

# An Analysis of Public Sector Banks in India Based on Camel Model

## Urmila Bharti

Assistant Professor,  
Deptt. of Commerce,  
Zakir Husain Delhi College  
(Evening),  
University of Delhi,  
New Delhi

## Rajanikant Verma

Associate Professor,  
Deptt. of Commerce,  
Zakir Husain Delhi College  
(Evening),  
University of Delhi,  
New Delhi

### Abstract

Banking sector is reckoned as a hub and barometer of the financial system. In evaluating the function of the banks, many of the developed countries are now following uniform financial rating system (CAMELS Rating) along with other existing procedures and techniques. The advantage of the CAMELS model is that it highlights the key aspects of a bank that an analyst should be interested in capital, asset quality, earnings and liquidity.

The focus of the paper is to analyze the financial position and performance of the Public Sector banks in India using CAMELS model. To achieve the main objective the sub-objectives are to examine the Financial Performance of Public Sector Banks from the view point of CAMELS model, to rank the banks based on CAMELS model regarding financial Performance and to make suggestions for the better performance of Public Sector Banks based on CAMELS model. The present study is a descriptive research study based on analytical research design. This study is based on secondary data and data have been collected from various sources, viz. journals, IBA bulletin, statistics published by Reserve bank of India, annual reports published by the banks and other related websites for nationalized banks in India for the period of five years from 2012-13 to 2016-17.

CAMELS rating model is a model to confess that an organization where can be successful and where has weaknesses. The results show that in most of the indicators Bank of Baroda occupies the top position followed by Andhra Bank, Vijaya Bank and Bhartiya Mahila Bank Ltd. In contrast, Central Bank of India along with Indian Overseas Bank, United Bank of India and Punjab and Sind Bank are least efficient banks. Also, it can be concluded that the banks with least ranking need to improve their performance to come up to the desired standards. The process of strengthening the banking system has to be viewed as a continuous one. With India increasingly getting integrated with the global financial world, the Indian banking sector has still a long way to go to catch up with their counterparts.

**Keywords:** CAMELS, Public Sector Banks, Model, Capital Adequacy, Asset Quality, Management Quality, Earnings and Liquidity.

### Introduction

Financial system is an important institutional and functional vehicle for economic transformation of any country. The economic development of any country is dependent on its financial system—its banks, stock markets, insurance sector, pension funds and a government-run central bank with authority, or at least influence, over currency and interest rates. In developed countries, these two sides of the economic coin work together to promote growth and avoid runaway price inflation. When a country is still in developing stage, the lack of a strong, sound financial system generally works against the national economy. Banks are the cornerstone of a national financial system. As a pillar of the economy, this sector plays a decisive role in the development of economy in general and enterprise sector in particular. Schumpeter says, "It is the banking system which serves as a key agent along with the entrepreneurs in the process of economic development. The banking sector can play a vital role as growth facilitator.

Banking sector is reckoned as a hub and barometer of the financial system. Their key services are to provide a safe haven for the earnings of the individuals and loan to companies in need of capital, either to start operating or to stay in business. Without this source of available capital, businesses would be hard-pressed to continue growing and returning a profit to their owners and outside investors. By channeling

savings into the business sector through loans—and also offering loans to individuals to buy cars and homes—banks boost overall economic growth and development. There are currently 27 public sector banks in India, out of which 19 are nationalized banks and 6 are SBI and its associate banks. Further, there are two banks which have been categorized by RBI as “Other Public Sector Banks”. IDBI Bank and Bhartiya Mahila Bank come under this category. Apart from above there are 21 private sector banks and 45 foreign banks in India. In total 93 commercial banks are working in India. (Reserve Bank of India March 31, 2017)

#### **CAMEL Model**

CAMEL model of rating was first developed in the 1970s by the three federal banking supervisors of the U.S (the Federal Reserve, the FDIC and the OCC) as part of the regulators’ “Uniform Financial Institutions Rating System”, to provide a convenient summary of bank condition at the time of its on-site examination. The banks were judged on five different components under the acronym C-A-M-E-L:

C – Capital Adequacy

A – Asset Quality

M – Management Soundness

E – Earnings Capacity

L – Liquidity and

S - Sensitivity to Market Risk

The system of CAMEL was revised in 1996, when agencies added an additional parameter ‘S’ for assessing “sensitivity to market risk”, thus making it ‘CAMELS’ that is in vogue today. Based on the recommendations of the Padmanbhan Committee, the commercial banks incorporated in India are presently rated on the ‘CAMELS’ model (Capital adequacy, Asset quality, Management, Earnings, Liquidity, and Systems & Control).

#### **Review of Literature**

The financial performance of banks, both public and private, has been analyzed by academicians, scholars and administrators using CAMEL model in the last decade. A summary of some of the studies is given below:

Das (2009) compares the performance of public sector banks with private/foreign banks under the CAMELS framework. The results of the study show that private/foreign banks fared better than public sector banks on most of the CAMELS factors in the study period. The two contributing factors for the better performance of private/foreign banks were Management Soundness and Earnings and Profitability. Kaur (2010) in his article, rank the various commercial banks operating in India. The banks in India have been categorized into Public sector, Private sector and foreign banks. For the purpose of profitability analysis 28 Public Sector, 26 Private Sector and 28 foreign banks have been taken into consideration For the purpose of ranking, CAMEL analysis technique has been used. Siva and Natarajan (2011) empirically tested the applicability of CAMEL norms and its consequential impact on the performance of SBI Groups. The study concluded that annual CAMEL scanning helps the commercial bank

to diagnose its financial health and alert the bank to take preventive steps for its sustainability.

Chaudhry and Singh (2012) analyzed the impact of the financial reforms on the soundness of Indian Banking through its impact on the asset quality. The study identified the key players as risk management, NPA levels, effective cost management and financial inclusion. Mohiuddin (2014) made an effort to evaluate the financial performance of the two major banks (one is NCB and another one is PCB) operating in Bangladesh. This evaluation has been done by using CAMEL Parameters, the latest model of financial analysis. Through this model, it is highlighted that the position of the banks under the study is sound and satisfactory so far as their capital adequacy, asset quality, management capability and liquidity is concerned.

Gupta (2014) evaluate and analyze the performance of banks to ensure a healthy financial system and an efficient economy. The study attempts to evaluate the performance of public sector banks in India using CAMEL approach for a five year period from 2009-13. Rostami (2015) study some important ratios to evaluate bank’s performance. Data which is used in this study is gathered from annual financial reports of an Iranian bank. Then data is compared with other bank’s ratios and reports. Gadhia (2015) in the paper made an attempt to explain the concept of ‘CAMEL’ model for performance evaluation of banks in India. ‘CAMEL’ model measures the performance of banks by applying important parameters like Capital Adequacy, Assets Quality, Management Efficiency, Earning Quality and Liquidity. Muralidhara & Lingam (2017) analyses the performance of selected nationalized banks in India. With the study period of 2006-2012 to 2015-2016 the performance of five nationalized banks Bank Of Baroda, Punjab National Bank, Bank Of India, Central Bank Of India, Bank Of Maharashtra are analyzed based on capital adequacy, assets quality, management efficiency, earning capacity and liquidity management of banks using weight age techniques.

#### **Objectives of The Study**

The main objective of the study is to analyze the financial position and performance of the Public Sector banks in India using CAMEL model. To achieve the main objective the following are set as the sub-objectives:

1. To examine the Financial Performance of Public Sector Banks from the view point of CAMEL Model.
2. To rank the banks based on CAMELS model regarding financial Performance.
3. To make suggestions for the better performance of Public Sector Banks based on CAMEL Model.

#### **Research Methodology**

For analyzing performance, CAMEL analysis technique has been used. CAMEL is a ratio-based model used to evaluate the performance of banks with the help of different criteria, viz. Capital Adequacy, Asset Quality, Management Quality, Earnings and Liquidity. The present study is a descriptive research study based on analytical research design.

**Data Collection and Scope of The Study**

This study is based on secondary data. Data have been collected from various sources, viz. journals, IBA bulletin, statistics published by Reserve bank of India, annual reports published by the banks and other related websites. This study is based on data of nationalized banks in India for the period of five years from 2012-13 to 2016-17.

**Camel Framework and Major Ratios**

CAMEL is basically a ratio-based model for evaluating the performance of banks. Various ratios forming this model are explained below:

**Capital Adequacy - C**

Capital base of financial institutions facilitates depositors in forming their risk perception about the institutions. Also, it is the key parameter for financial managers to maintain adequate levels of

capitalization. Capital adequacy ultimately determines how well financial institutions can cope with shocks to their balance sheets. A sound capital base strengthens confidence of depositors. This ratio is used to protect depositors and promote the stability and efficiency of financial systems around the world. The following ratios have been used to measure capital adequacy:

**Capital Risk Adequacy Ratio**

CRAR is a ratio of Capital Fund to Risk Weighted Assets. Reserve Bank of India prescribes banks to maintain a minimum Capital to risk-weighted Assets Ratio (CRAR) of 9 % with regard to credit risk, market risk and operational risk on an ongoing basis, as against 8 % prescribed in Basel documents.

CRAR = Capital/ Total Risk Weighted Credit Exposure.

**Table 1: Average Capital Adequacy Ratios for the period 2012-13 to 2016-17**

S. No.	Bank	CAR	Rank	Total Adv./ TA	Rank	Avg Rank
1	Allahabad Bank	10.78	18	0.63	7	12.5
2	Andhra Bank	11.43	13	0.66	1	7
3	Bank Of Baroda	12.72	3	0.55	19	11
4	Bank Of India	11.17	15	0.59	14	14.5
5	Bank Of Maharashtra	11.54	10	0.65	3	6.5
6	Bhartiya Mahila Bank Ltd.	183.39	1	0.21	21	11
7	Canara Bank	11.51	11	0.59	15	13
8	Central Bank Of India	10.72	19	0.57	16	17.5
9	Corporation Bank	11.39	14	0.61	11	12.5
10	Dena Bank	11.10	16	0.60	13	14.5
11	Idbi Bank Limited	11.79	6	0.57	17	11.5
12	Indian Bank	13.08	2	0.63	6	4
13	Indian Overseas Bank	10.58	21	0.60	12	16.5
14	Oriental Bank Of Commerce	11.57	8	0.63	5	6.5
15	Punjab And Sind Bank	11.43	12	0.62	8	10
16	Punjab National Bank	11.88	5	0.61	10	7.5
17	Syndicate Bank	11.55	9	0.65	2	5.5
18	Uco Bank	11.91	4	0.56	18	11
19	Union Bank Of India	10.96	17	0.64	4	10.5
20	United Bank Of India	10.65	20	0.53	20	20
21	Vijaya Bank	11.72	7	0.61	9	8

Source: Statistical Tables Relating to Banks in India 2012-13 to 2016-17

**Total Advance to Total Asset Ratio**

This is the ratio of the total advances to total asset. This ratio indicates banks aggressiveness in lending which ultimately results in better profitability. Higher ratio of advances of bank deposits (assets) 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 to Total Asset Ratio = Total Advances/ Total Asset

**Discussion: Average Capital Adequacy Ratios for The Period 2012-13 to 2016-17**

On the basis of CAR the Bhartiya Mahila Bank Ltd enjoys the first rank with CAR of 183.39 followed by Indian Bank (13.08) and Bank of Baroda (12.72). Indian Overseas Bank has the least CAR (10.58). On the basis of Total advances to Total Assets, Andhra bank (0.66) occupies the top most position followed by Syndicate Bank (0.65) and Bank of Maharashtra (0.65). Higher ratio is considered good for the company. Banks like Bhartiya Mahila Bank Ltd (0.21) followed by United Bank of India (0.53) and Bank of Baroda (0.55) have very low values.

On the aggregate basis, Indian Bank occupies the first rank followed by Syndicate Bank at the second position and Oriental Bank of Commerce at the third position.

#### Asset Quality – A

Asset quality determines the healthiness of financial institutions against loss of value in the assets. The weakening value of assets, being prime source of banking problems, directly pour into other areas, as losses are eventually written-off against capital, which ultimately expose the earning capacity of the institution. With this backdrop, the asset quality is gauged in relation to the level and severity of non-performing assets, adequacy of provisions, recoveries, distribution of assets etc. One of the indicators for asset quality is the ratio of non-performing loans to total loans. Higher ratio is indicative of poor credit decision-making. The following ratios have been used to measure asset quality:

#### 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

Gross NPA (GNPA) to Net Advances Ratio (GNPA's/ ADV Ratio): Gross Non-Performing Assets (GNPA) to Net Advances Ratio is a measure of the quality of assets in a situation, where the management has not provided for loss on NPAs. It reflects the quality of advances made by the bank. Gross NPAs are the sum total of all loan assets that are classified as NPAs as per RBI guidelines as on Balance Sheet date. The Gross NPAs are measured as a percentage of Net Advances. A low ratio signifies that the bank has granted sound loans and proves the good quality of advances. Symbolically,  
GNPA's/ ADV Ratio = Gross Non-Performing Assets / Net Advances.

**TABLE 2: Average Asset Quality Ratios for the period 2012-13 to 2016-17**

S. No.	Bank	Net NPA	Rank	Gross NPA	Rank	Avg Rank
1	ALLAHABAD BANK	5.40	17	7.32	14	15.5
2	ANDHRA BANK	4.13	7	7.31	13	10
3	BANK OF BARODA	2.89	3	6.52	6	4.5
4	BANK OF INDIA	4.42	10	6.82	8	9
5	BANK OF MAHARASHTRA	4.97	14	5.63	2	8
6	BHARATIYA MAHILA BANK LTD.	4.48	11	9.47	21	16
7	CANARA BANK	3.91	6	6.11	3	4.5
8	CENTRAL BANK OF INDIA	5.56	18	8.99	18	18
9	CORPORATION BANK	4.29	9	6.33	4	6.5
10	DENA BANK	4.91	13	7.64	15	14
11	IDBI BANK LIMITED	5.39	16	8.38	16	16
12	INDIAN BANK	3.12	4	7.27	11	7.5
13	INDIAN OVERSEAS BANK	7.45	21	9.26	19	20
14	ORIENTAL BANK OF COMMERCE	4.82	12	6.52	6	9
15	PUNJAB AND SIND BANK	4.24	8	7.10	10	9
16	PUNJAB NATIONAL BANK	5.14	15	7.06	9	12
17	SYNDICATE BANK	2.78	1	6.47	5	3
18	UCO BANK	5.58	19	8.46	17	18
19	UNION BANK OF INDIA	3.69	5	7.29	12	8.5
20	UNITED BANK OF INDIA	7.07	20	9.28	20	20
21	VIJAYA BANK	2.79	2	4.12	1	1.5

Source: Statistical Tables Relating to Banks in India 2012-13 to 2016-17

#### Discussion: Average Asset Quality Ratios for The Period 2012-13 to 2016-17

The Table 2 reveals that best bank in terms of least NPAs to total assets is Syndicate bank (2.78) followed by Vijaya Bank (2.79) and Bank of Baroda (2.89). On the basis of Gross non-performing assets, Vijaya Bank (4.12) is again ranked at number one,

therefore, being the best bank in terms of asset quality. The second and the third positions are occupied by Bank of Maharashtra (5.63) and Canara Bank (6.11). On an average basis, Vijaya Bank is at the top followed by Syndicate Bank. It shows that loans given by these banks are sound, so have good quality of advances. Indian Overseas bank (7.45)

followed by United Bank of India (7.07) and UCO Bank (5.58) shows higher level of NPA which in turn depicts high probability of credit defaults.

#### Management – M

Management of financial institution is generally evaluated in terms of capital adequacy, asset quality, earnings and profitability, liquidity and risk sensitivity ratings. In addition, performance evaluation includes compliance with set norms, ability to plan and react to changing circumstances, technical competence, leadership and administrative ability. Sound management is one of the most important factors behind financial institutions' performance. The ratios used to evaluate management efficiency are described as under:

#### Business per Employee

Revenue per employee is a measure of how efficiently a particular bank is utilizing 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/revenues out of each of its employee.

BPE = Total Business / No. of Employees

#### Profit per Employee

This 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.

PPE = Profit after Tax/ No. of Employees

#### Discussion:

#### Average Management Quality Ratios for the period 2012-13 to 2016-17

The Table 3 depicts the productivity of banks in terms of BPE and PPE. Bank wise interpretation of the table shows that BPE was highest in IDBI Bank Ltd. (250.27) followed by Corporation Bank (192.11), Bank of India (187.00) and Bank of Baroda (177.44). On the contrary it was lowest in Bhartiya Mahila Bank Ltd. (23.03) followed by Central Bank of India (112.13) and United Bank of India (116.88).

**Table 3: Average Management Quality Ratios for the period 2012-13 to 2016-17**

S. No.	Bank	BPE	Rank	PPE	Rank	Avg Rank
1	Allahabad Bank	142.82	13	0.16	14	13.5
2	Andhra Bank	153.10	7	0.36	7	7
3	Bank Of Baroda	177.44	4	0.86	2	3
4	Bank Of India	187.00	3	0.02	17	10
5	Bank Of Maharashtra	157.86	6	0.03	16	11
6	Bharatiya Mahila Bank Ltd.	23.03	21	0.38	6	13.5
7	Canara Bank	143.62	11	0.28	11	11
8	Central Bank Of India	112.13	20	-0.18	19	19.5
9	Corporation Bank	192.11	2	0.31	9	5.5
10	Dena Bank	143.14	12	0.10	15	13.5
11	Idbi Bank Limited	250.27	1	-0.50	21	11
12	Indian Bank	144.32	10	0.61	3	6.5
13	Indian Overseas Bank	128.96	18	-0.36	20	19
14	Oriental Bank Of Commerce	171.02	5	0.22	13	9
15	Punjab And Sind Bank	153.00	8	0.28	11	9.5
16	Punjab National Bank	130.86	17	0.28	10	13.5
17	Syndicate Bank	140.76	14	0.32	8	11
18	Uco Bank	133.12	16	-0.09	18	17
19	Union Bank Of India	144.62	9	0.46	4	6.5
20	United Bank Of India	116.88	19	1.07	1	10
21	Vijaya Bank	139.84	15	0.38	5	10

**Source:** Statistical Tables Relating to Banks in India 2012-13 to 2016-17

The table further reveals that in case of PPE, United Bank of India (1.07) followed by Bank of Baroda (0.86) and Indian Bank (0.61) have the highest values which show that profitability position of these banks is very good. In contrast, IDBI Bank Ltd. (-0.50) had the lowest value, followed by Indian Overseas Bank (-0.36) and Central Bank of India (-0.18). It indicates that these banks have less amount of profit in relation to their employees. So these banks should try to increase their income in order to enhance their performance.

The analysis of average mean ranks indicates that it was highest in Bank of Baroda followed by Corporation Bank and Union Bank of India.

#### Earnings & Profitability – E

Earnings and profitability, the prime source of increase in capital base, is examined with regards to interest rate policies and adequacy of provisioning. In addition, it also helps to support present and future operations of the institutions.

#### Operating Profit to Total Assets

Operating profit to total asset indicates the efficiency of the banks in utilizing their assets in generating profits. A higher ratio indicates the better income generating capacity of the assets and better efficiency of management in future.

Operating Profit/ Total Asset

**Table 4: Average Earning Quality Ratios for the period 2012-13 to 2016-17**

S. No.	Bank	NIM / TA	Rank	OP / TA	Rank	Avg Rank
1	Allahabad Bank	2.50	5	1.81	3	4
2	Andhra Bank	2.62	3	1.96	2	2.5
3	Bank Of Baroda	2.00	16	1.53	11	13.5
4	Bank Of India	2.00	15	1.45	13	14
5	Bank Of Maharashtra	2.59	4	1.60	8	6
6	Bhartiya Mahila Bank Ltd.	4.93	1	1.07	20	10.5
7	Canara Bank	1.87	19	1.44	14	16.5
8	Central Bank Of India	2.28	9	1.07	21	15
9	Corporation Bank	1.85	20	1.54	10	15
10	Dena Bank	2.02	13	1.20	17	15
11	Idbi Bank Limited	1.70	21	1.58	9	15
12	Indian Bank	2.50	6	1.74	6	6
13	Indian Overseas Bank	2.05	12	1.36	16	14
14	Oriental Bank Of Commerce	2.29	8	1.79	4	6
15	Punjab And Sind Bank	2.02	14	1.09	19	16.5
16	Punjab National Bank	2.75	2	2.10	1	1.5
17	Syndicate Bank	2.23	10	1.43	15	12.5
18	Uco Bank	2.21	11	1.75	5	8
19	Union Bank Of India	2.30	7	1.65	7	7
20	United Bank Of India	1.93	17	1.47	12	14.5
21	Vijaya Bank	1.88	18	1.11	18	18

Source: Statistical Tables Relating to Banks in India 2012-13 to 2016-17

#### **Net Interest Margin to Total Assets**

Net Interest margin is an important parameter of the performance of banks. It is the difference between the interest income and the interest expended as a percentage of total assets. A higher NIM indicates better earnings as against the total assets. Symbolically,  

$$\text{NIM to Total Assets} = (\text{Interest Income} - \text{Interest Expense}) / \text{Total Assets}$$

#### **Discussion: Average Earning Quality Ratios for the period 2012-13 to 2016-17**

Net interest margin is also known as spread. It is the most important driver of profitability of banks. The trend of spread reveals that it was highest in case of Bhartiya Mahila Bank Ltd. (2.59) followed by Punjab National Bank (2.75) and Andhra bank (2.62). In contrast, it was lowest in IDBI bank Ltd. (1.70) followed by Corporation Bank (1.85) and Canara Bank (1.87). These banks should try to lower down their interest expenses and also they should try to improve their interest income. Only then they will be able to compete with other banks. The table further exhibits that operating profits are high in Punjab National Bank (2.10), followed by Andhra Bank (1.96) and Allahabad Bank (1.81). As against above, Central Bank of India (1.07), followed by Bhartiya Mahila Bank Ltd. (1.07) and Punjab and Sind Bank (1.09) recorded lower values which indicate that these banks are earning very low profits. These banks should try to cut their operating expenses as well as interest expenses.

Another notable feature revealed by the trend of spread is that on an average Punjab National

Bank enjoys the top position followed by Andhra Bank and Allahabad Bank.

#### **Liquidity – L**

An adequate liquidity position refers to a situation, where institution can obtain sufficient funds, either by increasing liabilities or by converting its assets quickly at a reasonable cost. It is, therefore, generally assessed in terms of overall assets and liability management, as mismatching gives rise to liquidity risk.

The ratios used to measure liquidity under CAMELS Model are as follows:

#### **Liquidity Asset to Total Asset**

Liquidity for a bank means the ability to meet its financial obligations as they come due. Thus one of the main challenges to a bank is ensuring its own liquidity under all reasonable conditions. The proportion of liquid asset to total asset indicates the overall liquidity position of the bank.

$$\text{Liquid Ratio} = \text{Liquidity Asset} / \text{Total Asset}$$

#### **Government Securities to Total Asset**

Government Securities are the most liquid and safe investments. This ratio measures the government securities as a proportion of total assets. Banks invest in government securities primarily to meet their SLR requirements, which are around 25% of net demand and time liabilities. This ratio measures the risk involved in the assets hand by a bank.

$$\text{Government Securities to total Asset} = \text{Government Securities} / \text{Total Asset}$$

**Table 5: Average Liquidity Ratios for the period 2012-13 to 2016-17**

S. No.	Bank	LA / TA	Rank	GS / TA	Rank	Avg Rank
1	Allahabad Bank	0.08	9	0.21	15	12
2	Andhra Bank	0.05	19	0.24	4	11.5
3	Bank Of Baroda	0.20	2	0.16	21	11.5
4	Bank Of India	0.13	3	0.17	20	11.5
5	Bank Of Maharashtra	0.06	14	0.21	13	13.5
6	Bharatiya Mahila Bank Ltd.	0.44	1	0.21	16	8.5
7	Canara Bank	0.09	4	0.23	6	5
8	Central Bank Of India	0.09	6	0.23	7	6.5
9	Corporation Bank	0.07	12	0.23	8	10
10	Dena Bank	0.06	16	0.24	5	10.5
11	Idbi Bank Limited	0.06	15	0.22	10	12.5
12	Indian Bank	0.06	17	0.21	14	15.5
13	Indian Overseas Bank	0.08	8	0.23	9	8.5
14	Oriental Bank Of Commerce	0.05	18	0.21	12	15
15	Punjab And Sind Bank	0.04	21	0.22	11	16
16	Punjab National Bank	0.09	5	0.20	17	11
17	Syndicate Bank	0.08	7	0.19	18	12.5
18	Uco Bank	0.07	11	0.24	3	7
19	Union Bank Of India	0.06	13	0.19	19	16
20	United Bank Of India	0.07	10	0.27	1	5.5
21	Vijaya Bank	0.05	20	0.24	2	11

Source: Statistical Tables Relating to Banks in India--2012-13 to 2016-17

#### **Discussion: Average Liquidity Ratios for the Period 2012-13 to 2016-17**

'Liquidity' is a term used by different bankers in different ways. Generally, three elements make up a banks' liquidity profile: its expected cash flow, its capacity to borrow in the market; and its stock of readily available high quality liquid assets. Banks must be capable of meeting their obligations when they fall due.

Bank wise analysis shows that highest liquidity was maintained by Bhartiya Mahila Bank Ltd. (0.44) Bank of Baroda (0.20) and Bank of India (0.13). These banks have excess liquidity which in turn lowers their profitability. On the other side the lowest value was of Punjab and Sind Bank (0.04), followed by Vijaya Bank (0.05) and Andhra Bank (0.05). These banks should keep sufficient cash with them so that they should be capable of meeting their obligations in time.

In Government Securities to total Asset United Bank of India (0.27) enjoys the first rank followed by Vijaya Bank (0.24) and UCO bank (0.24). It means these banks have most liquid and safe investments. On the contrary, Bank of Baroda (0.16) had the least liquid asset in the form of government securities, followed by Bank of India (0.17) and Union Bank of India (0.19). On an average, Canara Bank occupies the highest position followed by United Bank of India and Central Bank of India.

#### **Sensitivity to Market Risk – S**

The diversified nature of bank operations makes them vulnerable to various kinds of financial risks. Sensitivity covers how particular risk exposures can affect institutions. Examiners assess an institution's sensitivity to market risk by monitoring the management of credit concentrations. In this way, examiners are able to see how lending to specific industries affect an institution. These loans include agricultural lending, medical lending, credit card

lending, and energy sector lending. Exposure to foreign exchange, commodities, equities and derivatives are also included in rating the sensitivity of a company to market risk.

#### **Recommendations**

The following recommendations are proposed as follows:

1. An appropriate mix of capital structure should be adopted in order to increase the profitability of banks.
2. It is necessary to public sector banks to reduce their operating expenses and NPA to increase the profit. So, as they can increase earnings per share up to the mark.
3. Banks should focus on internal source of financing in order to increase their profitability and to reduce the cost.
4. The reduction in operating expenses would go a long way to help the public sector banks to improve their performance.
5. A sound capital base strengthens the confidence of depositors. The higher the CRAR the better the capacity of the banks to pay of its obligations and safety against bankruptcy.
6. Nonperforming assets have to managed efficiently, The higher ratio means the bank is unable to manage its loans and advances effectively.
7. Net interest income is the most important ratio that measures the financial performance of the financial institutions. The profit earning capacity of the firm shows how well the banks are managing its earning assets to earn profitable revenues. Therefore it has to be given highest priority.
8. The banks need to lay focus on the management efficiencies as management is the only criteria which can manage all the other elements of the performance.

**Conclusion**

Banking sector is reckoned as a hub and barometer of the financial system. Due to significant changes in the banking sector in the recent years, the central banks all around the world have improved their supervision quality and techniques. In evaluating the function of the banks, many of the developed countries are now following uniform financial rating system (CAMEL Rating) along with other existing procedures and techniques. The advantage of the CAMEL model is that it highlights the key aspects of a bank that an analyst should be interested in—capital, asset quality, earnings and liquidity. Changing financial scenario has opened up opportunities for banks to expand their global presence through self-expansion, strategic alliances, and so on.

In this study CAMELS rating method is used to choose important and effective indicators in each category. Banks can use this method to calculate and discuss ratios and focus on some crisis and find best solution when there is competitive problem and try to challenge and get a new and better position between the others. CAMELS rating model is a model to confess that an organization where can be successful and where has weaknesses. The results show that in most of the indicators Bank of Baroda occupies the top position followed by Andhra Bank, Vijaya Bank and Bhartiya Mahila Bank Ltd. In contrast, Central Bank of India along with Indian Overseas Bank, United Bank of India and Punjab and Sind Bank are least efficient banks. Also, it can be concluded that the banks with least ranking need to improve their performance to come up to the desired standards. The process of strengthening the banking system has to be viewed as a continuous one. With India increasingly getting integrated with the global financial world, the Indian banking sector has still a long way to go to catch up with their counterparts.

**References**

1. Chaudhry, Sahila and Singh, Sultan (2012): "Impact of Reforms on the Asset Quality in Indian Banking", *International Journal of Multidisciplinary* Vol. 5(2): pg. 17-24
2. Das, Mihir & Das, Annyesha (2009): "A Camel Analysis of The Indian Banking Industry", *SSRN Electronic Journal*, July 2009.

3. Gupta, Ruchi (2014): "An Analysis of Indian Public Sector Banks Using Camel Approach", *IOSR Journal of Business and Management (IOSR-JBM)*, e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 16, Issue 1, January 2014, PP 94-102.
4. Gadhia, Nayan M. (2015): "Camel Model, A Conceptual Framework for Financial Performance Evaluation of Banks in India", *International Journal of Scientific Research*, Vol. IV, Issue: 1, January 2015.
5. Hirtle and Lopez, 2008: "ABA Banking Journal, Banks performance evaluation by camel model". *Finance Trade Publications*, Volume. 4, Issue-4, pp. 9-14
6. Kaur, Harsh Vineet (2010): "Analysis of Banks in India- A Camel Approach", *Global Business Review*, 11:2 (2010): 257-280, SAGE Publications, Washington DC
7. Kaushal Bhatt (2012): *Performance Evaluation of Commercial Banks Through Camel Approach "A Comparative study of selected Public, Private and Foreign banks working in India"*
8. Mohiuddin, Golam (2014): "Use of Camel Model: A Study on Financial Performance of Selected Commercial Banks in Bangladesh", *Universal Journal of Accounting and Finance* 2(5): 151-160, 2014.
9. Muralidhara, P. & Lingam, Chokka (2017): "Camel Model As An Effective Measure of Financial Performance of Nationalised Banks", *International Journal of Pure and Applied Mathematics* Volume 117 No. 7 2017.
10. Prasad K.V.N.G. Ravinder and D. Maheshwari Reddy (2011), "A CAMEL Model Analysis of Public and Private Sector Banks in India". *Journal of Banking Financial Services and Insurance Research*, Vol1(5): Pg. 16-23
11. *The Bank Credit Analysis Handbook: A Guide for Analysts, Bankers and Investors* By Jonathan Golin, Philippe Delhaise
12. Rostami, Malihe (2015): "Camels' Analysis in Banking Industry", *Global Journal of Engineering Science and Research Management*, November 2015.