PERFORMANCE EVALUATION OF SELECTED PUBLIC AND PRIVATE SECTOR BANKS USING CAMEL APPROACH

Namita P Konnur[1] , Dr. Jahnavi M[2] , Chandan L [3] Dr. Sanjay , V. Hanji[4] , Kiran S [5]

[1]Assistant Professor, Department of MBA, CMR Institute of Technology, Bengaluru, Karnataka, India

[2]Associate Professor, Department of Finance, RVIM, Bangalore

[3]Assistant Professor, Department of MBA, RNSIT, Bengaluru, Karnataka, India

[4]Professor, Department of MBA, KLE Technological University's, KLE Dr. MS Sheshgiri College of Engineering and Technology, Udyambag, Belgaum, Karnataka, India.

[5]Asst. Professor - Department of MBA, Sir MVIT, Bengaluru.

ABSTRACT

This research paper talks about evaluating the performance of selected Private and Public sector banks using CAMEL APPROACH. The selected Banking sectors are ranked based on Sector wise and overall. The ranking is done according to the score of each bank. CAMEL APPROACH has been used to rank the performance evaluation of the selected banking sectors with the help of CAMEL ratings. The parameters used for the study are Capital Adequacy ratio or CRAR, Asset Quality, Management Capability, Earnings Capacity and Liquidity. ANOVA test is used to test is there any significant distinction among the selected Public and Private sector banks or not with respect to each parameter under the study. The outcome of the project explains the overall ranking of the Public and Private banks and helps in providing information regarding the performance and economic stability by using CAMEL's framework.

1.   INTRODUCTION

The Indian Banking sector is invariably presumed to be one of the most significant system in the economy. Banking sectors are considered as the Life blood of the Indian economy as it plays an important and crucial role in economic activities. During 90's Banking sectors has endorsed radical changes in the banking process. The banking sector has two categories scheduled and unscheduled banks. Further banking sectors are classified into Public, Private, Regional, and Foreign banks. Public sector banks are controlled by government and are also called as Nationalized banks. Private sector banks those are owned by private individuals. In India there are 91 commercial banks out of that, there are 12 Public banks and 22 Private banks. Banking institution's function is to promote savings among the public and lend loans and advances to the needy people and business. Presently banking sectors has grown faster and witnessed technological development and introduced online banking for the public. Online banking is also termed as web banking it is a platform of the customer of a bank to make electronic payment through the websites of the banks. This development has brought tremendous changes in the banking system.

1.1 Introduction of CAMEL Approach

Camel Approach is used by the baking sectors in Oder to evaluate the credit worthiness of the bank's performance and analysis the bank's risk. It is recognized as international classification system that bank higher-up authorities use to rate monetary establishments consistent with six factors diagrammatic by its word form. The higher-up forces given every financial institution a specific rating or score. The most effective rating is 5, and the worst rating given is 1 for every issue. There are 5 factors in this approach observed as:

- "C" it is CAPITAL ADEQUACY.

- "A" it is ASSET QUALITY.

- "M" it is MANAGEMENT.

- "E" it is EARNINGS.

- "L" it is LIQUIDITY.

2. LITERATURE REVIEW

Piyu 1992, examined the private and public banks financial credit worthiness by using CAMEL APPROCAH. The important element to analyses the fiscal area of the bank with the help of Camel approach with the help of monetary scale. **Kwan and Eisenbeis 1997,** they noticed that their study recorded that funding influenced the movement of the banking sectors. Asset Quality is one of the elements of the Camel approach which will help to determine the risk involved in the banking process as well as help to figure out the efficiency of the bank by using financial ratios.

Prasuna, he conducted study in the year 2003 he conducted an evaluation of more than 65 banks by using Camel rating system. **Veni 2004,** concluded that Capital adequacy plays an important role for rating firm and these firm takes Camel framework by using to rate the banks.**Nurazi and Evans 2005,** did and assessment by using Camel Approach to estimate the breakdown in the baking industry, with the help of Camel Model one could estimate the drawbacks of the banking sectors.

Baral in 2005 he conducted a study on comparing the Joint enterprises banks with Commercial banks. The study resulted by saying that Commercial banks financial Status was not that good as Joint enterprises banks. **Sathish et al 2005,** he stated that Indian banking sector has developed in a better way. Through his study he stated that banking system has tremendous growth due to technology.

Dash & Das 2009, evaluated the Management soundness and Earnings capacity of the Private, Public and Foreign banking sectors. They finalized that the Management soundness and Earnings capacity of the Private and Foreign banking sectors performing better in respect to Management efficiency and Earnings capacity. **Hays, Lurgio & Arthur 2009,** conducted a study of banks on the basis on low and high efficiency by using Camel Approach's barometers. **Sangmi & Nazir 2010** assessed two better performing Northern Indian banks by using Camel rating system. This study was done to determine the involvement in the development of economies.

Baru 2010, stated that having strong financial stand will help to induce the efficiency and effectiveness of the financial concern to play main part of country's wealth. A strong, healthy financial stand is important for the customers of the bank as well as for the employees of the banks. To keep the track of the healthy banking position one should take right approaches and plans at right time.

Mishra et al in the year 2012 evaluated the financial stand of 12 government owned and non- government institution, later the research finalized private establishment performance was superior whereas public banks did not show any improvement. **K.V.N Prasad, G. Ravinder 2012** it is understood that analyzing or studying the banking sector in India is not an easy task to do, so it is every important to extricate the merits and demerits of banks.

Manish Kumar Ghanshyam Chand Yadav 2013 he analyzed the management efficiency and liquid assets of the banks which helped to diminish the indebted and helps to run the bank successfully. **Rohit Bansal & Anoop Mohanty 2013** he evaluated the banking sectors financial position through ranking each bank performance by using Camel Approach. **Sushendra Kumar Mishra & Parvesh Kushal Aspal 2013,** using Camel approach factors they evaluated the banks liquidity, capital adequacy and capacity of earnings and explained the concept of camel rating system.

Jagjeet Kaur, Dr. Harsh Vineet Kaur 2016, they evaluated the fiscal status of the Indian banking sectors. They took different banks such as BOB, SBI & Canara, Union institution, BOI etc. Their study concluded that BOB was ranked as first position, SBI & Canara was rankedas second position and Union establishment & BOI was ranked as rock bottom presentation. **Majumdar 2016,** assessed the financial status of fifteen banks through Camel Approach. He evaluated by using different types of tests to understand the financial credit worthiness. Through varies test the assessment stated that the banking sector must take necessary steps to retrieve the drawbacks of financial position.

3.RESEARCH GAP

The Literature review throw some lights on important parameters of the Camel Approaches, but the gap here found is few research papers does not reveal how the ratings are done with the help of Camel framework or Model, the other few research paper only concentrated on the theory part of the Camel Framework. On the other hand, some papers focused only on assigning the marks according to the Banks credibility. There were complete and proper evaluation of banking sector through Camel model.

3.1 RESEARCH DESIGN

Statement of the Problem

The banking Institutions contribute to economic sector, as it is the backbone of the economy. Banks accepts Deposits as well as provides Loans to the needy customers. Financial supports will help in the growth of the country. The Evaluation of 10 Selected Public and Private Sector Banks with the aid of CAMEL APPROACH shows the act of Public Sector banks must be assessed in Perpetuity to check the efficiency and accurate financial status and position. Compare to Private institution the attainment of Public fiscal establishment is not up to the level. The usage of CAMEL Parameters, with different Ratios and allotted marks of each ratios identifies the top ranked Private sector bank and their Performance.

3.2 Need of the Study

The primary function of this consideration is to analyze the selected financial establishment in virtue of Camel rating system and to provide a conclusion on the enforcement of the preferred institutions. By using Camel rating system's five elements we can investigate the banking institutions positions, if any weakness that can be found. In respect to Public Banks the major challenge faced is devaluation of Asset Quality. In respect to Private Banks the major problem faced is in Capital Adequacy, the government

infuses an outsized quantity of payer cash to recapitalize the banks in order that they will fulfil adequate capital norms.

3.3 Objectives of the Study

The main objective of the study is as follows:

- To understand the financial performance of selected public sector and private sector banks through CAMEL Rating System.

- To calculate how Capital adequacy, Asset quality, Management integrity, Earnings capacity and profitability, Liquidity influenced the performances of the selected Public and Private banks.

- To compare the performance of Selected Public sector and Private sector banks

3.4 Scope of the Study

Using CAMEL APPROACH, the banks performances are evaluated with the help of Camel Ratios or parameters. Various formulas preowned to arrive at Adequacy Ratio, Net NPA Ratio, Business Per Employees, Profit Per Employees, Interest Income to Total Income (II to TI), Other Income to Total Income (OI to TI) and Total Loans to Total Advances. Camel Approach not only provide the worthiness of the banking sector but also helps in providing Qualitative Judgments.

3.5 Research Methodology

Research Design

Descriptive analysis seeks to explain the current standing of associate degree identified variable. This research comes square measure designed to supply systematic data about a development. A part of this analysis been used in taking averages of all the CAMEL ratios. Average is also known as Mean. It is Calculated by using a formula, add all the data ratios values and then breaking down the sum by the values.

Sample Size

The study has taken 10 Public and Private banking institutions as Sample to check the accomplishment and analyze those selected banking sectors using Camel Model and frameworks. The following are the banks taken:

Public Sector Banks – Bank of Baroda, Bank of India, Bank of Maharashtra, Canara Bank, Indian Overseas Bank, Punjab National Bank, Punjab and Sind Bank, State Bank of India, Union Bank of India and UCO Bank

Private Sector Banks – Axis Bank, City Union Bank, Dhana Lakshmi Bank, Federal Bank, HDFC Bank, ICICI Bank, IDFC Bank, Kotak Mahindra Bank, South Indian Bank and Yes Bank.

Data Collection

The secondary data is taken from official websites as well as taken from the annual reports, which includes 5 years' data (from 2016 to 2020).

Primary Data: Primary data is acquired through interviews, tests, survey etc.

Secondary Data: Secondary data is collected through published survey reports, census, from books, journals and through websites. These data are collected by the person other than Primary or first user.

Tools used for Calculation:

The tools used for the calculation is CAMEL FRAMEWORK. The variables considered for the analysis are Capital Adequacy Ratio, Asset Quality, Management Quality, Profit per Employee, Return on Asset, Interest Income to Total Income, Other Income to Total Income and Total Loans to Total Deposits.

Table 1: Following are the Criteria for Marks allotted for Ratings:

CAMEL APPROACH	MARKS				
	1	2	3	4	5
CAR	Below 15	15 to 20	20 to 25	25 to 30	Above 30
NET NPA RATIO	Above 3	1.5 to 3	1.0 to 1.5	0.5 to 1.0	Below 0.5
BUSINESS PER EMPLOYEE	Below 10	10 to 15.5	15.5 to 20	20 to 25.5	Above 25.5
PROFIT PER EMPLOYEE	Below 2.0	2.0 to 4.5	4.5 to 7	7 to 9.5	Below 9.5
RETURN ON ASSET	Below 0.5	0.5 to 0.75	0.75 to 1.0	1.0 to 1.25	Above 15.5
OI TO TI	Below 7	7 to 18	18 to 29	29 to 40	Above 40
INTEREST INCOME TO TOTAL INCOME	Below 56	56 to 67	67 to 78	78 to 89	Above 89
TL TO TD	Below 0.5	0.5 to 0.75	0.75 to 1	1 to 1.25	Above 1.25

(Source: Author Tabulated)

The above table represents the criteria to be followed to allocate the marks for each CAMEL parameters. each parameter has marks depending upon the derived values.

Sector Wise and Overall Ranking

It is presented with support of above table, the Marks are derived from all last 5 years Selected Public and Private banking sectors. The 5 Years are (2016-2017, 2017-2018, 2019-2020, 2020-2021).

Formula used for Calculation:

$$\text{WEIGHTED AVERAGE SCORES} = W_c * C_a + W_a * A_a + W_m * M_a + W_e * E_a + W_l * L_a$$

Table 2: Weightage Average as Follows:

CAMEL FRAMEWORK	WEIGHTAGE
CA	20%
AQ	20%
MQ	30%
EC	15%
L	20%

(Source: Author Tabulated)

3.6 HYPOTHESIS:

H01: There is no significant difference between selected Public and Private sector banks with respect to Capital risk weighted Asset ratio.

H02: There is no significant difference between selected Public and Private sector banks with respect to Quality of Asset.

H03: There is no significant difference between selected Public and Private sector banks with respect to Management Quality.

H04: There is no significant difference between selected Public and Private sector banks with respect to Earnings Capacity.

H05: There is no significant difference between selected Public and Private sector banks with respect to Liquidity ratio.

3.7 LIMITATIONS OF THE STUDY

- This study is limited to banking sectors only.
- Since it is only selected banks, other banks details of performance are not mentioned.
- Project is based on Secondary data.
- This study focused CAMEL did not concentrate much on CAMELSC that is "S" stands for System and "C" stands for Compliance.

4. ANALYSIS AND INTERPRETATION

Table 3: Computation of Marks Scored by Public & Private Sector Banks in Capital Adequacy

Public Sector Banks	CAR AVG	MARKS	Private Sector Banks	CAR AVG	MARKS
Bank of Baroda	12.9725	1	Axis Bank	16.036	2
Bank of India	12.876	1	City Union Bank	15.988	2
Bank of Maharashtra	11.756	1	Dhana Laxmi Bank	13.902	1
Canara Bank	12.542	1	Federal Bank	11.96	1
Indian Overseas Bank	8.178	1	HDFC Bank	16.106	2
Punjab National Bank	11.202	1	ICICI Bank	17.09	2
Punjab and Sind Bank	11.202	1	IDBI Bank	11.534	1
SBI	12.936	1	Kotak Mahindra Bank	17.334	2
UCO Bank	10.78	1	South Indian Bank	12.584	2
Union Bank of India	11.688	1	Yes Bank	15.38	2

(Source: Author Tabulated)

The table consists of information about public & private sector banks CAR. The table is computed by taking 5 years (2016, 2017, 2018, 2019, 2020,) of Selected 10 Public & Private banking sectors. Here ratios are derived by calculating the average of all 5 years' values. The marks are allotted according to the Criteria. As all 10 Public sector Banks Capital Adequacy Ratio lies Below 15 the marks assigned is 1. In Private sector Banks Capital Adequacy Ratio of Dhana Lakshmi, Federal and IDBI lies Below 15 the marks assigned is 1 and Capital Adequacy ratio of AXIS, City Union, ICICI, Kotak Mahindra, SIB and YES Bank lies between 15-20 and the marks allotted is 2.

Table 4: Computation of Marks Scored by Public & Private Sector Banks in Asset Quality – NET NPA Ratio

Public Sector Banks	NET NPA RATIO AVG	MARKS	Private Sector Banks	NET NPA RATIO AVG	MARKS
Bank of Baroda	3.088	1	Axis Bank	1.8	2
Bank of India	1.818	2	City Union Bank	1.798	2
Bank of Maharashtra	3.612	1	Dhana Laxmi Bank	2.502	2
Canara Bank	1.716	2	Federal Bank	1.48	2
Indian Overseas Bank	5.996	1	HDFC Bank	0.352	5
Punjab National Bank	1.836	2	ICICI Bank	3.4	1
Punjab and Sind Bank	1.44	3	IDBI Bank	2.06	2
SBI	3.976	1	Kotak Mahindra Bank	0.936	4
UCO Bank	2.224	2	South Indian Bank	2.14	2
Union Bank of India	5.966	1	Yes Bank	1.72	2

(Source: Author Tabulated)

Here ratios are derived by calculating the average of all 5 years' values. In Public sector Banks the Net NPA Ratio of BOB, BOM, Indian Overseas, SBI, Union Bank of India lies Above 3 the marks assigned is 1. The Net NPA ratio of BOI, Canara, Punjab National and UCO bank lies between 1.5 to 3 so the marks assigned is 2. The Net NPA ratio of Punjab & Sind bank lies between 1.0 to 1.5, so the marks assigned in this case according to the criteria table is 3. In Private sector banks the Net NPA Ratio of ICICI bank lies Above 3 the marks assigned is 1. The Net NPA ratio of Axis, City Union, IDBI, Dhana Lakshmi, Federal Bank, SIB, YES lies between 1.5 to 3so the marks assigned is 2. The Net NPA ratio of Kotak Mahindra lies between 0.5 to 1.0, so the marks assigned in this case according to the criteria table is 4. The NET NPA ratio of HDFC lies Below 0.5, the marks assigned is 5.

Table 5: Computation of Marks Scored by Public & Private Sector Banks in Management Quality – Business Per Employee, Business Per Employee

Public Sector Banks	BEP AVG	MARKS	Private Sector Banks	BEP AVG	MARKS
Bank of Baroda	190000284.9	3	Axis Bank	15.1946	2
Bank of India	114074000	2	City Union Bank	11.9002	2
Bank of Maharashtra	1055612783	2	Dhana Laxmi Bank	9.1744	1
Canara Bank	134193885.8	2	Federal Bank	17.056	3
Indian Overseas Bank	103213462.1	2	HDFC Bank	15.6454	3
Punjab National Bank	150395675.6	3	ICICI Bank	12.981	2
Punjab and Sind Bank	140562707.6	2	IDBI Bank	23.69	5
SBI	145050973.1	2	Kotak Mahindra Bank	8.417	1
UCO Bank	12912953.5	2	South Indian Bank	15.439	2
Union Bank of India	15345	3	Yes Bank	16.815	3
Public Sector Banks	**PPE AVG**	**MARKS**	**Private Sector Banks**	**PPE AVG**	**MARKS**
Bank of Baroda	-214583	1	Axis Bank	662180	3
Bank of India	-659702	1	City Union Bank	104737	5
Bank of Maharashtra	-1053055	1	Dhana Laxmi Bank	-11595	1
Canara Bank	905793.2	4	Federal Bank	819728	4
Indian Overseas Bank	-1832003	1	HDFC Bank	79225	5
Punjab National Bank	-676395	1	ICICI Bank	907232	4
Punjab and Sind Bank	-390449	1	IDBI Bank	-514776	1
SBI	262421.6	2	Kotak Mahindra Bank	922283	4
UCO Bank	-1338168	1	South Indian Bank	355285	2
Union Bank of India	-48399	1	Yes Bank	-133746	1

(Source: Author Tabulated)

In Public sector Banks, the BPE Ratio of BOB, BOI, Canara, Indian overseas, Punjab & Sind Bank, SBI, UCO lies between 10 to 15.5 the marks assigned is 2. The Business Per Employee ratio of BOB, Punjab National, Union Bank of India lies between 15.5 to 20 so the marks assigned is 3. In Public sector Banks the PPE Ratio of BOB, BOI, BOM, Indian overseas, Punjab National, Punjab & Sind, UCO, Union Bank of India lies Below 2.0 and the marks assigned is 1. The Business Per Employee ratio of State BOI lies between 2.0 to 4.5 so the marks assigned is 2. The Business Per Employees ratio of Canara Bank lies Between 7 to 9.5, so the marks

assigned is 4. In Private sector Banks the BPE Ratio of Dhana Lakshmi and Kotak Mahindra lies Below 2.0 and the marks assigned is 1. The Business Per Employee ratio of Axis Bank, City Union, ICICI and SIB lies between 2.0 to 4.5 so the marks assigned is 2. The Business Per Employee ratio of Federal Bank, HDFC Bank and YES Bank lies between 4.5 to 7 and the marks assigned is 3. The Business Per Employee ratio of IDBI Bank lies between Above 9.5and the marks assigned is 5. In Private sector Banks the PPE Ratio of Dhana Lakshmi and YES bank lies Below 2.0 and the marks assigned is 1. The Profit Per Employee ratio of IDBI and South Indian Bank lies between 2.0 to 4.5 so the marks assigned is 2. The Profit Per Employees ratio of Axis Bank lies Between 4.5 to 7, so the marks assigned is 3. The Profit Per Employees ratio of Federal Bank, ICICI Bank and Kotak Mahindra lies Between 7 to 9.5, so the marks assigned is 4. The Profit Per Employee Ratio of City Union bank and HDFC Bank lies Above 9.5 and the marks allotted is 5.

Table 6: Computation of Marks Scored by Public Sector Banks in Earnings Quality – Return on Asset, Other Income to Total Income, and Interest Income to Total Income

PUBLIC SECTOR BANKS	ROA AVG	MARKS	OI/TI AVG	MARKS	II/TI AVG	MARKS
Bank of Baroda	-0.17	1	0.116	2	0.874	4
Bank of India	-0.71	1	0.118	2	0.872	4
Bank of Maharashtra	-0.306	1	0.106	1	0.882	4
Canara Bank	-0.25	1	0.626	1	0.864	4
Indian Overseas Bank	-2.036	1	0.15	1	0.854	4
Punjab National Bank	-0.65	1	0.136	2	0.854	4
Punjab and Sind Bank	-0.32	1	0.164	2	0.92	5
SBI	0.2	2	0.12	2	0.844	4
UCO Bank	-1.376	1	0.098	1	0.884	4
Union Bank of India	-0.346	1	0.11	2	0.872	4

(Source: Author Tabulated)

In Public sector Banks the ROA Ratio of BOB, BOI, BOM, Canara, Indian Overseas, Punjab National, Punjab & Sind Bank, UCO, Union Bank of India lies Below 0.5 and the marks assigned is 1. The ROA ratio of State Bank of India lies between 0.5 to 0.75 so the marks assigned is 2. In Public sector Banks the OI to TI Ratio of BOM, Canara, Indian Overseas, UCO bank, lies Below 7 and the marks assigned is 1. The Other Income to Total Income ratio of BOB, BOI, Punjab National, Punjab & Sind, and SBI, and Union lies between 7 to 18 so the marks assigned is 2. In Public sector Banks the II to TI Ratio of BOI, BOB, BoM, Canara, Indian Overseas, Punjab National Bank, SBI, Union bank and UCO, lies between 78 to 89 and the marks assigned is 4. The II to TI ratio of Punjab & Sind Bank, lies between Above 89 so the marks assigned is 5.

Table 7: Computation of Marks Scored by Private Sector Banks in Earnings Quality – Return on Asset, Other Income to Total Income, and Interest Income to Total Income

PRIVATE SECTORBANKS	ROA AVG	MARKS	OI/TI AVG	MARKS	II/TI AVG	MARKS
Axis Bank	0.59	2	0.201	3	0.79	4
City Union Bank	1.354	5	0.128	2	0.704	3
Dhana Laxmi Bank	-0.232	1	0.076	1	0.914	5
Federal Bank	0.7	2	0.1054	2	0.886	4
HDFC Bank	1.69	5	0.1556	2	0.838	4
ICICI Bank	0.886	3	0.4476	5	0.774	3
IDBI Bank	-2.748	1	0.1596	2	0.898	4
Kotak Mahindra Bank	1.48	5	0.329	4	0.834	4
South Indian Bank	0.36	1	0.098	1	0.892	4
Yes Bank	-0.298	1	0.205	3	0.79	4

(Source: Author Tabulated)

In Private sector Banks the ROA Ratio of Dhana Lakshmi, IDBI bank, South India bank and YES bank lies Below 0.5 and the marks assigned is 1. The ROA ratio of Axis bank and Federal bank lies between 0.5 to 0.75 so the marks assigned is 2. The ROA ratio of ICICI bank lies between 0.75 to 1.0 and the marks assigned is 3. The ROA ratio of City Union Bank, HDFC, Kotak Mahindra lies

Above 1.25 and the marks allotted is 5. In Private sector Banks the OI to TI Ratio of Dhana Lakshmi, IDBI Bank, South Indian lies Below 7 and the marks assigned is 1. The Other Income to Total Income ratio of City union, Federal, HDFC, IDBI lies between 7 - 18 so the marks assigned is 2. The Other Income to Total Income ratio of Axis bank, YES bank lies between 18 to 29 so the marks assigned is 3. The Other Income to Total Income ratio of Kotak Mahindra lies between 29 to 40 so the marks assigned is 4. The Other Income to Total Income ratio of ICICI lies Above 40, so the marks assigned is 5. In Private sector Banks the II to TI Ratio of City bank of India lies between 67 to 78 and the marks assigned is 3. The Interest Income to Total Income ratio of Axis, Federal, HDFC, IDBI, Kotak Mahindra, SIB, and YES lies between 79 to 89 so the marks assigned is 4. The II to TI ratio of Dhana Lakshmi lies Above 89, so the marks assigned is 5.

Table 8: Computation of Marks Scored by Public & Private Sector Banks in Liquidity

Public Sector Banks	TL to TD	MARKS	Private Sector Banks	TL to TD	MARKS
Bank of Baroda	0.69	2	Axis Bank	0.932	3
Bank of India	0.66	2	City Union Bank	0.814	3
Bank of Maharashtra	0.642	2	Dhana Laxmi Bank	0.58	2
Canara Bank	0.69	2	Federal Bank	0.782	3
Indian Overseas Bank	0.622	2	HDFC Bank	0.856	3
Punjab National Bank	0.685	2	ICICI Bank	0.92	3
Punjab and Sind Bank	0.676	2	IDBI Bank	3.11	5
SBI	0.754	3	Kotak Mahindra Bank	0.862	3
UCO Bank	0.56	1	South Indian Bank	0.744	2
Union Bank of India	0.726	2	Yes Bank	1.096	4

(Source: Author Tabulated)

In Public sector Banks the TL to TD ratio of UCO lies Below 0.5 and marks allotted is 1. The Total Loans to Total Deposits Ratio of BOB, BOI, BOM, Canara, Indian overseas, PNB, Punjab & Sind bank lies Between 0.5 to 0.75 and the marks assigned 2. The Total Loans to Total Deposits Ratio of SBI lies between 0.75 to 1and the marks assigned is 3. In Private sector Banks, The Total Loans to Total Deposits Ratio of Dhana Lakshmi bank lies between 0.5 to 0.75 and the marks assigned is 2. The TL to TD Ratio Axis, City Unio Bank, Federal, HDFC, ICICI and Kotak Mahindra lies Between 0.7 to 1 and the marks assigned is 3. The TL to TD ratio of YES lies between 1 to 1.25, the marks allotted is 4. The Total Loans to Total Deposits ratio of IDBI lies Above 1.25 so the marks allotted is 5.

Table 9: Computation of Overall bank ranking and Sector wise ranking

Public Sector Banks	W. AVG. S	SWR	OR	Private Sector Banks	W. AVG. S	SWR	OR
Bank of Baroda	1.74	8	17	Axis Bank	2.7	7	8
Bank of India	1.79	7	16	City Union Bank	2.94	5	6
Bank of Maharashtra	1.55	10	20	Dhana Laxmi Bank	1.7	10	18
Canara Bank	2.2	2	11	Federal Bank	2.65	8	9
Indian Overseas Bank	4.25	1	4	HDFC Bank	3.75	4	5
Punjab National Bank	1.94	5	14	ICICI Bank	2.64	9	10
Punjab and Sind Bank	2.04	3	12	IDBI Bank	2.84	6	7
SBI	1.99	4	13	Kotak Mahindra Bank	9.04	1	1
UCO Bank	1.6	9	19	South Indian Bank	4.8	3	3
Union Bank of India	1.8	6	15	Yes Bank	6.19	2	2

(Source: Author Tabulated)

Keeping Weightage Average scores of each bank as a reference lead to Sector wise ranking and overall ranking. This ranking is only based on Camel approach ratios or Parameters. By taking Average of Paraments of Camel for each Public and Private sectors banks. In Sector wise ranking, from Public Sector Bank, Indian Overseas bank has performed well compared to all other banks because Indian Overseas bank scored the 1st rank being Weighted Average score of 4.25. The least rank according to the table is Bank of Maharashtra as its rank is 10th rank being Weighted Average score of 1.55.

Coming to Private Sector banks, the top rank scored bank is Kotak Mahindra being Weighted Average Score of 9.04. Hence Kotak

Mahindra bank performed well compared to all other Private sector banks. The least rank scored according to the table is ICICI bank because its Weighted Average Score is 2.64. In overall ranking of the banking sectors, it is noticed that Kotak Mahindra has scored the 1st rank. In Sector wise as well as in overall ranking Kotak Mahindra is the top performed bank. And the least performed bank is again Bank of Maharashtra by scored 20th rank among all the banks. From this we can understand that Sector wise the top performed is Indian Bank and Kotak Mahindra, performed well in relation to Camel's Parameters by scoring 1st rank in Sector wise as well as in overall ranking.

So, considering the ranking Private sector banks performed well compared to public sector banks by only taking Overall ranking method.

HYPOTHESIS TESTING

The Hypothesis test used here is ANOVA TEST. This statistical test is used to figure out the distinct among the information collected by the researchers to test and consider details categories for testing, then discover to be received or rejected.

Following is the outcome of ANOVA test for each CAMEL Approach Parameters

Table 10: For Capital Adequacy (CA)

Groups	Count	Sum	Average	Variance		
Public Sector Banks	10	116.13	11.61	2.10		
Private Sector Banks	10	147.91	14.79	4.56		
ANOVA						
Variation of sources	SS	Df	MS	F	P-value	F crit
Between Groups	50.50	1	50.50	15.14	0.0016	4.41
Within Groups	60.00	18	3.33			
Total	110.51	19				

F value deliberated from the above table is 15.14873, which is more than hypothesis tested value at 5% of significant extent. So, we can say that it falls in the Region of Rejection. Hence, we should Reject H_{01}. Therefore, remarkable dissimilarity found in Capital Adequacy of Public sector and Private sector banks.

- **Table 11: Asset Quality**

Groups	Count	Sum	Average	Variance		
Public Sector Banks	10	31.67	3.167	2.91		
Private Sector Banks	10	18.74	1.87	0.74		
ANOVA						
Variation of sources	SS	Df	MS	F	P-value	F crit
Between Groups	8.351	1	8.351	4.55	0.04	4.41
Within Groups	33.00	18	1.833			
Total	41.35	19				

In the above table of ANOVA test, the calculated value of F is 4.555111 is more than critical value at 5% of significant level. So, we can say that it falls in the Region of Rejection. Hence, we should Reject H_{02}. Therefore, can conclude by saying, there is a notable distinction between the Asset Quality of Public and Private sector banks.

Table 12: Management Quality

Groups	Count	Sum	Average	Variance		
Public Sector Banks	10	124.52	12.45	22.55		
Private Sector Banks	10	71.39	7.13	962.37		
ANOVA						
Variation of sources	SS	Df	MS	F	P-value	F crit
Between Groups	141.17	1	141.17	0.286	0.598	4.413
Within Groups	8864.32	18	492.46			
Total	9005.501	19				

From the above table, the value of F is 0.286666 is less than critical value at 5% of significant intensity. So, we can say that it does

not fall in the Region of Rejection. Hence, we should accept H03 Therefore, can conclude by saying, no dissimilarity between the Management soundness of Public and Private sector banks.

Table 13: Earnings Capacity

Groups	Count	Sum	Average	Variance		
Public Sector Banks	10	4.5	0.45	0.48		
Private Sector Banks	10	14.01	1.40	1.65		
ANOVA						
Variation of sources	*SS*	*Df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	4.52	1	4.52	4.21	0.054	4.41
Within Groups	19.30	18	1.072			
Total	23.82	19				

Since the critical value at 5% of significant level due to the value of F is 4.217159 is more with reference to above table. So, we can say that it falls in the Region of Rejection. Hence, we should reject H04 Therefore, can conclude by saying that there is an important variation in Earnings Capacity of Public sector and Private sector banks.

Table 14: Liquidity

Groups	Count	Sum	Average	Variance		
Public Sector Banks	10	6.71	0.67	0.002		
Private Sector Banks	10	10.69	1.069	0.53		
ANOVA						
Variation of sources	*SS*	*Df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.79	1	0.794	2.963	0.102	4.413
Within Groups	4.82	18	0.26			
Total	5.61	19				

As a result of above table shows, the figured-out F value is 2.963697 is less than critical value at 5% of significant level. So, we can say that it does not fall in the Region of Rejection. Hence, we should accept H05. Therefore, can conclude by saying, no substantial deviation between the Liquidity of Public sector and Private sector banks.

5. FINDINGS, CONCLUSION AND SUGGESTIONS

5.1 Findings of the Study:

- The Analysis shows that out of all selected Public and Private Banks, Kotak Mahindra bank is better performed bank compared to all other banking sectors with 9.04 weighted Average score taken from all the elements of Camel Approach. The poor Performed banking sector out of selected Public and Private Bank is Bank of Maharashtra with Weighted Average Score of 1.55. It is also revealed that just after Kotak Mahindra banks the next better performed bank among all selected banking sector is Yes bank with 6.19.

- South Indian bank (Private sector bank), with Average score of 4.8 is found to be in 3rd rank, where the Camel Frameworks Capital Adequacy, Asset Quality, Earning Quality is seeming to be better compared to all other banks.

- By taking Average of all 5 years' ratios of each selected banks using Camel Approaches reveled that the CAR picked out 10 Public and Private banks had performed well and each of the banks scored 1 and 2 marks.

- Similarly, in Asset Quality, the parameter used was Net NPA ratio of selected 10 Public and Private banks had performed well.

- But in Management Quality, the parameter used was Profit Per Employees ratio which revealed that few banks from public sector banks had negative Average values which resulted or indicated that there are issues like incompetence or self-dealing issues.

- The Next parameter used under Management Quality were Business per employees which indicated that each bank had full efficiency in Management and Directions. Similarly, in Private sector banks only IDBI bank had a negative Average value in Profit Per Employees ratio under Management Quality, all other banks performed well. In case of Business Per Employees just like Public sector banks, Private sector banks also performed well.

- The Parameters used under Earnings Quality were Return on Asset, it was initiated, where all the Government owned banks had negative Average values, which indicated that the stability has dropped down in earnings and had regular fluctuations in the net income.

- In Private sector banks the Return on Asset Average value of IDBI and Dhana Lakshmi banks had negative average value, so it indicates that consistent losses and these losses are threats to the banking institutions.

- But in case of Other Income to Total Income and Interest Income to Total Income ratio of both Public and Private sector banks under Earnings Quality performed well and which indicates that there were sufficient to provide the level of earnings to the unexpected risk.

- In case of liquidity, the parameter taken were Total loans to Total deposits ratio of both Public and Private sector banks performed well.

5.2 Suggestions

- Even though Kotak Mahindra performed well and well Capitalized still it need concern about the Profit Per employees as it indicates the issues like inefficiency in management and directions.

- Similarly, YES bank also performed well in respect to all 5 elements of Camel Approach but lacked in measuring and controlling the levels of Capital Formation, so YES banks need to rectify those lacking issues.

- Bank of Maharashtra need to improve and reconstruct the overall Management functions as well as they indicated more of undercapitalized formation in capital levels. So, the bank must be able to absorb the uncertain risks to convert the undercapitalized to well capitalized level.

- IDBI Bank and Dhana Lakshmi Bank must concentrate on Earnings quality as it has resulted in poor performance and indicated variations in the net income and trends in income. To overcome this issue, the banking institutions must take Qualitative and Quantitative measures.

6. Conclusion

From this study we can conclude that the banking sectors have a great influence in the economic activities of the country, that is the reason it always stated that Banking system or sector is the determination of the economy. Since banking association takes important aspects in the economy, the changes and challenges also effect the economy, and Private sectors banks showed improvement in many aspects such as in respect to managing and controlling the unexpected risks, well capitalized. The presentation assay of banking institution with the help of CAMEL framework has helped a lot to reveal the credit worthiness of banking sectors. Through Camel approach and Weighted Average of all 5 elements of Camel model, we could conclude that Kotak Mahindra bank performed well in Sector Wise Ranking as well as in Overall banks ranking and poor performed bank was Bank of Maharashtra in Sector Wise Ranking and Overall banks ranking.

Apart from Camel Model, ANOVA test was used with respect to all five elements of CAMEL model factors to prove the Hypothesis to conclude whether there is an important difference between selected Public and Private banking institution or no dissimilarity.

Finally, we can conclude by saying that as Kotak Mahindra is a private sector bank and scored 1st rank out of all selected banking sector and if we consider sector wise performance, private sector bank has Performed well compared to Government owned bank. Private banking institution has been a better performer in respect to Profitability, Earnings capacity as well as in terms of Management Quality.

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