



“A STUDY ON THE FINANCIAL PERFORMANCE OF SELECTED INDIAN BANKS THROUGH CAMEL MODEL”

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Abstract

India has a long history of banking which started in the 17th century, modernised in the mid of 18th century and at present India is blessed to have 12 public sector banks, 21 private sector banks, 42 foreign banks, 43 regional rural banks, 12 small finance banks etc. which are strictly regulated by the Reserve Bank of India. We know that strong banking system is the driving force for the economic growth of a country. So it is necessary to check financial health of a bank on a regular basis; however the task is not an easy one. CAMEL model (Capital Adequacy, Assets Quality, Management Efficiency, Earnings Quality and Liquidity Position) is an important financial tool to measure the financial position of a bank. In order to measure the financial soundness of a bank, RBI official uses the CAMEL rating system and rank the position of a bank accordingly. The present study has been conducted to measure and to compare the financial position of two public sector banks namely SBI, PNB and two private sector banks HDFC & ICICI. This study has been prepared on the basis of secondary data only and data has been collected from the Annual Report of the respective banks from 2016 to 2022.

Keywords: Financial performance, CAMEL, Asset Quality, Management Efficiency.

Introduction:

Banking is the lifeblood for the economic development of a country. Indian banking sector is regulated by the RBI and banks play a vital role for the development of GDP in our country and contribution of the banking sector to GDP is approx 7.7% of the total GDP. In order to measure performance, efficiency and financial soundness of banks RBI needs to monitor their financial health from time to time and has to implement new policies according to the necessity of market. To check the financial health of banks RBI adopted the 'CAMEL' model in the year 1996 based on the recommendation of 'Padmanabham Working Group committee'. The 'CAMEL' model is an accepted international rating system which is used by the regulatory banking authorities to check the financial soundness of banks and provide them remedial suggestion. Here

'CAMEL' stands for Capital Adequacy, Assets Quality, Management Efficiency, Earnings Quality and Liquidity Analysis of a bank. A camel rating of 1 indicates that a bank is performing very well and a rating of 5 indicates that the bank is facing some serious financial crisis and must take drastic overhauling.

Review of Literature:

A literature review helps us to understand about the systematic execution of an existing research work and act as a guide to prepare our new research work. Several studies have been carried out by the researchers and academicians to find out the financial performance of different banks by using the CAMEL model. According to Gadhia, Nayankumar M and Chandarana, Harish M (2015); in the year 1995 the Reserve Banks of India established a working group under the chairmanship of Shri S. Padmanabhan to review the entire supervision system of banking sector. On the base of recommendations and suggestions given by this committee, A rating system namely (based on an internationally adopted model) "CAMEL" Model, which was later modified as 'CAMELS' was introduced for banks, commencing from July, 1998 audit and inspection cycle.

Committee recommended that the banks should be rated on a five point scale (1 to 5) based on the guidelines of the international "CAMEL" rating model. Khadija N, Ruwala & Shah, Rupali A (2021) have mentioned in their study that the new approach to inspection of banks (CAMEL) has been adopted from the cycle of inspections commencing since July 1997. It focused on the mandated aspects of solvency, liquidity, financial and operational health, based on CAMEL model. In India, CAMEL ratings are normally assessed every year as every banking institution is generally examined once a year. In the case of problem banks (those with a CAMEL rating of 4 or 5), the ratings may be assessed more frequently, as these banks are subject to more frequent on-site examination. Conversely, in the case of sound banks (those with a CAMEL rating of 1 or 2, on-site examinations may be conducted after an interval of 18 months, and the ratings would accordingly be updated once every one and a half 27 years. According to Patel S. Gulabbhai & Vadhel V.G. (2020) during an on-site exam, supervisors gather private information, such as details on problem loans, with which to evaluate with which to evaluate a bank's financial condition and to monitor its compliance with laws and regulatory policies. A key product of such an exam is a supervisory rating of the bank's overall condition, commonly referred to as a CAMEL rating. The acronym "CAMEL" refers to the five components of a bank's condition that are assessed: Capital Adequacy, Asset Quality, Management, Earnings and Liquidity. A sixth component, a bank's Sensitivity to market risk was added in 1997; hence the acronym was changed to CAMELS. A CAMEL is basically a ratio-based model for evaluating the performance of banks. It is considered as the best available method for evaluating bank performance and health of the bank since it considers all areas of banking operations.

Research Methodology:

The present study is basically exploratory in nature and this paper has been prepared on the basis of secondary data only. Data has been mainly collected from the Annual Reports of respective banks for a period of 7 years starting from 2016 to 2022. Moreover relevant information and other important data have been

collected from various journals and websites. With the help of the 'CAMEL' model, performance of two public sector and two private sector banks has been evaluated and ranked them accordingly.

Objective of the Study:

- To compare and analyze the performance of two public sector and private sector banks.
- To evaluate financial soundness of the selected banks.

Data Analysis & Interpretation:

'CAMEL' rating is done on a scale with a ranking system starting from 1 to 5, where 1 indicates a bank is performing very well and their management is efficiently managing assets and liabilities. A camel rating of 5 indicates that a bank is the worst performer in all aspect. Moreover every bank doing business in India has to strictly follow the rules and regulation laid by the Reserve Bank of India from time to time. With the help of various ratios under 'CAMEL' performance of selected banks has been analysed in this study.

A) CAPITAL ADEQUACY:

Under Capital adequacy ratio which is shown in Table 1, ICICI bank has secured 1st rank and PNB has achieved 4th position. However in Table 2, which shows Debt- Equity ratio PNB has got 1st position and ICICI bank stood at last position. In Table 3, under total advances to total assets ratio HDFC comes at 1st position and ICICI comes at the last position. In table 4, under Govt. Securities to total investment PNB got 1st rank and ICICI got 4th rank. Interestingly management of PNB have invested maximum amount in risk free govt. securities to earn a risk free return.

Table 1: Capital Adequacy Ratio

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	13.12	13.11	12.60	12.72	13.13	13.74	13.83	13.18	3
	PNB	11.28	11.66	9.20	9.73	14.14	14.32	14.50	12.12	4
Private	HDFC	15.53	14.6	14.82	17.11	18.52	18.79	18.90	16.89	2
	ICICI	16.64	17.39	18.42	16.89	16.11	19.12	19.16	17.67	1

Table 2: Debt Equity Ratio

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	12.27	10.85	12.58	14.3	14.4	15.1	14.8	13.47	2
	PNB	14.44	14.86	15.64	15.8	12.1	12.6	12.4	13.98	1
Private	HDFC	6.83	5.93	8.6	7.0	7.6	7.2	7.2	7.19	3
	ICICI	4.70	4.90	5.33	7.8	8.3	7.0	6.9	6.42	4

Table 3: Total Advances / Total Assets Ratio

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	64.79	58.06	56.01	59.38	58.85	54.02	54.81	57.99	2
	PNB	61.78	58.24	56.64	59.13	56.80	53.48	55.38	57.35	3
Private	HDFC	62.71	64.20	63.46	67.23	66.02	65.87	66.93	65.20	1
	ICICI	60.4	60.15	50.42	52.23	51.28	50.31	52.51	53.90	4

Table 4: Government Securities/ Total Investment

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	77.63	76.25	80.95	78.35	80.00	79.40	79.78	78.91	3
	PNB	80.14	79.09	76.86	80.16	85.41	87.80	87.31	82.40	1
Private	HDFC	80.51	75.73	79.17	83.78	82.66	79.27	80.51	80.23	2
	ICICI	70.33	69.66	69.72	72.17	76.63	81.33	86.10	75.13	4

B) ASSETS QUALITY:

Under Assets quality it has been identified that PNB is the worst performer in managing their NPA's. From the following table 1 & 2, it has been observed that gross NPA to Total Assets Ratio and net NPA to Total Assets ratio, PNB have secured last position in comparison to other banks. On the other way SBI have managed their NPA's in a better way and they are continuously reducing their NPA's. Under Total investment to total asset and credit deposit ratio, ICICI bank has secured 1st position. On the other way PNB stood at 4th position in maintaining Credit deposit ratio.

Table 1: Gross NPA / Total Assets Ratio (%)

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	4.35	4.15	6.47	4.69	3.77	3.43	3.24	4.3	1
	PNB	8.36	7.69	11.31	15.50	14.21	14.12	11.78	11.85	4
Private	HDFC	5.93	6.81	8.10	9.02	8.26	8.64	7.80	7.79	3
	ICICI	3.64	5.46	6.06	6.70	5.53	4.96	3.60	5.15	2

Table 2: Net NPA / Total Assets Ratio (%)

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	2.47	2.15	3.21	1.79	1.31	0.81	0.56	1.76	1
	PNB	5.31	4.54	6.36	3.88	8.84	4.24	2.65	5.12	4
Private	HDFC	1.78	2.13	2.44	2.58	2.31	2.61	2.13	2.28	3
	ICICI	1.80	3.27	3.16	2.06	1.41	1.14	0.76	1.94	2

Table 3: Total Investment to Total Assets Ratio

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	21.12	28.31	30.71	26.27	26.49	29.81	29.70	27.49	3
	PNB	23.65	25.92	26.16	26.57	28.95	31.17	28.30	27.25	2
Private	HDFC	26.43	24.83	26.29	26.65	29.80	31.60	29.01	27.80	4
	ICICI	22.26	20.93	23.09	21.54	22.72	22.86	21.98	22.20	1

Table 4: Credit Deposit Ratio

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	84.57	80.38	73.79	73.35	73.32	68.97	67.03	74.49	3
	PNB	74.55	67.47	67.53	67.79	67.04	60.94	62.26	66.80	4
Private	HDFC	83.24	86.16	83.46	88.76	86.6	84.85	86.43	85.64	2
	ICICI	103.28	94.73	91.34	89.85	83.7	78.68	79.75	88.76	1

C) MANAGEMENT EFFICIENCY:

Under Management efficiency it has been observed in table 1 that SBI secured 1st position in generating business per employee and in profit per employee category SBI have secured 2nd position. In calculating both Return on assets and Return on equity ratio HDFC bank have secured 1st position, followed by ICICI, SBI & PNB.

Table 1: Business per Employee (in cr.)

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	14.11	16.24	16.70	-	21.05	23.73	25.74	16.80	1
	PNB	13.59	14.17	14.73	16.80	18.21	18.85	19.41	16.54	2
Private	HDFC	11.39	12.36	15.08	16.87	17.49	19.30	20.25	16.10	3
	ICICI	9.43	9.89	10.78	12.22	12.75	14.92	16.69	12.38	4

Table 2: Profit per Employee (in cr.)

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	0.47	0.51	-0.24	-	0.58	0.83	1.30	0.49	2
	PNB	-0.06	0.02	-0.17	-0.15	0.04	0.20	0.34	0.03	4
Private	HDFC	0.15	0.16	0.20	0.23	0.24	0.26	0.28	0.22	3
	ICICI	0.14	0.12	0.08	0.04	0.08	1.64	2.21	0.62	1

Table 3: Return on Equity Ratio

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	7.74	7.25	-3.78	0.48	7.74	9.94	13.92	6.18	3
	PNB	-9.47	3.01	-31.26	-22.51	0.74	3.00	4.26	-7.46	4
Private	HDFC	16.91	16.26	16.45	14.12	15.35	15.27	15.39	15.68	1
	ICICI	11.30	10.30	6.60	3.19	6.99	11.21	13.94	9.08	2

Table 4: Return on Assets Ratio (%)

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	0.46	0.41	-0.19	0.02	0.38	0.48	0.67	0.32	3
	PNB	-0.51	0.16	-1.55	-1.21	0.05	0.20	0.28	-0.37	4
Private	HDFC	1.89	1.88	1.64	1.69	1.71	1.78	1.78	1.77	1
	ICICI	1.49	1.35	0.87	0.34	0.72	1.31	1.65	1.10	2

D) EARNINGS QUALITY:

In calculating Dividend payout ratio and Net interest margin HDFC have secured 1st position, followed by ICICI, SBI and PNB. It has been observed that while calculating Operating profit to total assets ratio again HDFC secured top position. However in calculating Net profit to total assets ratio SBI got 1st position and HDFC stood at 2nd position followed by PNB & ICICI.

Table 1: Dividend Payout Ratio

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	20.03	19.35	NIL	NIL	NIL	17.49	20.00	10.98	3
	PNB	0.00	0.00	-0.5	-0.3	7.3	7.0	18.3	4.54	4
Private	HDFC	23.51	23.32	23.26	23.36	-	11.54	22.6	18.23	1
	ICICI	32.83	16.33	14.34	19.34	-	8.45	15.16	15.21	2

Table 2: Operating profit / Total Assets Ratio

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	1.91	1.88	1.72	-0.93	-0.77	-0.50	-0.17	0.45	4
	PNB	1.83	2.02	1.34	1.68	1.77	1.78	1.57	1.71	2
Private	HDFC	0.21	0.26	0.21	0.27	0.19	0.33	0.36	1.83	1
	ICICI	3.31	3.43	2.81	-1.15	-0.77	-0.22	0.34	1.11	3

Table 3: *Net Interest Margin (%)*

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	2.52	2.28	2.50	2.78	2.97	3.04	3.12	3.14	3
	PNB	2.29	2.08	1.95	2.21	2.09	2.41	2.18	2.17	4
Private	HDFC	3.89	3.83	3.76	3.87	3.67	3.71	3.48	3.74	1
	ICICI	2.95	2.82	2.62	3.42	3.73	3.69	3.96	3.31	2

Table 4: *Net Profit to Total Assets ratio*

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	0.44	0.39	-0.19	0.02	0.37	0.45	0.63	2.11	1
	PNB	-0.60	0.18	-1.60	3.88	3.28	3.06	2.65	1.55	3
Private	HDFC	1.73	1.68	1.64	1.69	1.71	1.78	1.79	1.72	2
	ICICI	1.35	1.27	0.77	0.35	0.72	1.32	1.65	1.06	4

E) LIQUIDITY:

While calculating liquidity of the four banks through various ratios it has been observed that under Current ratio and Liquid assets to total assets ratio PNB got 1st position followed by ICICI, HDFC and SBI. In calculating Liquid assets to total deposit ratio ICICI secured 1st position and SBI secured last position. However while calculating Total investment to total deposit ratio it has been identified that SBI got 1st rank, followed by ICICI, HDFC and PNB.

Table 1: *Liquid Assets / Total Assets (%)*

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	7.41	6.36	5.55	6.04	6.35	7.56	7.91	6.74	4
	PNB	11.03	12.26	12.47	9.71	9.15	8.83	10.09	10.51	1
Private	HDFC	5.49	5.67	11.55	6.54	5.66	6.84	7.36	7.02	3
	ICICI	8.31	9.81	9.57	8.32	10.85	10.82	11.89	9.94	2

Table 2: *Liquid Assets / Total Deposit (%)*

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	9.68	8.41	7.09	7.64	7.75	9.32	9.74	8.52	4
	PNB	13.31	14.2	14.86	11.14	10.80	10.06	11.57	12.28	2
Private	HDFC	7.12	7.60	15.58	8.81	7.55	8.95	9.77	9.34	3
	ICICI	14.21	15.45	15.00	12.30	15.45	14.28	15.76	14.64	1

Table 3: *Total Investment / Total Deposit (%)*

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	27.57	27.46	39.20	33.21	32.30	36.72	36.56	33.29	1
	PNB	28.54	30.03	31.19	29.90	34.16	35.52	32.47	31.69	4
Private	HDFC	30.00	33.32	30.71	31.48	34.15	33.24	29.22	31.73	3
	ICICI	38.06	32.96	36.19	31.81	32.36	30.16	29.14	32.95	2

Table 4: *Current Ratio*

	Banks	2016	2017	2018	2019	2020	2021	2022	Mean	Rank
Public	SBI	11.08	12.22	14.08	18.37	17.57	17.28	15.08	15.10	4
	PNB	30.99	32.93	25.79	38.27	40.95	41.74	33.99	34.95	1
Private	HDFC	14.75	11.39	17.88	17.24	16.83	17.88	19.04	16.43	3
	ICICI	15.92	17.59	22.13	19.78	17.51	16.00	15.82	17.82	2

Composite Ranking of Camel Model:

In calculating composite ranking of CAMEL model it has been observed from the following tables that under Capital Adequacy, HDFC bank have secured 1st position followed by PNB, SBI and ICICI. Under composite ranking of Assets quality ICICI have well managed their assets and stood at 1st position, while PNB is the worst performer in managing their assets. In case of Management efficiency HDFC is the clear winner, while SBI & ICICI have shared same position and here also PNB got the last position. In calculating composite earnings quality again HDFC bank have proven their performance and got 1st position. SBI & ICICI bank have jointly secured the next position after HDFC but PNB got the last position amongst them. In composite liquidity analysis we have observed in the below table that ICICI bank has the maximum liquidity, followed by PNB, HDFC and SBI. Liquidity position of SBI is not at all good and SBI must manage their assets and liabilities properly.

CAPITAL ADEQUACY

	SBI	PNB	HDFC	ICICI
Capital Adequacy Ratio	3	4	2	1
Debt-Equity Ratio	2	1	3	4
Total Advances to Total Assets Ratio	2	3	1	4
Govt. Securities to Total Investment Ratio	3	1	2	4
Composite	2.5	2.25	2	3.25
Rank	3	2	1	4

ASSETS QUALITY

	SBI	PNB	HDFC	ICICI
Gross NPA to Total Assets Ratio	1	4	3	2
Net NPA to Total Assets Ratio	1	4	3	2
Total Investment to Total Assets Ratio	3	2	4	1
Credit Deposit Ratio	3	4	2	1
Composite	2.00	3.50	3	1.5
Rank	2	4	3	1

MANAGEMENT EFFICIENCY

	SBI	PNB	HDFC	ICICI
Business per Employee (<i>in cr.</i>)	1	2	3	4
Profit per Employee (<i>in cr.</i>)	2	4	3	1
Return on Equity Ratio	3	4	1	2
Return on Assets Ratio	3	4	1	2
Composite	2.25	3.50	2	2.25
Rank	2.50	4	1	2.50

EARNINGS QUALITY

	SBI	PNB	HDFC	ICICI
Dividend Payout Ratio	3	4	1	2
Operating profit to Total Assets Ratio	4	2	1	3
Net Interest Margin (%)	3	4	1	2
Net Profit to Total Assets ratio	1	3	2	4
Composite	2.75	3.25	1.25	2.75
Rank	2.50	4	1	2.50

LIQUIDITY ANALYSIS

	SBI	PNB	HDFC	ICICI
Liquid Assets to Total Assets Ratio	4	1	3	2
Liquid Assets to Total Deposit Ratio	4	2	3	1
Total Investment to Total Deposit Ratio	1	4	3	2
Current Ratio	4	1	3	2
Composite	3.25	2	3	1.75
Rank	4	2	3	1

Overall performance of Banks:

From the following table of Composite Ranking of Banks (from 2016-2022), it has been observed that HDFC bank have secured top position amongst the other banks in maximum parameters i.e. in Capital Adequacy, management efficiency and in earnings quality. ICICI have maintained top position in Assets quality and Liquidity analysis. Suggesting that PNB needs to focus on their policies and must take proper action to overcome this. Interestingly in this study it has also been observed that Private sector banks have performed much better than public sector banks and retained their position. As a largest public sector bank with market capitalization of Rs.5.30 trillion SBI must re-evaluate their asset management policies, debt recovery strategy and Investment policy.

Composite Ranking of Banks
(Overall Performance from 2016 to 2022)

	SBI	PNB	HDFC	ICICI
C	2.50	2.25	2.00	3.25
A	2.00	3.50	3.00	1.50
M	2.25	3.50	2.00	2.25
E	2.75	3.25	1.25	2.75
L	3.25	2.00	3.00	1.75
Mean	2.55	2.90	2.25	2.30
Rank	3	4	1	2

Conclusion:

The 'CAMEL' model is an important instrument to find out financial soundness and performance of a bank. In the present study two large public sector banks, SBI & PNB and two fastest growing public sector banks i.e. HDFC & ICICI has been considered to explore their financial performance over a period of 7 years; starting from 2016 to 2022. 'Camel' model which stands for Capital adequacy, Assets quality, Management efficiency, Earnings capability & Liquidity position; is an important instrument which is generally used to evaluate financial stability of banks. It has been observed that HDFC bank stood first in all the three parameters

of Camel model i.e. capital adequacy, management efficiency and earnings quality. However in the other two parameters of Camel model it got third position. ICICI bank remains as a close competitor of HDFC bank and gives a strong challenge in Assets quality and Liquidity position. If we talk about the two public sector banks, SBI have well managed their Assets and earnings quality is also good but apart from Capital adequacy and Liquidity position, PNB has miserably failed in other parameters. It has been also observed that in overall performance HDFC bank have secured first position and gives a strong challenge to the public sector banks.

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