	1.60	1.78
2017-18	0.06	1.67	0.68	1.62	1.83
2018-19	0.61	1.72	0.34	1.18	1.82
Average	**1.18**	**1.63**	**1.09**	**1.55**	**1.93**
Rank	**4**	**2**	**5**	**3**	**1**

Table 2 revels interest income to total income earned by the banks from 2008-09 to 2018-19. HDFC bank earned continuous increase in II/TI from 79.41% to 85.05% in the period from 2009-10 to 2016-17 and earned first rank in terms of II/TI. The maximum percentage of II/TI earned by Axis bank (80.62% in 2015-16), HDFC bank (85.05% in 2016-17), ICICI bank (62.19% in 2013-14), Indusind bank (84.12% in 2011-12) and Kotak bank (72.78% in 2015-16). HDFC bank secured first rank followed by Indusind, Axis, Kotak and ICICI bank in terms of interest income to total income ratio of a bank.

Table 2: Interst Income to Total Income (II/TI)

Year	II/TI				
	Axis	**HDFC**	**ICICI**	**Indus.**	**Kotak**
2009-10	74.59	79.41	50.59	83.02	45.77
2010-11	76.44	81.38	48.84	83.41	55.68
2011-12	80.03	82.47	57.00	84.12	65.09
2012-13	79.92	83.41	60.49	83.67	67.95
2013-14	79.83	83.68	62.19	81.36	69.41
2014-15	80.17	84.15	60.92	80.13	62.03
2015-16	80.62	84.93	58.48	78.26	72.78
2016-17	78.43	85.05	53.74	77.55	65.69
2017-18	79.71	84.16	52.25	78.44	64.75
2018-19	79.80	84.73	54.82	79.77	65.11
Average	**78.96**	**83.34**	**55.93**	**80.97**	**63.43**
Rank	**3**	**1**	**5**	**2**	**4**

Table 3: Intrerst Income to Total Assets (II/TA)

Year	II/TA				
	Axis	**HDFC**	**ICICI**	**Indus.**	**Kotak**
2009-10	8.27	8.80	7.60	7.65	11.53
2010-11	6.24	7.21	5.63	7.87	8.10
2011-12	7.70	8.26	6.28	9.30	9.17
2012-13	7.98	8.79	6.65	9.53	9.35
2013-14	7.95	8.44	6.61	9.48	9.80
2014-15	7.64	8.34	6.65	8.88	8.96
2015-16	7.78	8.64	6.45	8.26	8.47
2016-17	7.38	8.21	6.18	8.06	8.08
2017-18	6.62	7.73	5.52	7.79	7.44
2018-19	6.88	8.13	5.81	8.01	7.57
Average	**7.44**	**8.26**	**6.34**	**8.48**	**8.85**
Rank	**4**	**3**	**5**	**2**	**1**

The table 3 reveals II/TA ratio of selected private sector banks in the period from 2009-10 to 2018-19. There is a decrease in percentage of II/TA ratio of Axis bank: 7.98% to 6.62% from 2012-13 to 2017-18, ICICI bank: 6.65% to 5.52% from 2014-15 to 2017-18, Indusind bank: 9.53% to 7.79% from 2012-13 to 2017-18 and Kotak Mahindra bank: 9.80% to 7.44% from 2013-14 to 2017-18. Kotak Mahindra bank secured first position in II/TA parameter.

Table 4: Calculation of Group Rank

Ratio	Axis	HDFC	ICICI	Indus.	Kotak
RoA	4	2	5	3	1
II/TI	3	1	5	2	4
II/TA	4	3	5	2	1
Avg	3.67	2.00	5.00	2.33	2.00
Rank	4	1	5	3	1

The table 4 showed rank status of selected banks in sub parameters of earning. HDFC bank and Kotak Mahindra bank secured first position in earning parameter followed by Indusind bank, Axis bank and ICICI bank.

Table 5: Result of ANOVA Test

Earning	SS	df	MS	F	P-value
(1) RoA					
Between Groups	4.698	4	1.174	10.324	0.000
Within Groups	5.119	45	0.114		
Total	9.817	49			
(2) II/TI					
Between Groups	5877.514	4	1469.378	78.827	0.000
Within Groups	838.830	45	18.641		
Total	6716.344	49			
(3) II/TA					
Between Groups	40.077	4	10.019	16.273	0.000
Within Groups	27.706	45	0.616		
Total	67.782	49			

The table 5 reveals hypotheses testing result of selected private sector banks in RoA, II/TI and II/TA parameters at 95% confidence level. The calculated value of RoA, II/TI ratio and II/TA ratio were 0.0000, 0.0000 and 0.0000 respectively which is less then significant value 0.05 that means there is a statistically difference among selected private sector banks. The F values of RoA, II/TI ratio and II/TA ratio were 10.324, 78.827 and 16.273 respectively. The current result shows that null hypothesis is rejected.

6.2 Assets

Table 6: Gross NPA

Year	Gross NPA				
	Axis	HDFC	ICICI	Indus.	Kotak
2009-10	1.25	1.43	4.50	1.23	2.20
2010-11	1.11	1.05	4.06	1.01	1.10
2011-12	1.06	1.00	3.62	0.98	1.10
2012-13	1.20	0.95	3.13	1.03	1.10
2013-14	1.34	0.98	3.03	1.12	1.60
2014-15	1.43	0.93	3.78	0.81	1.60
2015-16	1.75	0.94	9.10	0.87	2.10
2016-17	5.42	1.05	7.80	0.93	2.20
2017-18	6.77	1.30	10.05	1.17	2.00
2018-19	5.26	1.36	7.47	2.10	1.90
Average	**2.66**	**1.10**	**5.65**	**1.13**	**1.69**
Rank	**4**	**1**	**5**	**2**	**3**

The table 6 indicates that ICICI bank reduced gross NPA ratio from 10.05% to 7.47% from 2017-18 to 2018-19. Highest percentage of gross NPA was registered by Axis bank: 6.77% in 2017-18, HDFC bank: 1.43% in 2009-10, ICICI bank : 10.05% in 2017-18, Indusind bank: 2.10 in 2018-19 and Kotak Mahindra bank: 2.20 in year 2009-10 and 2016-17.HDFC bank (1.10%) registered first position in terms of Gross NPA ratio followed by Indusind bank (1.13%), Kotak Mahindra bank (1.69%), Axis bank (2.66%) and ICICI bank (5.65%).

Table 7: Net NPA

Year	Net NPA				
	Axis	HDFC	ICICI	Indus.	Kotak
2009-10	0.40	0.31	2.12	0.50	1.10
2010-11	0.29	0.19	1.11	0.28	0.40
2011-12	0.28	0.18	0.73	0.27	0.50
2012-13	0.36	0.20	0.77	0.31	0.50
2013-14	0.44	0.28	0.97	0.33	0.90
2014-15	0.46	0.26	1.61	0.31	0.80
2015-16	0.73	0.28	2.67	0.36	0.90
2016-17	2.26	0.33	4.89	0.39	1.10
2017-18	3.40	0.40	5.43	0.51	0.90
2018-19	2.06	0.39	2.29	1.21	0.70
Average	**1.07**	**0.28**	**2.26**	**0.45**	**0.78**
Rank	**4**	**1**	**5**	**2**	**3**

Table 8: Govt. Securities to Total Invetments

Year	GS/I				
	Axis	**HDFC**	**ICICI**	**Indus.**	**Kotak**
2009-10	61.20	87.25	39.29	81.92	54.38
2010-11	61.51	76.34	34.96	73.96	55.56
2011-12	62.87	78.74	41.42	81.68	57.14
2012-13	63.72	76.52	42.93	71.78	57.84
2013-14	61.10	79.15	42.88	71.33	54.41
2014-15	60.94	73.29	44.07	72.03	58.86
2015-16	71.96	81.42	50.23	82.54	67.97
2016-17	70.22	77.06	46.03	85.70	63.02
2017-18	66.23	78.99	48.45	80.61	68.49
2018-19	67.12	83.53	47.13	82.08	66.89
Average	**64.69**	**79.23**	**43.74**	**78.36**	**60.46**
Rank	**3**	**1**	**5**	**2**	**4**

Table 7 shows that net performing assets to net advances ratio of all the selected private sector banks from the period 2009-10 to 2018-19. HDFC bank also registered lowest percentage of net NPA 0.39% , followed by Indusind bank:0.45%, Kotak Mahindra bank 0.78%, Axis bank: 2.06% and ICICI bank: 2.29% in 2018-19. HDFC bank also registered first rank in terms of net NPA ratio. Table 8 reveals government securities to total investments during the research period. This ratio indicates safe and low risk investment of banks over the period. It can be seen from this research study percentage of GS/I of HDFC bank was increased from 77.06% to 83.53% during the period from 2016-17 to 2018-19. Highest percentage of GS/I was registered by Axis bank: 71.96% in 2015-16, HDFC bank: 87.25% in 2009-10, ICICI bank: 50.23% in 2015-16, Indusind bank: 85.70% in 2016-17 and Kotak Mahindra bank: 68.49% in 2017-18. It can be seen from table 8 HDFC bank secured first rank in sub parameter of safety return from investment and low risk exposure in government securities to total investments over the last ten years followed by Indusind bank,Axis bank, Kotak Mahindra bank and ICICI bank.

Table 9: Calculation of Group Rank

Ratios	Axis	HDFC	ICICI	Indus.	Kotak
Gross NPA	4	1	5	2	3
Net NPA	4	1	5	2	3
GS/I	3	1	5	2	4
Avg	3.67	1	5	2	3.33
Rank	4	1	5	2	3

Table 9 shows that HDFC bank registered first position in asset quality parameter of EAGLE model followed by Indusind bank, Kotak Mahindra bank, Axis bank and ICICI bank.

Table 10: Result of ANOVA Test

Assets	SS	df	MS	F	P-value
(1) Gross NPA					
Between Groups	144.676	4	36.169	14.566	0.0000
Within Groups	111.737	45	2.483		
Total	256.413	49			
(2) Net NPA					
Between Groups	24.541	4	6.135	7.394	0.0001
Within Groups	37.341	45	0.830		
Total	61.881	49			
(3) GS/I					
Between Groups	8533.833	4	2133.458	93.523	0.0000
Within Groups	1026.549	45	22.812		
Total	9560.382	49			

Table 10 shows hypothesis result of assets quality parameter of EAGLE model at 95% confidence level. There is a statistically difference among Axis bank, HDFC bank, ICICI bank, Indusind bank and Kotak Mahindra bank's performance in gross npa ratio,net npa ratio GS/I ratio as the calculated value 0.0000, 0.0010 and 0.0000 are less then 0.05.The F values are 14.566, 7.394 and 93.523. From the above result null hypothesis of gross npa ratio, net npa ratio and GS/I ratio are rejected which means there is a significant difference among all selected private sector bank's pattern.

6.3 Growth

The performance of growth of deposits and advances of banks shows how the employees of banks are working for better financial performance. Table 11 depicts that ICICI bank registered negative deposit growth -7.50% in 2009-10 but then showing variation throughout the time period of the study. Highest percentage of deposit growth registered by Axis bank: 33.93% in 2010-11, HDFC bank: 24% in 2013-14, ICICI bank: 16.56% in 2015-16, indusind bank: 36.10% in 2016-17 and Kotak Mahindra bank: 86.63% in 2015-16. In growth of deposit parameter Kotak Mahindra bank secured first position. Table 12 showing advances growth of selected banks during the period from 2009-10 to 2019-20. ICICI bank in the initial period of the study showed negative growth of advances -15.16% in 2009-10 also showed step downfall in percentage of advances growth 19.40% to 6.65% during the period 2010-11 to 2016-17.

Kotak Mahindra bank registered highest percentage of advances growth 63.36% in 2015-16. Indusind bank registered first position in advances growth parameter followd by Kotak Mahindra bank, HDFC bank, Axis bank and ICICI bank.

Table 11: Growth of Deposits

Year	GoD				
	Axis	**HDFC**	**ICICI**	**Indus.**	**Kotak**
2009-10	20.38	21.00	-7.50	20.80	57.86
2010-11	33.93	16.90	11.70	28.66	25.17
2011-12	16.31	18.30	13.30	23.27	33.49
2012-13	14.77	20.10	14.50	27.75	35.45
2013-14	11.22	24.00	13.43	11.80	15.27
2014-15	14.77	22.70	8.93	22.53	27.95
2015-16	11.02	17.80	16.56	25.45	86.63
2016-17	15.76	17.80	16.28	36.10	14.41
2017-18	9.00	22.50	14.50	19.80	22.94
2018-19	20.91	17.00	16.40	28.51	17.56
Average	**16.81**	**19.81**	**11.81**	**24.47**	**33.67**
Rank	**4**	**3**	**5**	**2**	**1**

Table 12: Growth of Advances

Year	GoA				
	Axis	**HDFC**	**ICICI**	**Indus.**	**Kotak**
2009-10	27.94	27.00	-15.16	30.31	32.12
2010-11	36.48	26.80	19.40	27.32	38.74
2011-12	19.21	22.20	17.30	34.00	28.85
2012-13	16.03	22.70	14.40	26.40	24.67
2013-14	16.81	26.40	16.69	24.33	8.20
2014-15	22.17	20.60	14.41	24.84	23.62
2015-16	20.52	19.40	12.32	28.54	63.36
2016-17	10.12	19.40	6.65	27.89	15.42
2017-18	18.00	18.70	10.40	28.19	23.25
2018-19	12.54	24.50	14.50	28.59	18.18
Average	**19.98**	**22.77**	**11.09**	**28.04**	**27.64**
Rank	**4**	**3**	**5**	**1**	**2**

Table 13 depicts the rank status of selected banks in growth parameter of EAGLE model and Kotak Mahindra bank secured first position.

Table 13: Calculation of Group Rank

Ratios	Axis	HDFC	ICICI	Indus.	Kotak
GoD	4	3	5	2	1
GoA	4	3	5	1	2
Average	4	3	5	2	2
Rank	4	3	5	1	1

Table 14 depicts the hypothesis testing of deposit growth and advances growth parameters at 95% confedence level. The tabulated value of deposit growth is 0.0015 and advances growth is 0.0007 which is less then significant value 0.05. The F value of deposit growth is 5.213 and advances growth is 5.913. The result showed that there is a significant difference among Axis bank, HDFC bank, ICICI bank, Indusind bank and Kotak Mahindra bank in growth parameters. So, null hypothesis were rejected in both parameters.

Table 14: Result of ANOVA Test

Growth	SS	df	MS	F	P-value
(1) GoD					
Between Groups	2755.874	4	688.968	5.213	0.0015
Within Groups	5947.696	45	132.171		
Total	8703.570	49			
(2) GoA					
Between Groups	1919.409	4	479.852	5.913	0.0007
Within Groups	3651.544	45	81.145		
Total	5570.953	49			

6.4 Liquidity

The liquidity of banks indicates banks ability to pay their liability when its mature. Liquid assets to total deposits, cash to total assets and government securities to total assets are sub-parameters of liquidity position of banks. The table 15 indicates that HDFC bank recorded continuous decrease in percentage of LA/TD ratio from 10.87% to 7.67% in the period from 2013-14 to 2016-17. Kotak Mahindra bank also recorded continuous decrease in percentage of LA/TD ratio from 11.49% to 9.15% during the period 2009-10 to 2012-13. There is a continuous increase in percentage of LA/TD ratio of Axis bank from 6.33% to 11.32% in the period from 2011-12 to 2014-15. ICICI bank secured first position with average of last ten years LA/TD ratio 14.89% followed by Indusind bank, Kotak Mahindra bank, HDFC bank and Axis bank.

Table 15: Liquid Assets to Total Deposits

Year	LA/TD				
	Axis	HDFC	ICICI	Indus.	Kotak
2009-10	10.76	17.98	19.52	9.75	11.49
2010-11	11.32	14.33	15.20	11.71	10.96
2011-12	6.33	8.59	14.60	13.08	9.81
2012-13	8.13	9.30	15.68	12.66	9.15
2013-14	10.19	10.87	13.42	11.19	11.67
2014-15	11.32	8.11	12.34	14.54	9.48
2015-16	9.41	7.16	14.42	10.87	8.53
2016-17	12.28	7.67	15.70	14.72	16.45
2017-18	9.64	15.61	15.19	8.72	12.76
2018-19	12.35	8.87	12.83	7.59	13.91
Average	**10.17**	**10.85**	**14.89**	**11.48**	**11.42**
Rank	**5**	**4**	**1**	**2**	**3**

The table 16 shows C/TA ratio over the period from 2009-10 to 2018-19. Kotak Mahindra bank registered continuous decrease in percentage of C/TA ratio from 3.80% to 1.92% in the period from 2009-10 to 2012-13. Similarly ICICI bank also registered continuous decrease in percentage of C/TA ratio from 5.69% to 2.86% in the period from 2009-10 to 2012-13. HDFC bank registered highest percentage of C/TA ratio 9.49% in 2017-18. HDFC bank secured first position in C/TA ratio on the basis of last ten years average (5.48%).

Table 16: Cash with bank to Total Assets

Year	C/TA				
	Axis	HDFC	ICICI	Indus.	Kotak
2009-10	5.25	6.94	5.69	5.94	3.80
2010-11	5.72	9.03	3.98	5.38	2.87
2011-12	3.75	4.40	3.35	5.04	2.20
2012-13	4.34	3.59	2.86	4.43	1.92
2013-14	4.41	5.03	2.96	5.07	2.42
2014-15	4.24	4.53	3.13	3.70	2.66
2015-16	4.09	3.95	2.97	3.16	2.88
2016-17	5.05	4.25	3.23	4.34	2.72
2017-18	5.04	9.49	2.96	4.95	2.65
2018-19	4.31	3.62	3.07	3.59	2.76
Average	**4.62**	**5.48**	**3.42**	**4.56**	**2.69**
Rank	**2**	**1**	**4**	**3**	**5**

Table 17: Govt. Securities to Total Assets

Year	G/TA				
	Axis	HDFC	ICICI	Indus.	Kotak
2009-10	18.94	22.90	14.96	24.09	19.22
2010-11	18.20	19.30	13.73	21.96	19.64
2011-12	20.47	22.35	16.04	20.66	19.59
2012-13	21.22	20.82	16.27	19.25	20.43
2013-14	17.88	18.79	15.35	17.67	17.27
2014-15	17.39	19.83	16.15	16.41	18.76
2015-16	17.31	20.68	15.64	19.67	19.84
2016-17	14.82	18.20	14.21	17.61	15.62
2017-18	14.40	17.07	16.04	18.21	18.45
2018-19	14.35	18.54	15.15	17.51	17.52
Average	**17.50**	**19.85**	**15.35**	**19.30**	**18.63**
Rank	**4**	**1**	**5**	**2**	**3**

The table 17 shows government securities to total assets in the period from 2009-10 to 2018-19. Axis bank recorded step downfall in percentage of G/TA ratio from 21.22% to 14.35% in the period from 2012-13 to 2018-19. Indusind bank also registered continuous decrease in percentage of G/TA ratio from 24.09% to 16.41% in the period from 2009-10 to 2014-15. ICICI bank recorded lowest percentage of G/TA ratio 13.73% in 2010-11. HDFC bank secured first position in G/TA parameters. The table 18 showed ranking status of banks in sub parameters of liquidity position of banks. HDFC bank secured first position in liquidity position parameters followed by Indusind bank, ICICI bank, Axis bank and Kotak Mahindra bank.

Table 18: Calculation of Group Rank

Ratios	Axis	HDFC	ICICI	Indus.	Kotak
LA/TD	5	4	1	2	3
C/TA	2	1	4	3	5
G/TA	4	1	5	2	3
Average	3.67	2.00	3.33	2.33	3.67
Rank	4	1	3	2	4

As per table 19 p-value of LA/TD ratio 0.0020, C/TA ratio 0.0000 and G/TA ratio 0.0000 which is less then the significant value 0.05. The F value of LA/TD ratio, C/TA ratio and C/TA ratio were 5.007, 8.624 and 8.988 respectively. The above result shows there is statistically significant difference in the financial performance of Axis bank, HDFC bank, ICICI bank, Indusind bank and Kotak Mahindra bank in terms of CA/TD ratio, C/TA ratio and G/TA ratio. Hence the null hypothesis is rejected.

Table 19: Result of ANOVA Test

Assets	SS	df	MS	F	P-value
(1) LA/TD					
Between Groups	133.431	4	33.358	5.007	0.0020
Within Groups	299.825	45	6.663		
Total	433.256	49			
(2) C/TA					
Between Groups	48.425	4	12.106	8.624	0.0000
Within Groups	63.169	45	1.404		
Total	111.595	49			
(3) G/TA					
Between Groups	126.963	4	31.741	8.988	0.0000
Within Groups	158.912	45	3.531		
Total	285.875	49			

6.5 Equity

Table 20: Capital Adequacy Ratio

Year	CAR				
	Axis	**HDFC**	**ICICI**	**Indus.**	**Kotak**
2009-10	15.80	17.44	19.40	15.33	19.30
2010-11	12.65	16.22	19.50	15.89	19.50
2011-12	13.66	16.52	18.50	13.85	17.90
2012-13	17.00	16.80	18.74	15.36	17.00
2013-14	16.07	16.07	17.70	13.83	18.90
2014-15	15.09	16.79	17.02	12.09	17.60
2015-16	15.29	15.53	16.64	15.50	17.00
2016-17	14.95	14.60	17.39	15.31	17.20
2017-18	16.57	14.80	16.89	15.03	18.40
2018-19	15.84	17.10	18.42	14.16	17.90
Average	**15.29**	**16.19**	**18.02**	**14.64**	**18.07**
Rank	**4**	**3**	**2**	**5**	**1**

The table 20 reveals that Axis bank, HDFC bank, ICICI bank, Indusind bank and Kotak Mahindra bank maintain CAR ratio as per Basel accord II and RBI norms. There is a continuous decrease in CAR of Indusind bank from 15.50% to 14.16% in the period from 2015-16 to 2018-19 and secured last position in CAR parameter. Highest percentage of CAR was registered by Axis bank: 17% in 2012-13, HDFC bank: 17.44% in 2009-10, ICICI bank: 19.50% in 2010-11, Indusind bank: 15.89% in 2010-11 and Kotak Mahindra bank: 19.50% in 2010-11. Higher CAR refers bank was not utilized their funds for lending and also indicates bank is strong in terms of paying liability when it matures. The lowest percentage of CAR was registered by Indusind bank 12.09% in 2014-15. Kotak Mahindra bank secured first position in CAR parameter followed by ICICI bank, HDFC bank, Axis bank and Indusind bank. The table 21 indicates total advances to total assets of equity parameter for the period of 2009-10 to 2018-19. Highest percentage of AD/TA ratio was registered by Axis bank: 63.93% in 2017-18, HDFC bank: 67.24% in 2018-19, ICICI bank: 53.74% in 2015-16, Indusind bank: 67.09% in 2018-19 and Kotak Mahindra bank: 61.61% in 2018-19. There is a continuous increase in percentage of AD/TA ratio by Axis bank: 57.84% to 63.08% from 2012-13 to 2014-15, HDFC bank: 56.59% to 65.61% from 2009-10 to 2016.17, ICICI bank 47.17% to 53.74% from 2011-12 to 2015-16, Indusind bank: 61.88% to 67.09% from 2015-16 to 2018-19 and Kotak Mahindra bank: 57.20% to 61.61% from 2012-13 to 2018-19. Indusind bank registered first position in AD/TA parameter.

Table 21: Advances to Total Assets

Year	AD/TA				
	Axis	**HDFC**	**ICICI**	**Indus.**	**Kotak**
2009-10	57.78	56.59	46.14	58.10	53.93
2010-11	58.71	57.86	47.96	57.34	55.97
2011-12	59.48	58.30	47.17	60.88	57.55
2012-13	57.84	60.64	48.90	60.46	57.20
2013-14	60.15	62.63	51.80	63.32	58.65
2014-15	60.88	63.15	53.08	63.04	59.65
2015-16	63.08	63.93	53.74	61.88	60.13
2016-17	62.32	65.61	52.26	63.30	60.51
2017-18	63.93	63.46	50.42	65.40	61.00
2018-19	62.24	67.24	52.23	67.09	61.61
Average	**60.64**	**61.94**	**50.37**	**62.08**	**58.62**
Rank	**3**	**2**	**5**	**1**	**4**

The table 22 indicates rank status of all selected banks in equity parameter of EAGLE model. HDFC bank and Kotak Mahindra bank secured first position in equity parameter followed by Indusind bank, Axis bank and ICICI bank.

Table 22: Calculation of Group Rank

Ratios	Axis	HDFC	ICICI	Indus.	Kotak
CAR	4	3	2	5	1
AD/TA	3	2	5	1	4
Average	4	3	4	3	3
Rank	4	1	4	3	1

Table 23: Result of ANOVA Test

Assets	SS	df	MS	F	P-value
(1) CAR					
Between Groups	97.932	4	24.483	20.814	0.0000
Within Groups	52.934	45	1.176		
Total	150.866	49			
(2) AD/TA					
Between Groups	950.899	4	237.725	30.259	0.0000
Within Groups	353.529	45	7.856		
Total	1304.429	49			

The table 23 describes the result of CAR and AD/TA ratio at 95% confedence level. P value of CAR and AD/TA ratio were 0.0000 and 0.0000 which is less then significant value 0.05. F value of CAR and AD/TA ratio was 20.814 and 30.259. P tabulated value of both sub parameters is less then significant value so null hypothesis is rejected. Above result showed that there is a significant difference in terms of CAR and AD/TA ratio among Axis bank, HDFC bank. ICICI bank, Indusind bank and Kotak Mahindra bank.

Table 24: Overall Rank Status

EAGLE	Axis	HDFC	ICICI	Indus.	Kotak
E	4	1	5	3	1
A	4	1	5	2	3
G	4	3	5	1	1
L	4	1	3	2	4
E	4	1	4	3	1
Avg	4.00	1.40	4.40	2.20	2.00
Rank	**4**	**1**	**5**	**3**	**2**

The table 24 reveals overall rank status of selected private sector banks on the basis of EAGLE parameters. In this research study HDFC bank secured first position with outstanding performance followed by Kotak Mahindra bank at second position with superior performance. Indusind bank secured the third position with average performance which means that it is a good bank followed by Axis bank at fourth position and ICICI bank at fifth position. This study clearly reveals that the performance of HDFC bank, Kotak Mahindra bank and Indusind bank were outstanding, superior and average in all parameters like earning, assets, growth, liquidity and equity.

7. Limitations of the study and Scope

This study done with only selected five private sector banks from Indian banking sector and limited to ten years only from 2009-10 to 2018-19. This research study was based on secondary data of selected private sector banks so no primary and economic (macro) data were considered for this research study. This current research include only earning, assets, growth, liquidity and equity parameters no any strategy, management and sensitivity to market risk parameters were considered. Only private sector bank has been selected for this research study so any generalization of result cannot be applied to all the banks. It is positively expected that this research study will be used to individuals, customers of the banks, investors, bankers, policy makers, regulators and future researchers. Further research can be done with all private sector banks and all public sector banks of India with internal and external factors like GDP, foreign exchange rate and change in interest rates etc.

8. Conclusion

Based on findings, we conclude that the financial variable of banks like earning, assets, growth, liquidity and equity are able to describe the important part of profitability of private sector banks. From the above result HDFC bank secured first rank in earning, assets, liquidity and equity parameters with outstanding performance and secured third rank in growth parameter because of low growth rate of deposits and advances. Kotak Mahindra bank also secured first rank in earning, growth and equity parameters with superior performance and secured third and fourth rank in assets and liquidity parameters respectively. ICICI bank secured last position in earning, assets and growth parameters with below average performance. ICICI bank should pay attention on this parameters to improve their profitability. There is a strong competition in liquidity and earning parameters among all selected private sector banks. All the selected private sector banks has been maintained the capital adequacy ratio as per RBI norms. The tabulated values of all the variables are less than significant value

0.05. So null hypothesis of variables of this study are rejected, that means there are statistically significant difference in all the selected samples. Finally this research study conclude that the large private sector bank selected on the bases of market capitalization of India that are Axis bank, HDFC bank, ICICI bank, Indusind bank and Kotak Mahindra bank had a acceptable performance according to EAGLE parameters.

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