

## **“Camels Framework as a Tool to Measure Performance of Public Sector And Private Sector Banks”**

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**Abstract:** *Although a complete turnaround in banking sector performance is not expected till the completion of reforms, signs of improvement are visible in some indicators under the CAMEL framework. Under this bank is required to enhance capital adequacy, strengthen asset quality, improve management, increase earnings and reduce sensitivity to various financial risks. Amongst these reforms and restructuring the CAMELS Framework has its own contribution to the way modern banking is looked up on now. The attempt here is to see how various ratios have been used and interpreted to reveal a bank's performance and how this particular model encompasses a wide range of parameters making it a widely used and accepted model in today's scenario.*

*In today's scenario, the banking sector is one of the fastest growing sector and a lot of funds are invested in Banks. There are so many models of evaluating the performance of the banks, one of the model is the CAMEL Model to evaluate the performance of the banks; i.e. Capital, Assets, Management, Earnings and Liquidity. This model will be applied to evaluate the performance of two public bank and two private bank for comparison. The data is collected from the annual reports of the banks under study. And ratios are compute and interpreted for all the banks. The ranks are allocated to each parameter of the CAMELS Model and each ratio. Ranking as per the analysis is ICICI Bank, State Bank of India, Bank of Baroda, HDFC Bank*

**Key Words :** *CAMEL, ICICI, SBI, BOB, HDFC, BANKS, PERFORMANCE, RATIOS*

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### **I. Introduction**

Banks are playing crucial and significant role in the economy in capital formation due to the inherent nature, therefore banks should be given more attention than any other type of economic unit in an economy. There is a substantial improvement over the earlier supervisory system of banking sector in terms of recovery, management efficiency, assets quality, earning quality and internal control system to regulate the level of risk and financial viability of commercial banks. The regulators have augmented bank supervision by using CAMEL (capital adequacy, asset quality, management quality, earnings and liquidity) rating criterion to assess and evaluate the performance and financial soundness of the activities of the bank. The CAMEL supervisory criterion in banking sector is a significant and considerable improvement over the earlier criterions in terms of frequency, check, spread over and concentration. Reserve Bank of India recommended supervisory rating model named as CAMELS (Capital Adequacy, Assets Quality, Management, Earning, Liquidity, Systems and Controls) for rating of Indian commercial Banks and Foreign Banks operating in India.

### **II. Review Of Literature**

**Sarker A (2005)** examined the CAMEL Model for regulation and supervision of Islamic banks by the central bank in Bangladesh and reviewed the CAMELS standard set by the BASEL Committee. This effort added a new 'S' to the CAMELS rating system as Sharia rating and CAMELS has become 'CAMELSS' rating system. **Bhayani S (2006)** analyzed the performance of new private sector banks with the help of the CAMEL Model. Four leading private sector banks — Industrial Credit & Investment Corporation of India (ICICI), Housing Development Finance Corporation (HDFC), Unit Trust of India (UTI) and Industrial Development Bank of India (IDBI) - had been taken as a sample. **Gupta R and Kaur S (2008)** conducted the study with the main objective to assess the performance of Indian Private Sector Banks on the basis of CAMEL Model and gave rating to top five and bottom five banks. They ranked 20 old and 10 new private sector banks on the basis of CAMEL model.

### III. Research Methodology

#### 3.1 OBJECTIVE

To analyze Public sector and Private sector banks to measure their performance by using CAMELS Framework as a measuring tool.

#### 3.2 SCOPE AND PERIOD OF STUDY

In this study, 3 indicators are chosen from CAMEL category and all indicators are calculated for Indian banks. From the private sector banks; ICICI and HDFC banks are chosen and from the public sector banks SBI and BOB are chosen. Data of last 5 years i.e march 2012-16 are taken for the sample.

#### 3.3 DATA SOURCE

##### *Secondary data*

Secondary data on the subject was collected from bank's prospectus, annual reports.

#### 3.4 TOOLS AND TECHNIQUES

Camel model is used.

### IV. Analysis Of Data

#### 4.1 CAPITAL ADEQUACY

##### 1. Capital Adequacy Ratio (CAR)

This ratio is propounded to ensure that banks can take up a reasonable level of losses arising from operational losses. The higher the CAR ratio, indicates stronger the bank and the more will be the protection of investors. The banks need to maintain 9% capital adequacy ratio as per latest RBI norms.

**CAR = (Tier-I Capital + Tier-II Capital)/Risk Weighted Assets.**

##### Tier One and Tier Two Capital

Tier one capital is the capital that is permanently and easily available to cushion losses suffered by a bank without it being required to stop operating. A good example of a bank's tier one capital is its ordinary share capital. Tier 1 capital includes permanent shareholders' equity; perpetual non-cumulative preference shares, Disclosed reserves and Innovative capital instruments.

Tier 2 capital includes Undisclosed reserves, Revaluation reserves fixed assets and long-term holdings of equity securities, General provisions/general loan-loss reserves; Hybrid debt capital instruments and subordinated debt. Tier two capital is the one that cushions losses in case the bank is winding up, so it provides a lesser degree of protection to depositors and creditors. It is used to absorb losses if a bank loses all its tier one capital.

**Table : 1**

Sr. No	Bank Name	2016	2015	2014	2013	2012	Average	Rank
1	ICICI	17	17	18	19	19	18	1
2	HDFC	16	17	17	16	17	16.6	2
3	SBI	13	12	13	13	12	12.6	4
4	BOB	13	13	12	13	15	13.2	3

- On analyzing the Capital Adequacy Ratio, it is found that the CAR of ICICI Bank is highest than the other banks which is 18%.
- The HDEC Bank is ranked second with 16.6% and BOB is ranked third with 13.2%.
- SBI Bank has lowest CAR for the period.

##### 2. Debt Equity Ratio

Debt/Equity Ratio is a debt ratio used to measure a company's financial leverage, calculated by dividing a company's total liabilities by its stockholders' equity. The D/E ratio indicates how much debt a company is using to finance its assets relative to the amount of value represented in shareholders' equity.

The formula for calculating D/E ratios can be represented in the following way:

**Debt - Equity Ratio = Total Liabilities / Shareholders' Equity**

The result may often be expressed as a number or as a percentage.

A high debt to equities ratio means less protection for creditors, a lower ratio, on the other hand, indicates a wider safety cushion. This ratio indicates the proportion of debt fund in relation to equity.

Debt- Equity ratio is the indicator of firm's financial leverage.

**Table: 2**

Sr.No	Bank	2016	2015	2014	2013	2012	Average	Rank
1	ICICI	6.64	6.64	6.65	6.57	6.55	6.61	1
2	HDFC	8.25	8.00	9.36	9.09	9.04	8.75	2
3	SBI	13.55	13.87	13.34	13.87	13.94	13.72	3
4	BOB	15.11	16.39	16.83	15.65	14.87	15.77	4

- This ratio represents the degree of leverage of a bank. It shows how much proportion of the bank business is financed through equity and how much through debt. It is calculated by dividing total borrowings with shareholders' net worth. Higher ratio is an indication of less protection for the depositors and creditors and vice-versa.
- In above table, ICICI is on the top position with least average of 6.61 followed by HDFC (8.75) and SBI (13.72). BOB scored the lowest (15.77) position.

### 3. Total Advances to Total Asset Ratio:

This is the ratio of the total advance to total assets. This indicates banks aggressiveness in lending which ultimately results in better profitability. Higher ratio of advances of bank deposits is preferred to a lower one. Total advances also include receivables. The value of total assets is excluding the revolution of all the assets.

#### Total Advances/Total Asset

**Table: 3**

Sr. No	Bank Name	2016	2015	2014	2013	2012	Average	Rank
1	ICICI	60.40	59.98	56.96	54.07	53.57	56.99	4
2	HDFC	65.54	61.90	61.64	59.88	57.83	61.36	2
3	SBI	64.79	63.48	67.50	66.76	64.96	65.50	1
4	BOB	57.16	59.87	60.20	59.98	64.24	60.29	3

- This is a ratio indicates the relationship between the total advances and total assets. This ratio indicates a bank's aggressiveness in lending which ultimately produces better profitability. Higher ratio is preferred to a lower one.
- In above table, SBI is on the top position with highest average of 65.50 followed by HDFC (61.36) and BOB (60.29). ICICI scored the lowest position.

### Composite Rating Of Capital Adequacy

**Table : 4**

Bank	CAR		Debt- Equity Ratio		Advances to Asset Ratio		Group Rank	
	%	Rank	%	Rank	%	Rank	Average	Rank
ICICI	18	1	6.61	4	56.99	4	3.00	1
HDFC	16.6	2	8.75	3	61.36	2	2.33	3
SBI	12.6	4	13.72	2	65.50	1	2.33	3
BOB	13.2	3	15.77	1	60.29	3	2.33	3

## 4.2 ASSET QUALITY

### 1. Gross NPA ratio

This ratio is used to check whether the bank's gross NPAs are increasing quarter on quarter or year on year. If it is, indicating that the bank is adding a fresh stock of bad loans. It would mean the bank is either not exercising enough caution when offering loans or is too lax in terms of following up with borrowers on timely repayments.

#### Gross NPA/Net Advances

**Table : 5**

Sr. No	Bank Name	2016	2015	2014	2013	2012	Average	Rank
1	ICICI	6.02	3.90	3.10	3.31	3.73	4.01	2
2	HDFC	0.95	0.94	0.99	0.97	1.02	0.97	1
3	SBI	6.71	4.36	5.09	4.90	4.57	5.13	4
4	BOB	10.56	3.80	2.99	2.43	1.55	4.27	3

- It is the most standard measure to judge the assets quality, measuring the gross nonperforming assets as a percentage of advances.
- HDFC is on the top position with least average of 0.97 followed by ICICI (4.01) and BOB (4.27) on second and third positions respectively. SBI scored the lowest position with highest percentage of 5.13.

**2. Net NPA ratio:**

Net NPAs reflect the performance of banks. A high level of NPAs suggests high probability of a large number of credit defaults that affect the profitability and net-worth of banks and also wear down the value of the asset. Loans and advances usually represent the largest asset of most of the banks. It monitors the quality of the bank loan portfolio. The higher the ratio, the higher the credits risk.

**Net NPA ratio = Net NPA/Net Advances**

**Table: 6**

Sr. No	Bank Name	2016	2015	2014	2013	2012	Average	Rank
1	ICICI	0.030	0.016	0.010	0.008	0.007	0.014	2
2	HDFC	0.003	0.002	0.003	0.002	0.002	0.002	1
3	SBI	0.038	0.021	0.026	0.021	0.018	0.025	4
4	BOB	0.050	0.019	0.015	0.013	0.005	0.020	3

- It is the most standard measure to judge the assets quality, measuring the net nonperforming assets as a percentage of net advances. Net NPAs = Gross NPAs - Net of provisions on NPAs - interest in suspense account.
- HDFC is on the top position with least average of 0.002 followed by ICICI (0.014) and BOB (0.020) on second and third positions respectively. SBI scored the lowest position with highest percentage of 0.025.

**3. Total loans to Total assets:**

Total loan to total assets is a leverage ratio that defines the total amount of debt relative to assets. This enables comparisons of leverage to be made across different banks. The higher the ratio, the higher is the degree of leverage, and consequently, financial risk. This is a broad ratio that includes long-term and short-term loan (borrowings maturing within one year), as well as all assets – tangible and intangible.

**Total Borrowings/Total Assets**

**Table : 7**

Sr. No	Bank Name	2016	2015	2014	2013	2012	Average	Rank
1	ICICI	24.26	26.68	26.03	27.08	29.59	26.73	1
2	HDFC	7.48	7.66	8.02	8.24	7.06	7.69	3
3	SBI	9.92	10.02	10.22	10.80	9.51	10.09	2
4	BOB	4.99	4.93	5.35	6.73	8.23	6.04	4

- Here, the ratio of ICICI bank is highest as in respect to other banks which we can see from the graph as well as from the table, which indicates higher leverage of ICICI bank.

**Composite Rating Of Asset Quality**

**Table: 8**

Bank	Gross NPA to Net Advances		Net NPA to Net Advances		Total Loans to Total Assets		Group Rank	
	%	Rank	%	Rank	%	Rank	Average	Rank
ICICI	4.01	2	0.014	2	26.73	1	1.67	3.5
HDFC	0.97	1	0.002	1	7.69	3	1.67	3.5
SBI	5.13	4	0.025	4	10.09	2	3.33	1.5
BOB	4.27	3	0.020	3	6.04	4	3.33	1.5

**4.3 MANAGEMENT SOUNDNESS**

**1. Total advance to Total deposits ratio:**

This ratio measures the efficiency and ability of the banks management in covering the deposits available with the banks excluding other funds like equity capital etc. into high earning advances .Total deposits include demand deposits, savings deposits, term deposits and deposits of other bank .Total advances also includes the receivables.

**Total Advance/ Total Deposits**

**Table : 9**

Sr. No	Bank Name	2016	2015	2014	2013	2012	Average	Rank
1	ICICI	1.03	1.07	1.02	0.99	0.99	1.02	1
2	HDFC	0.85	0.81	0.82	0.81	0.79	0.82	3
3	SBI	0.85	0.82	0.87	0.87	0.83	0.85	2
4	BOB	0.67	0.69	0.70	0.69	0.75	0.70	4

**Interpretation:**

- The ratio evaluate the efficiency and capatibility of the bank’s management in applying the deposits available exciting other funds viz equity capital,etc . into rich earning advances.
- ICICI is on the top position with highest average of 1.02 followed by SBI (0.85) and HDFC(0.82) on second and third positions respectively . BOB scored the lowest position with least percentage of 0.70.

**2. Business per Employee:**

Revenue per employee is a measure of how efficiently a particular bank is utilising its employees. Ideally, a bank wants the highest business per employee possible, as it denotes higher productivity. In general, rising revenue per employee is a positive sign that suggests the bank is finding ways to squeeze more sales/revenue out of each of its employee.

**Business per Employee = Total Income (Net Profit)/ No. of Employees**

**Table: 10**

Sr. No	Bank Name	2016	2015	2014	2013	2012	Average	Rank
1	ICICI	11.87	11.29	9.28	9.39	8.74	10.12	3
2	HDFC	11.55	10.70	9.83	7.76	6.69	9.31	4
3	SBI	15.38	13.49	11.73	9.85	8.87	11.86	2
4	BOB	18.41	21.18	21.00	18.61	15.94	19.3	1

- Business per employee reveals the productivity and efficiency of human resource of bank. It is followed as a tool to measure the efficiency of employees of a bank higher the ratio, the better it is for the bank and vice versa.
- BOB is the top position 19.03 followed by SBI (11.86) and ICICI (10.12) respectively. HDFC scored the lowest position with least ratio of 9.31.

**3. Profit per Employee:**

The ratio shows the surplus earned per employee. It is arrived at by dividing profit after tax earned by the bank by the total number of employee. The higher the ratio shows good efficiency of the management.

**Profit per Employee = Net Profit/No. of Employees**

**Table: 11**

Sr. No	Bank Name	2016	2015	2014	2013	2012	Average	Rank
1	ICICI	0.13	0.17	0.14	0.13	0.11	0.14	1
2	HDFC	0.14	0.13	0.12	0.10	0.08	0.11	2
3	SBI	0.05	0.06	0.05	0.06	0.05	0.05	4
4	BOB	-0.10	0.07	0.10	0.10	0.12	0.06	3

- It is calculated by dividing the profit after tax earned by the bank with the total number of employees .The higher the ratio ,higher is the efficiency of the management and vice versa.
- ICICI is on the top position with highest average of 0.14 followed by HDFC 0.11 and BOB 0.06 respectively.SBI Scored the lowest position with least ratio of 0.05

**Composite Rating of Management Soundness**

**Table :12**

Bank	Total Adv to Total Deposits		Business Per Employee		Profit Per Employee		Group Rank	
	%	Rank	%	Rank	%	Rank	Average	Rank
ICICI	1.02	1	10.12	3	0.14	1	1.67	4
HDFC	0.82	3	9.31	4	0.11	2	3.00	1
SBI	0.85	2	11.86	2	0.05	4	2.67	2.5
BOB	0.70	4	19.03	1	0.06	3	2.67	2.5

**4.4 EARNINGS**

**1.Net profit to Total assets:**

This ratio reflects the return on assets employed or the efficiency in utilization of assets. It is calculated by dividing the net profits with total assets of the bank. Higher the ratio reflects better earning potential of a bank in the future.

**Table: 13**

Sr. No	Bank Name	2016	2015	2014	2013	2012	Average	Rank
1	ICICI	1.35	1.73	1.65	1.55	1.36	1.53	2
2	HDFC	1.73	1.73	1.72	1.68	1.53	1.68	1
3	SBI	0.44	0.64	0.61	0.90	0.88	0.69	3
4	BOB	-0.80	0.48	0.69	0.82	1.12	0.46	4

**Interpretation:**

- This ratio reflects the return on assets employed or the efficiency in utilization of assets. It is calculated by dividing the net profits with total assets of the bank. Higher the ratio reflects better earning potential of a bank in the future.
- HDFC is on the top position with highest average of 1.68 followed by ICICI (1.53) and SBI (0.69) respectively. BOB scored the lowest position with least ratio of 0.76.

**2. Return on Assets (ROA):**

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

**Return on assets = Net profits / Avg. total assets**

**Table: 14**

Sr. No	Bank Name	2016	2015	2014	2013	2012	Average	Rank
1	ICICI	1.34	1.72	1.64	1.55	1.36	1.522	2
2	HDFC	1.73	1.73	1.72	1.68	1.52	1.676	1
3	SBI	0.44	0.63	0.6	0.9	0.87	0.688	3
4	BOB	-0.8	0.47	0.68	0.81	1.11	0.454	4

**Interpretation:**

- HDFC is on the top position with highest average of 1.67 followed by ICICI (1.52) and SBI (0.69) respectively. BOB scored the lowest position with least ratio of 0.45.

**3. Net Interest Margin**

The net interest margin measures the difference between interest paid and interest received, adjusted relative to the amount of interest-generating assets.

The formula for net interest margin is:

**Net Interest Margin = (Interest Received - Interest Paid) / Average Invested Assets**

Net interest margin is always expressed as a percentage.

A positive net interest margin means the investment strategy pays more interest than it costs. Conversely, if net interest margin is negative, it means the investment strategy costs more than it makes.

**Table: 15**

Sr. No	Bank Name	2016	2015	2014	2013	2012	Average	Rank
1	ICICI	2.94	2.94	2.77	2.58	2.26	2.698	3
2	HDFC	3.89	3.79	3.75	3.94	3.63	3.8	1
3	SBI	2.51	2.68	2.74	2.83	3.24	2.8	2
4	BOB	1.89	1.84	1.81	2.06	2.3	1.98	4

- NIM is the difference between the interest income and the interest expended. It is expressed as a percentage of total assets. A higher spread indicates the better earnings given the total assets.
- HDFC is on the top position with highest average of 3.8 followed by SBI (2.8) and ICICI (2.7) respectively. BOB scored the last position with least ratio of 1.98.

**Composite Rating Of Earnings**

**Table : 16**

Bank	1.Net profit To Total Assets		Return on Asset		NIM		Group Rank	
	%	Rank	%	Rank	%	Rank	Average	Rank
ICICI	1.53	2	1.522	2	2.698	3	2.33	3
HDFC	1.68	1	1.676	1	3.8	1	1.00	4
SBI	0.69	3	0.688	3	2.8	2	2.67	2

BOB	0.46	4	0.454	4	1.98	4	4.00	1
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**4.5 LIQUIDITY**

**1. Credit Deposit Ratio**

Credit Deposit Ratio is the ratio of how much a bank lends out of the deposits it has mobilized. RBI does not stipulate a minimum or maximum level for the ratio, but a very low ratio indicates banks are not making full use of their resources. Alternatively, a high ratio indicates more reliance on deposits for lending and a likely pressure on resources.

CD Ratio helps in assessing a bank’s liquidity and indicates its health. If the ratio is too low, banks may not be earnings as much as they could be. If the ratio is too high, it means that banks might not have enough liquidity to cover any unforeseen fund requirements, may effect capital adequacy and asset-liability mis-match. A very high ratio could have implications at the systemic level.

Total Advances/Total Deposits

**Table: 17**

Sr. No	Bank Name	2016	2015	2014	2013	2012	Average	Rank
1	ICICI	0.41	0.48	0.47	0.50	0.55	0.48	1
2	HDFC	0.10	0.10	0.11	0.11	0.10	0.10	3
3	SBI	0.13	0.13	0.13	0.14	0.12	0.13	2
4	BOB	0.06	0.06	0.06	0.08	0.10	0.07	4

Interpretation:

- BOB has lower liquidity, as it’s earnings capability is lowest compare to other banks. Where as ICICI has highest earnings capacity.

**2. Liquidity Ratio:**

Liquidity or short term solvency means ability of the business to pay its short term liabilities.

- Reserve requirement, a bank regulation that sets the minimum reserves each bank must hold.
  - Liquidity ratio expresses a company's ability to repay short-term creditors out of its total cash. It is the result of dividing the total cash by short-term borrowings. It shows the number of times short-term liabilities are covered by cash. If the value is greater than 1.00, it means fully covered.

**Liquidity Ratio = Current assets / Current liabilities**

**Table: 18**

Sr. No	Bank Name	2016	2015	2014	2013	2012	Average	Rank
1	ICICI	0.19	0.12	0.14	0.15	0.13	0.15	2.00
2	HDFC	0.12	0.10	0.14	0.09	0.14	0.12	4
3	SBI	0.15	0.13	0.11	0.11	0.12	0.12	3
4	BOB	0.25	0.24	0.23	0.18	0.18	0.22	1

Interpretation:

- Above graph shows BOB’s liquidity is comparatively good than other banks as it’s ability to repay the short term creditors out its cash.
- But HDFC bank’s liquidity is lowest than others.

**Composite Rating Of Liquidity**

**Table : 19**

Bank	Credit Deposit Ratio		Liquidity Ratio		Group Rank	
	%	Rank	%	Rank	Average	Rank
ICICI	0.48	1	0.15	2.00	1.50	4.00
HDFC	0.10	3	0.12	4	3.50	1
SBI	0.13	2	0.12	3	2.50	2.5
BOB	0.07	4	0.22	1	2.50	2.5

**Composite Ranking (overall performance)**

**Table : 18**

Bank Name	C	A	M	E	L	Average	Rank
ICICI	1	3.5	4	1.67	4.00	2.83	1
HDFC	3	3.5	1	1.33	1	1.97	4
SBI	3	1.5	2.5	1.83	2.5	2.27	2
BOB	3	1.5	2.5	1.83	2.5	2.27	2

## V. Findings

In this research, the impact of CAMEL model parameters on Bank performance has been analyzed. The process of our study highlighted that, the different banks have obtained different ranks with respect to CAMELS ratios. Our study concluded that in terms of capital adequacy ratio parameter ICICI was at the top position. The possible reason for this was the strong performance in debt-equity, advances to assets.

In terms of asset quality parameter, SBI held the top rank, the possible reason for this was the strong performance of SBI in gross NPA to net advances, net NPAs to net advances, and total loans to total assets ratios.

Under management efficiency parameter it is observed that top rank taken by HDFC and lowest rank taken by ICICI. The possible reason for this was the poor performance of ICICI in total advances to total deposits, profit per employee and business per employee ratios.

In terms of earning quality parameter the capability of BOB got the top rank in the while HDFC was at the lowest position. The possible reason for this was the poor performance of HDFC in net profit to total assets, return on assets and net interest margin to total assets ratios.

Under the liquidity parameter HDFC stood on the top position and ICICI was on the lowest position. The possible reason for this was the poor performance of ICICI in credit deposit ratio and Liquidity ratio. The present study is limited in scope as it relates to four banks only.

## VI. Recommendations

On the basis of the findings of the study, it recommends that:

- i) The banks should improve their capital base and maintain adequate capital adequacy ratio, lower the ratio more the performance of the banks.
  - ii) The bank should decrease their nonperforming loan in order to improve their asset quality and limiting the loan outstanding.
  - iii) The administration of the bank should manage the cost of the bank, and the cost to income ratio should be in a reasonable range. The administration of the bank should make sure the costs of the bank are utilized in the sensible way.
  - iv) The bank should increase their net profit and improve their net interest margin, and maximize the income of loan product.
  - v) The bank should try to get more deposits and keep the right amount of liquid assets to increase its liquidity.
- For asset quality banks need to enhance their procedures for screening, credit clients and observing of credit danger. This is a critical indicator on the grounds that the banks have confronted difficult issues with non-performing credits in the past which prompted the breakdown of numerous banks. Then again banks ought to concentrate on enhancing their capital levels so as to enhance their financial execution. This will empower the banks to be cushioned against outside stuns, as well as to exploit business open incredibly and expand their budgetary execution in the process. Income diversification can be accomplished by expanding interest income, charges and commissions and foreign exchange activities.

## Bibliography

- [1]. Arora, S and Kaur, S (2008), "Diversification by Banks in India: What are the Internal Determinants?". *The Indian Banker*, Vol. III(7):pg. 37-41.
- [2]. Bodla, B.S. and Verma, R. (2006), "Evaluating Performance of Banks through CAMEL Model: A Case Study of SBI and ICICI". *The ICFAI Journal of Bank Management*, Vol.5(3): pg.49-63.
- [3]. Gupta, R. (2008), "A CAMEL Model Analysis of Private Sector Banks in India". *Journal of Gyan Management*, Vol. 2(1): pg. 3-8.
- [4]. Sarker, A. (2005), "CAMEL Rating System in the Context of Islamic Banking: A Proposed „S“ for Shariah Framework". *Journal of Islamic Economics and Finance*, Vol.1(1): pg. 78-84.

## WEBOGRAPHY

<https://investopedia.com/camelrating>  
[https://en.m.wikipedia.org/wiki/CAMELS\\_rating\\_system](https://en.m.wikipedia.org/wiki/CAMELS_rating_system)  
<http://niet.co.in/nietpfd/Camelmodel>  
<http://researchgate.net>  
<http://icicibank.com>  
<http://hdfcbank.co.in>  
<http://bankofbaroda.co.in>  
<http://www.sbi.co.in>  
<http://moneycontrol.com>  
[http://www.dnb.co.in/News\\_Press.asp?pid=1179](http://www.dnb.co.in/News_Press.asp?pid=1179)



*Camels Framework As A Tool To Measure Performance Of Public Sector And Private Sector Banks”*

<http://www.ibef.org/industry/banking-india.aspx>

<http://in.reuters.com/finance/stocks/companyProfile?symbol=IOBK.NS>

<http://www.indiaonline.com/Markets/Company/Background/Company-Profile/Indian-Overseas-Bank/532388>

[http://mospi.nic.in/Mospi\\_New/upload/SYB2013/CH-24-BANKS/BANKS-WRITEUP.pdf](http://mospi.nic.in/Mospi_New/upload/SYB2013/CH-24-BANKS/BANKS-WRITEUP.pdf)

<http://www.iba.org.in/>

<http://www.iob.in/>

<http://www.jagranjosh.com/articles/what-is-bank-introduction-features-1351930521>

<http://www.rbi.org.in/home.aspx>

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