A Comparative Analysis of Financial Performance of Banks

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ABSTRACT

The banking sector occupies a predominant place in the Indian economy as it accounts for more than half the assets of the financial sector. It is said to be the lifeline of any modern economy, is one of the imperative pillars of the Indian financial system and spurs economic efficiency by mobilizing savings and allocating them to high return investments. The banking sector, being the backbone of the Indian economy, plays a key role in safeguarding the economy by averting the harmful effects of economic upheaval. The Indian banking sector has always been praised with enormous appreciation for its strength, particularly in the wake of the worldwide economic disasters, which pushed its worldwide counterparts to the edge of closure. Keeping in view the high risky nature of the banking industry and the growing scepticism regarding the banking sector, it becomes immensely critical to evaluate and compare financial performance of public and private sector banks operating in India. This study is an attempt to analyze, evaluate and compare the financial performance of six Indian commercial banks including three public sector banks (State Bank of India, Punjab National Bank and Bank of Baroda) and three private sector banks (HDFC Bank, ICICI Bank and J &K Bank) for last ten financial years (2007-08 to 2016-17) in the light of CAMEL Model parameters i.e. Capital Adequacy, Asset Quality, Management Capability, Earning Quality and Profitability and Liquidity. Statistical tools like mean and standard deviation have been used to test the ratios scientifically.

Keywords: Asset Quality, Bank Performance, Capital Adequacy, Earning Quality and Profitability, Liquidity, Management Capability

I. INTRODUCTION

The prosperity of the financial sector is closely linked with the blossoming of the overall economy. The Indian economy has insatiable potential for growth and the studies confirm its veracity in every respect. Being a large economy, it may always step ahead on the path of progress for the years yet to come. Banking Industry, being one of the primary constituents of financial system, is imperative for economic growth and industrialization via channeling funds, providing proficient financial system, sociable investor's treatment, and optimal utilization of resources [1].

Banking sector plays a significant role in channelizing funds to industries and contributing towards economic and financial growth and stability. The essential role of a bank is to connect those who have capital (investors or depositors), to those who seek capital (individuals or firms). Banks have control over a large part of the supply of money in circulation. Through their influence over the volume of bank money, they can influence nature and character of production in any country. Economic development is a dynamic and continuous process which highly depends upon the extent of mobilization of resources, investment and operational efficiency of various segments i.e. trade, industrial development, and agriculture of the economy. Thus, in a modern economy like India, banks have become a part and parcel of all economic activities. Banks play a pivotal role in the economic development of all the nations of the world. In fact, Banking is the lifeblood of Modern Commerce. From its original narrow scope and modest purpose of taking care of other people's money and lending a part of it, banking has developed to such an extent that, in countries like England, France and the U.S.A., there is hardly a Business deal without the assistance of a Bank sought in one form or another.

A well-established banking sector can absorb major financial crisis in the economy and can provide a platform for strengthening the economic system of the country [2]. Indian banking sector has undergone through severe changes and challenges since inception. Sound financial health of a bank is a guarantee not only for its depositors, but the same is equally significant for the shareholders, employees and the entire economy. In this direction, progressive efforts have been continually made to evaluate the performance of different banks by measuring their financial position and effective management [3]. Voluminous researches like [4] [5] [6] [7] [8] [9] [10] [11] [12] [13] [14] [15] [16] [17] [18]

[19] [20] [21] and [22] have attempted to make contribution in the field. Numerous studies have been conducted on financial performance analysis of banks, performance comparison between government and private banks and other financial institutions but analysis of the most recent financial performance of largest as well as dominant public and private players in banking sector of Indian economy has not been conducted so far. It is against this backdrop that the present study has been undertaken to fill up this gap. This study is an attempt to analyze, evaluate and compare the financial performance of six Indian commercial banks including three public sector banks (State Bank of India, Punjab National Bank and Bank of Baroda) and three private sector banks (HDFC Bank, ICICI Bank and J & K Bank) for the last ten financial years (2007-08 to 2016-17) in the light of CAMEL Model parameters.

II.OBJECTIVES OF THE STUDY

1. To analyze, evaluate and compare the financial performance of selected banks by using the parameters of CAMEL Model.
2. To suggest measures, on the basis of the study results, to improve further the financial performance of the banks under study.

III. SCOPE AND LIMITATIONS OF THE STUDY

The scope of this study shall be restricted to six Indian banks including three Public Sector Commercial Banks (i.e. State Bank of India, Punjab National Bank and Bank of Baroda) and three Private Sector Commercial Banks (i.e. HDFC Bank, ICICI Bank and J & K Bank) operating in Northern India for the sake of data accessibility and convenience. The study shall be restricted to a time horizon of ten financial years only i.e. from 2007-08 to 2016-17.

IV. METHODOLOGY OF THE STUDY

The present study is analytical and primarily based on quantitative secondary data obtained from published annual report of respective commercial banks'. This study attempts to analyze and evaluate the financial performance of three public sector banks (State Bank of India, Punjab National Bank and Bank of Baroda) and three private sector banks (HDFC Bank, ICICI Bank and J & K Bank) for the last ten financial years (2007-08 to 2016-17) by evaluating different financial variables in the light of CAMEL Model parameters which include Capital Adequacy, Asset Quality, Management Capability, Earning Quality and Profitability and Liquidity. Statistical tools like mean and standard deviation have been used to test the ratios scientifically.

V.DATA ANALYSIS AND INTERPRETATION

Capital Adequacy: Capital Adequacy is important for a bank to maintain depositors' confidence and preventing the bank from going bankrupt. Capital is seen as a cushion to protect depositors and promote the stability and efficiency of financial system around the world. Capital Adequacy reflects the overall financial condition of the banks and also the ability of the management to meet the need for additional capital. It also indicates whether the bank has enough capital to absorb unexpected losses. Capital Adequacy ratios act as indicators of banks' leverage. Higher CRAR reveals lower Credit Risk of the banks. If the banks have riskier assets on its portfolio, the capital will be lower implying greater Credit Risk Exposure. The ratios suggested to measure Capital Adequacy under CAMEL Model are given below and are presented in Table-1.

Ratio 1: Capital Adequacy Ratio
Ratio 2: Leverage Ratio (Figure is times of Debt to Equity)
Ratio 3: Government Securities to Total Investments
Ratio 4: Total Borrowings to Total Assets Ratio

Table-1: Capital Adequacy Ratios of selected Public and Private Sector Banks

(Figures in percent)

Bank		07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	Mean	S.D
Punjab National Bank	1	13.46	14.03	14.16	12.42	12.63	12.72	11.52	12.21	11.28	11.66	12.61	0.96
	2	1.64	1.75	1.67	2.04	1.83	1.67	1.76	1.61	1.98	1.36	1.73	0.18
	3	79.12	83.39	84.88	83.54	81.30	82.83	78.10	81.94	79.15	78.29	81.25	2.32
	4	4.24	3.53	6.49	8.35	8.13	8.27	8.72	7.57	8.95	5.66	6.99	1.83
Bank of Baroda	1	12.94	14.05	14.36	14.52	14.67	13.30	12.28	12.60	13.17	12.24	13.41	0.88
	2	1.50	1.73	1.45	1.52	1.27	1.29	1.52	1.45	1.42	1.31	1.44	0.13
	3	76.47	76.53	80.81	83.20	83.15	84.06	82.45	79.22	83.38	85.62	81.49	2.99
	4	2.19	2.48	4.80	6.22	5.27	4.86	5.58	4.93	4.99	4.41	4.57	1.21
a n k	1	13.54	14.25	13.39	11.98	13.86	12.92	12.44	12.79	13.12	13.11	13.14	0.63

Bank												Mean	S.D
	2	2.75	2.84	2.78	3.46	2.48	2.68	2.37	2.67	3.35	2.51	2.79	0.33
	3	74.27	81.98	76.65	78.06	81.95	76.73	77.33	76.29	79.83	75.10	77.82	2.52
	4	7.17	5.57	9.78	9.77	9.51	10.80	10.22	10.02	13.71	11.74	9.83	2.13
HDFC Bank	1	13.60	15.70	17.44	16.20	16.50	16.80	16.10	16.80	15.53	14.55	15.92	1.08
	2	1.82	1.73	1.56	1.71	2.05	1.88	1.86	1.25	1.67	1.46	1.70	0.22
	3	64.11	88.68	87.10	75.64	78.19	76.07	78.25	72.32	80.51	75.73	77.66	6.65
	4	3.45	1.46	5.81	5.19	7.06	8.24	8.02	7.66	11.47	8.57	6.69	2.84
ICICI Bank	1	14.00	15.50	19.40	19.50	18.50	18.74	17.70	17.02	16.64	17.39	17.44	1.65
	2	2.32	2.23	2.13	2.28	2.87	2.66	2.59	2.53	2.33	1.81	2.37	0.28
	3	67.63	61.50	56.58	47.61	54.49	53.90	53.77	56.60	68.98	68.36	58.94	6.95
	4	16.42	17.75	25.94	26.97	28.66	27.08	26.03	26.68	24.26	19.12	23.89	4.19
J & K Bank	1	12.80	13.46	14.81	13.50	12.35	12.83	12.69	12.57	11.81	10.80	12.76	1.01
	2	0.75	0.79	0.76	0.68	0.69	0.55	0.62	0.69	0.69	0.68	0.69	0.06
	3	79.20	70.84	60.49	55.58	53.39	54.62	57.06	53.55	68.53	76.68	62.99	9.43
	4	2.15	2.64	2.59	2.19	2.06	1.50	2.24	3.07	2.79	1.56	2.28	0.48

Source: Annual Reports of Banks

Asset Quality: Asset Quality is one of the most critical areas in determining the overall condition of the bank. The primary factor effecting overall Asset Quality is the quality of the loan portfolio and the credit administration program. Loans are usually the largest of the asset items and can also carry the greatest amount of potential risk to the bank's capital account. Securities can often be a large portion of the assets and also have identifiable risks. Other items which impact a comprehensive review of asset quality are other real estate, other assets, off-balance sheet items and to a lesser extent, cash and due from accounts, and premises and fixed assets. The Asset Quality rating reflects the quantity of existing and potential credit risk associated with the loan and investment portfolios, other estate owned, and other assets, as well as off-balance sheet transactions. The ability of management to identify, measure, monitor and control credit risk is also reflected here. The quality of assets is an important parameter to gauge the strength of the bank. The main motto behind measuring the Asset Quality is to ascertain the component of Non-Performing Assets (NPA) as a percentage of Total Assets. These NPAs should be considered against not just Total Assets but also against the Advances because NPAs primarily arise from Advances. This indicates what type of Advances the bank has made to generate interest income. Thus, Asset Quality indicates the type of the debtors of the bank. The ratios suggested to measure Asset Quality under CAMEL Model are given below and are presented in Table-2.

Ratio 1: Gross NPAs to Gross Advances Ratio
Ratio 2: Net NPAs to Net Advances Ratio
Ratio 3: Total Investments to Total Assets Ratio
Ratio 4: Net NPAs to Total Assets Ratio
Ratio 5: NPA Coverage Ratio

Table-2: Asset Quality Ratios of selected Public and Private Sector Banks

(Figures in percent)

Bank		07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	Mean	S.D
Punjab National Bank	1	2.74	1.77	1.71	1.79	2.93	4.27	5.25	6.55	12.90	12.53	5.24	4.03
	2	0.64	0.17	0.53	0.85	1.52	2.35	2.85	4.06	8.61	7.81	2.94	2.87
	3	27.43	25.79	26.20	25.15	26.78	27.12	26.12	25.07	23.65	25.92	25.92	1.05
	4	0.37	0.10	0.33	0.54	0.97	1.51	1.80	2.55	5.30	4.54	1.80	1.73
	5	77.30	90.47	81.17	73.21	62.73	58.83	59.07	58.21	51.06	58.57	67.06	12.03
Bank of Baroda	1	1.84	1.27	1.36	1.36	1.53	2.40	2.94	3.71	9.99	10.46	3.69	3.35
	2	0.47	0.31	0.34	0.35	0.54	1.28	1.52	1.87	5.06	4.72	1.65	1.71
	3	24.43	23.14	21.98	19.88	18.60	22.19	17.61	17.11	17.94	18.66	20.15	2.45
	4	0.27	0.20	0.22	0.22	0.65	0.69	0.91	1.13	2.89	2.60	0.98	0.94
	5	75.09	75.63	74.90	85.00	80.05	68.24	65.45	64.99	60.09	66.83	71.63	7.34
State Bank of India	1	2.95	2.86	3.05	3.28	4.44	4.47	4.95	4.25	6.50	6.90	4.37	1.36
	2	1.78	1.79	1.72	1.63	1.82	2.10	2.57	2.12	3.81	3.71	2.31	0.77
	3	26.26	28.61	28.08	24.15	23.38	22.41	22.25	24.17	24.42	28.31	25.20	2.31
	4	0.83	1.01	1.03	1.01	1.02	1.22	1.73	1.35	2.37	2.15	1.37	0.50
	5	61.25	62.31	59.23	64.95	68.10	66.58	62.86	69.13	60.69	65.95	64.11	3.16
HDFC Bank	1	1.34	1.98	1.43	1.05	1.00	0.95	0.98	0.93	0.92	1.04	1.16	0.32
	2	0.47	0.63	0.31	0.19	0.18	0.20	0.28	0.26	0.28	0.33	0.31	0.13
	3	37.09	32.09	26.35	25.57	28.85	27.88	24.60	28.19	26.44	24.83	28.19	3.64
	4	0.002	0.003	0.002	0.001	0.10	0.12	0.17	0.15	0.18	0.21	0.09	0.08

	5	81.35	79.49	78.42	82.51	82.38	79.91	72.57	73.93	69.94	68.67	76.92	4.93
ICICI Bank	1	3.34	4.39	4.05	3.35	3.05	3.22	3.03	3.29	5.21	7.89	4.08	1.43
	2	1.49	1.96	1.87	0.94	0.62	0.64	0.82	1.40	2.67	4.89	1.73	1.22
	3	27.88	27.17	33.27	33.15	32.63	31.93	29.77	28.88	22.26	20.93	28.78	4.15
	4	0.87	1.20	1.06	0.59	0.38	0.42	0.55	0.97	1.80	3.27	1.11	0.83
	5	57.30	53.50	59.50	76.00	80.40	76.80	68.60	58.60	61.00	53.60	64.53	9.57
J & K Bank	1	2.55	2.65	1.97	1.95	1.54	1.62	1.66	5.97	8.32	11.20	3.94	3.22
	2	1.07	1.38	0.28	0.20	0.15	0.14	0.22	2.77	4.31	4.87	1.54	1.72
	3	26.73	28.48	32.80	39.00	35.88	35.88	33.32	33.02	25.36	25.96	31.64	4.49
	4	0.62	0.76	0.15	0.10	0.09	0.08	0.13	1.62	2.70	2.96	0.92	1.06
	5	71.35	60.61	90.13	92.71	93.76	94.01	90.30	59.02	56.15	66.88	77.49	15.25

Source: Annual Reports of Banks

Management Efficiency & Soundness: Management Efficiency is another important parameter of the CAMEL Model. The ratios in this segment involve subjective analysis to measure the efficiency and effectiveness of management. The management of the bank takes crucial decisions depending on its risk perception. It sets vision & goals for the organization and sees that it achieves them. This parameter is used to evaluate management efficiency so as to assign premium to better quality banks and discount poorly managed ones. The ratios suggested to measure Management Capability under CAMEL Model are given below and are presented in Table-3.

Ratio 1: Total Advances to Total Deposits Ratio
Ratio 2: Business per Employee (figure in rupees lakhs)
Ratio 3: Profit per Employee (figure in rupees lakhs)
Ratio 4: Cost-to-Income Ratio
Ratio 5: Asset Utilization Ratio
Ratio 6: Advances to Assets Ratio

Table-3: Management Capability Ratios of selected Public and Private Sector Banks

(Figures in percent)

Bank		07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	Mean	S.D
Punjab National Bank	1	71.79	73.75	74.84	77.38	77.39	78.84	77.38	75.90	74.55	67.47	74.92	3.18
	2	504.52	654.92	807.95	1017.80	1132	1165	1283	1319	1359	1417	1066.02	297.90
	3	3.66	5.64	7.31	8.35	8.42	8.06	5.49	4.85	-6.00	2.00	4.78	4.12
	4	46.81	42.50	39.39	41.27	39.75	42.81	45.06	46.74	46.79	41.57	43.27	2.74
	5	8.17	8.95	8.44	8.09	8.88	9.63	8.68	8.65	8.00	7.81	8.53	0.52
	6	60.04	62.65	62.91	63.99	64.12	64.47	63.45	63.07	61.78	58.24	62.47	1.87
Bank of Baroda	1	77.32	81.94	84.55	86.77	86.86	82.03	86.15	84.82	78.29	71.86	82.06	4.65
	2	704	911	1068	1229	1466	1689	1865	1889	1680	1749	1425	400.02
	3	3.90	6.05	7.85	10.59	11.87	10.39	9.87	6.88	-10	2.64	6.00	6.04
	4	50.89	45.38	43.57	39.87	37.55	39.79	43.44	43.63	50.30	45.86	44.03	4.12
	5	7.72	7.85	7.01	6.89	7.40	7.10	6.58	6.62	7.31	7.05	7.15	0.40
	6	59.41	63.32	62.89	63.81	64.24	60.00	60.20	59.87	57.16	55.15	60.61	2.83
State Bank of India	1	77.55	73.11	78.58	81.02	79.97	81.48	86.76	82.44	84.57	76.83	80.23	3.75
	2	456	556	636	704	798	944	1064	1234	1411	1624	942.70	366.26
	3	3.73	4.74	4.46	3.85	5.31	6.45	4.85	6.02	4.70	5.11	4.92	0.81
	4	48.60	49.06	52.59	47.60	45.2	48.5	52.67	49.04	49.13	47.7	49.02	2.11

Bank		07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	Mean	S.D
						3	1				5		
	5	7.98	7.93	8.16	7.94	9.05	8.66	8.64	8.54	8.14	7.80	8.28	0.39
	6	57.76	56.25	59.98	61.84	64.96	66.76	67.48	63.48	62.08	58.06	61.86	3.66
HDFC Bank	1	62.94	69.24	75.17	76.70	79.21	80.92	82.49	81.08	85.02	86.16	77.89	6.85
	2	506	446	590	653	654	750	890	1010	1139	1236	787.4	256.3
	3	4.97	4.18	5.98	7.37	8.00	10.00	12.00	10.00	15.00	16.00	9.35	3.83
	4	49.90	51.70	52.56	54.55	52.67	45.20	45.60	44.60	44.30	43.40	48.45	4.23
	5	9.31	10.71	8.98	9.25	9.96	10.47	9.98	9.73	9.58	9.45	9.74	0.55
	6	47.63	53.95	56.56	57.68	57.83	59.88	61.64	61.90	62.72	64.20	58.40	4.91
ICICI Bank	1	92.30	99.98	89.70	95.91	99.31	99.19	102.05	107.18	103.28	94.73	98.36	5.01
	2	1008	1154	765	735	708	735	747	832	943	989	861.6	144.5
	3	10.00	11.00	9.00	10.00	11.00	14.00	14.00	16.00	14.00	12.00	12.10	2.17
	4	50.00	43.40	37.00	41.95	42.91	40.50	38.20	36.80	34.70	35.80	40.13	4.38
	5	9.90	10.20	9.13	8.03	8.39	9.02	9.18	9.48	9.44	9.54	9.23	0.62
	6	56.43	57.55	49.86	53.26	51.88	54.07	56.96	59.98	60.40	60.15	56.05	3.49
J & K Bank	1	66.04	63.42	61.92	58.63	62.00	61.04	66.90	67.80	72.33	68.75	64.88	3.97
	2	596	501	731	856	934	1100	1235	1189	1137	1220	950	255.5
	3	5.03	5.10	7.00	7.75	8.68	11.22	12.62	5.48	4.10	-16.0	5.10	7.51
	4	34.81	37.81	37.60	39.77	36.92	35.32	38.21	43.42	48.11	56.92	40.89	6.54
	5	8.17	8.58	8.16	8.07	8.58	9.23	9.10	10.06	9.15	8.75	8.78	0.58
	6	57.64	55.52	54.19	51.86	54.88	54.64	59.00	58.60	62.53	60.74	56.96	3.13

Source: Annual Reports of Banks

Earning Quality & Profitability: The quality of earnings is very important criterion which determines the ability of a bank to earn consistently. It basically determines the profitability of the banks. It also explains the sustainability and growth in earnings in the future. This parameter has gained importance in the light of the argument that much of a bank's income is earned through activities like investments, treasury operations, corporate advisory services and so on. The ratios suggested to measure Earning Quality and Profitability under CAMEL Model are given below and are presented in Table-4.

Ratio 1: Spread to Total Assets Ratio (Net Interest Margin)
Ratio 2: Net Profit to Total Assets Ratio
Ratio 3: Interest Income to Total Income Ratio
Ratio 4: Return on Assets
Ratio 5: Profit Margin Ratio (Net Profit to Total Income Ratio)
Ratio 6: Burden to Total Income
Ratio 7: Return on Equity
Ratio 8: Burden to Total Assets

Table-4: Earning Quality and Profitability Ratios of selected Public and Private Sector Banks

(Figures in percent)

Bank		07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	Mean	S.D
N ati on	1	3.58	3.62	3.57	3.96	3.84	3.52	3.44	3.15	2.60	2.38	3.36	0.49
	2	1.03	1.23	1.32	1.17	1.06	0.99	0.61	0.51	-0.59	0.18	0.75	0.56

	3	87.72	87.17	85.58	88.12	89.67	90.86	90.43	88.72	88.77	84.08	88.11	1.99
	4	1.15	1.39	1.44	1.34	1.19	1.00	0.64	0.53	-0.61	0.19	0.83	0.62
	5	12.79	13.80	15.60	14.49	12.00	10.30	7.00	5.86	-7.44	2.36	8.67	6.70
	6	9.39	5.89	4.60	8.99	6.88	8.56	9.96	8.81	7.44	0.76	7.13	2.65
	7	19.00	23.52	24.59	22.13	18.52	15.19	9.69	8.12	-10.4	3.52	13.39	10.35
	8	0.77	0.53	0.39	0.73	0.61	0.82	0.86	0.76	0.60	0.06	0.61	0.23
Bank of Baroda	1	2.90	2.91	2.74	3.12	2.97	2.66	2.36	2.31	2.05	2.19	2.62	0.35
	2	0.80	0.98	1.10	1.18	1.12	0.82	0.69	0.48	-0.80	0.20	0.66	0.56
	3	85.21	84.55	85.62	88.62	89.66	90.65	89.72	90.71	89.81	86.20	88.07	2.29
	4	0.80	0.98	1.10	1.18	1.12	0.82	0.69	0.48	-0.80	0.20	0.66	0.57
	5	10.35	12.48	15.68	17.18	15.13	11.54	10.46	7.17	-11.0	2.83	9.18	7.83
	6	7.09	4.58	5.15	7.37	5.24	5.97	6.16	6.91	8.00	5.18	6.16	1.08
	7	15.07	19.56	22.19	21.42	19.04	14.59	13.00	9.21	-17.6	4.53	12.09	11.21
	8	0.55	0.36	0.36	0.51	0.39	0.42	0.41	0.46	0.58	0.37	0.44	0.08
State Bank of India	1	2.36	2.16	2.66	3.32	3.85	3.34	3.17	3.16	2.96	2.84	2.98	0.47
	2	0.93	0.95	0.87	0.68	0.88	0.90	0.61	0.64	0.42	0.39	0.73	0.20
	3	84.92	83.41	82.59	83.72	88.13	88.18	88.02	87.10	85.49	83.19	85.46	2.11
	4	1.01	1.04	0.88	0.71	0.88	0.97	0.65	0.68	0.46	0.41	0.77	0.21
	5	11.67	11.93	10.66	8.50	9.68	10.39	7.03	7.49	5.19	4.97	8.75	2.40
	6	6.79	3.86	6.22	7.40	9.69	9.76	11.09	9.20	7.26	5.22	7.65	2.15
	7	17.82	15.07	14.04	12.84	14.36	15.94	10.49	11.17	7.74	7.25	12.67	3.29
	8	0.54	0.31	0.51	0.59	0.87	0.85	0.96	0.79	0.59	0.41	0.64	0.20
HDFC Bank	1	4.40	4.20	4.30	4.30	4.40	4.50	4.40	4.40	4.30	4.30	4.35	0.08
	2	1.19	1.22	1.33	1.42	1.53	1.69	1.72	1.73	1.66	1.68	1.52	0.20
	3	81.58	83.23	80.24	82.13	82.82	83.65	83.84	84.35	84.85	84.93	83.16	1.43
	4	1.19	1.22	1.53	1.58	1.77	1.90	2.00	2.02	1.66	1.68	1.66	0.27
	5	12.83	11.44	14.63	16.18	15.35	16.05	17.28	17.77	17.33	17.83	15.67	2.16
	6	11.80	11.43	9.71	11.61	10.38	10.46	8.40	8.69	8.77	9.08	10.03	1.29
	7	16.05	16.12	16.80	16.50	18.37	20.07	20.90	20.40	17.97	18.04	18.12	1.72
	8	1.10	1.22	0.88	1.02	1.03	1.09	0.83	0.85	0.84	0.86	0.97	0.14
ICICI Bank	1	2.20	2.40	2.50	2.60	2.73	3.11	3.33	3.48	3.49	3.25	2.91	0.45
	2	1.04	0.99	1.11	1.27	1.32	1.55	1.65	1.73	1.35	1.27	1.33	0.24
	3	77.75	80.36	77.47	79.62	81.72	82.76	80.91	80.13	77.49	73.52	79.17	2.54
	4	1.10	1.00	1.13	1.35	1.50	1.70	1.78	1.86	1.49	1.35	1.43	0.28
	5	10.50	9.71	12.13	15.79	15.75	17.19	17.97	18.24	14.29	13.31	14.49	2.87
	6	-1.66	-1.44	-4.87	-0.09	0.85	1.38	-0.21	-1.11	-3.87	-6.45	-1.75	2.42
	7	11.10	7.70	7.90	9.60	11.10	12.90	13.70	14.30	11.32	10.34	10.99	2.12
	8	-0.16	-0.15	-0.45	-0.01	0.07	0.12	-0.02	-0.11	-0.36	-0.62	-0.17	0.23
J & K Bank	1	2.47	2.65	3.16	3.69	3.84	3.97	4.16	3.81	3.38	3.06	3.42	0.54
	2	1.10	1.08	1.20	1.22	1.33	1.47	1.50	0.67	0.52	-1.99	0.81	0.98
	3	90.85	92.42	88.02	91.06	93.54	92.69	94.55	92.24	93.14	93.14	92.17	1.73
	4	1.09	1.09	1.20	1.38	1.56	1.70	1.74	0.70	0.57	-2.04	0.90	1.05
	5	13.44	12.67	14.75	15.08	15.54	15.94	16.52	6.64	5.66	-22.7	9.35	11.28
	6	5.54	6.48	4.63	9.67	9.05	7.63	10.96	10.65	14.18	16.96	9.57	3.65
	7	16.79	16.62	18.19	18.96	21.22	23.56	22.34	8.60	6.64	-28.7	12.42	14.68
	8	1.37	0.55	0.38	0.78	0.78	0.70	1.00	1.07	1.30	1.48	0.94	0.35

Source: Annual Reports of Banks

Liquidity: Liquidity is very important for any organization dealing with money. But it is also noteworthy that Liquid Assets earn less return. Banks have to take proper care in hedging liquidity risk while at the same time ensure that a good percentage of funds are invested in higher return generating investments, so that banks can generate profits while at the same time provide liquidity to the depositors. So there must be a proper balance between liquidity and profitability. Among assets cash investments are most liquid of a bank's assets. In general, banks with a larger volume of liquid assets are perceived safe, since these assets would allow banks to meet unexpected withdrawal. The ratios suggested to measure Liquidity under CAMEL Model are given below and are presented in Table-5.

Ratio 1: Liquid Assets to Total Assets
Ratio 2: Percentage of Investment in Government Securities to Total Assets
Ratio 3: Liquid Assets to Demand Deposits
Ratio 4: Liquid Assets to Total Deposits

Table-5: Liquidity Ratios of selected Public and Private Sector Banks

(Figures in percent)

Bank		07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	Mean	S.D
Punjab National Bank	1	9.44	8.69	7.91	7.85	6.29	5.67	8.21	9.27	11.33	12.26	8.69	1.92
	2	21.70	21.50	22.24	21.01	21.77	22.47	20.40	20.54	18.72	20.29	21.06	1.06
	3	108.06	116.92	98.97	110.63	101.25	90.83	143.55	166.57	209.15	192.64	133.86	39.89
	4	11.52	10.46	9.41	9.49	7.59	6.93	10.02	11.16	13.67	14.21	10.44	2.21
Bank of Baroda	1	12.42	10.59	12.74	13.93	14.34	15.61	19.84	20.75	19.94	21.65	16.18	3.80
	2	18.68	17.65	17.76	16.54	15.47	18.65	14.52	13.55	14.96	15.97	16.37	1.69
	3	190.66	166.68	187.42	215.84	221.70	239.36	261.49	280.99	386.67	353.89	250.47	68.57
	4	14.67	12.52	14.70	16.35	16.67	18.02	23.01	24.02	23.33	25.01	18.83	4.34
State Bank of India	1	9.35	10.82	8.18	10.04	7.28	7.33	7.39	8.54	7.10	6.36	8.24	1.36
	2	19.51	23.46	21.52	18.86	19.16	17.19	17.20	18.44	19.50	21.26	19.61	1.87
	3	68.75	94.27	70.31	93.66	98.69	101.90	117.06	140.37	119.78	112.83	101.76	20.93
	4	12.55	14.07	10.72	13.15	9.31	9.55	9.51	11.09	9.68	8.41	10.80	1.78
HDFC Bank	1	11.10	9.55	13.46	10.70	6.20	6.81	8.05	6.15	5.25	5.67	8.29	2.63
	2	23.78	28.46	22.95	19.34	22.56	21.21	19.25	20.39	21.28	18.80	21.80	2.73
	3	51.39	61.55	80.43	63.86	46.11	52.15	64.38	49.39	44.01	42.36	55.56	11.25
	4	14.67	12.26	17.89	14.22	8.49	9.21	10.78	8.06	7.12	7.61	11.03	3.43
ICICI Bank	1	9.52	7.90	10.70	8.39	7.40	7.72	6.98	6.55	8.31	9.81	8.33	1.25
	2	18.85	16.71	18.82	15.79	17.78	17.21	16.01	16.35	15.35	14.31	16.72	1.40
	3	154.06	138.53	125.41	98.02	103.60	112.16	96.03	85.34	101.70	100.98	111.58	20.27
	4	15.56	13.72	19.24	15.11	14.18	14.15	12.51	11.70	14.21	15.45	14.58	1.93
J & K Bank	1	13.54	14.01	10.85	7.03	7.39	7.53	5.36	4.91	3.99	6.57	8.12	3.33
	2	21.20	20.18	19.84	19.57	19.16	19.60	19.01	17.68	17.38	19.90	19.35	1.08
	3	103.31	114.04	94.31	85.39	77.67	84.42	61.61	57.03	44.41	56.32	77.85	21.47
	4	15.52	15.98	12.39	7.94	8.35	8.42	6.08	5.68	4.62	7.43	9.24	3.81

Source: Annual Reports of Banks

CONCLUSION

The present study attempts to analyze and evaluate the financial performance of six Indian commercial banks which include three public sector banks (State Bank of India, Punjab National Bank and Bank of Baroda) and three private sector banks (HDFC Bank, ICICI Bank and J & K Bank) for the last ten financial years (2007-08 to 2016-17). The performance of the banks under study is judged by using five parameters of CAMEL Model which include Capital Adequacy, Asset Quality, Management Capability, Earning Quality and Profitability and Liquidity. Due to immense competition, increasing risk, policy changes and the operational environment in which Indian banks are presently operating, there has been increased focus on liquidity, asset quality, capital adequacy, operational efficiency and profitability among all the banks. More importantly, the increasing level of non-performing assets (NPAs) is the most challenging task faced by the Indian banking system, especially public sector banks, and the same need to be addressed aptly. RBI has called for better governance in all the banks to bring down the mounting NPA level, which would otherwise affect the very existence of banks. Since the last few years NPAs are posing an alarming threat to the banking industry in our country sending distressing signals on the sustainability and endurability of the affected banks. The reasons for piling-up of NPAs in the banking industry are numerous which include poor credit appraisal system, industrial sickness, change of government policies, ineffective recovery tribunal, willful defaults, natural calamities, defective lending process, inappropriate technology, improper SWOT Analysis, managerial deficiencies, relaxed lending norms especially for corporate honchos, aggressive selling of unsecured loans, etc. The mounting NPA level is necessitating the banks to create buffer through provisioning out of profits thereby squeezing the profit level of banks. It is suggested that the public sector banks should take necessary steps to enhance their liquidity and solvency position to amplify their profitability. The private banks should escalate their turnover and solvency position to augment their profits. The selected public sector banks have registered a significant improvement in their asset utilization ratio, cost to income ratio, capital adequacy and credit-deposit ratio, but the selected private sector banks continue to have better

profitability (NIM, ROA, ROE), liquidity, solvency, management capability and healthy capital adequacy ratios. As evident from the ratios, the period from 2014-15 to 2016-17 has been stressful for the banks, particularly for public sector banks due to deteriorating health of advances portfolio. The private banks are found to be relatively better than the public sector banks with respect to burden analysis. Overall the study shows that the financial performance of selected private sector banks is relatively better than the public sector banks throughout the sample period.

SUGGESTIONS

Based on analysis and interpretation, the following suggestions are put forth to improve further the financial performance of the banks under study:

1. Banks should ensure the credit portfolio is properly managed and the credit exposures are within levels consistent with prudential standards. This needs proper strategy so that asset quality of banks is maintained with minimal possible limit.
2. Supervisory authorities should develop effective system in place to identify, measure, maintain and control credit risk as a part of an overall approach to asset quality management.
3. Potential future changes in economic conditions should be considered while assessing credit, credit portfolios and credit quality by using stress testing.
4. The board of directors and top management should establish proper and scientific management over right and governance over the interest rate movements associated with various interest sensitive assets and liabilities including the establishment of specific accountability, policies and continues to manage positive interest spread insulation.
5. Frequent changes in management at top level, change in key policies and the lack of succession planning need to be viewed with suspicion. Management of credit quality and net interest margin are keys to the integral health of any banking institution.
6. A consistent year to year growth in profitability overview should be done to provide an acceptable return to shareholders and retain resources to fund future growth.
7. The banks should adapt themselves quickly to the changing norms. The system is getting internationally standardized with the coming of BASEL III accords so the Indian banks should strengthen internal processes so as to cope with the standards.
8. The banks management should approve the strategy and significant policies to execute the strategy and significant policies to execute liquidity management effectively. Regular review of limit on the size of liquidity position over particular time horizon should be made.
9. The banks should find more avenues to hedge risks as the market is very sensitive to risk of any type.
10. The degree of reliance upon interest income compared with fees earned, heavy dependence on certain sectors and the sustainability of income stream are relevant factor which every bank should consider.
11. More Debt Recovery Tribunals (DRTs) should be established and no loan/interest waivers under any circumstances to be allowed. Besides, the vibrant policy measures be implemented to enhance the operational efficiencies of the selected public sector banks.

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