# Performance Analysis For AXIS Bank And Union Bank Of India

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#### **Abstract:**

The banking sector plays a pivotal role in the economic development of India. After economic reforms, this has led a severe competition among the commercial banks in India, which resulted in mergers of banks. Sound financial health of the bank, boost confidence in stake holders as a whole. The present study is to analyze the financial performance through CRAMELS ratio's, forecasting of Return on Net worth, through excel and relationship between Return on Assets and Gross nonperforming assets, through excel for the two banks namely, Axis bank and UBI bank. CRAMELS is based on the CAMEL analysis, which was introduced in US in 1979. The research study is descriptive and empirical based on the annual reports of the banks. Various ratios are used and composite ranking technique is used to compare, the yearly performance of banks. Excel, is used to forecast RON and study the relationship between ROA and GNPA. The findings are, through CRAMELS, the Axis bank's performance is better than the Union Bank of India. Both bank's ROA and GNPA have negative correlation .Both the banks, RON are forecasted positively. The conclusion is the public sector banks have to be consistent in its operations, and both banks to follow stringent credit policy to sustain in business.

Key words: CRAMELS, performance, Banking Sector, Forecasting, relationship.

#### **Introduction:**

Banks are considered as financial intermediaries where in mobilize the savings and lend to different corporate and individuals. Banking sector plays a vital role in economic development of a country. The recent developments in Indian Banking system are discouraging and because of Nonperforming assets of the banks. A sound banking system leads to a sustainable growth in performance economy. Hence financial measurement has gained lot of significance and became a tool for measuring financial health of the banks. CAMEL model is first introduced in US in 1979 and became a measurement tool for banks to know their financial health. The present study is based on CRAMELS which includes resources deployed and sensitivity ratios which play a major role in measuring, Banks financial health

- **C Capital Adequacy** indicates the total capital maintained by the banks to cover unforeseen losses and risk weighted assets.
- **R Resources Deployed** represents the funds available invested in total assets, liquid assets, Investments and Advances.
- **A-- Asset Quality** measures the ratio of risky assets in total assets.
- **M** –**Management Quality** refers to the effective and efficient way of maintaining funds by the banks.
- **E Earnings Quality** gives a picture of banks ability towards earnings. If earnings are higher Banks are also considered as healthy.
- $\boldsymbol{L}-\boldsymbol{Liquidity}$  ratios talks about the funds which are required to meet its obligations.

**S** – **Sensitivity** talks about how sensitive are the banks to market risk by examining the credit management policy of the bank.

#### Forecasting of Return on Net worth (RON)

The financial forecasting reviews the past and current financial position to predict future financial position. RON is a measure, how efficiently the bank has utilized its share capital to generate profits. A good RON for a bank is 18%.

# Relationship between Return on Assets (ROA) and Gross Nonperforming assets. (GNPA).

The relationship between Return on assets and Gross nonperforming assets of the banks usually talks about the credit policy of the bank and returns on assets. The negative relationship between parameters shows that if one parameter increases, the other parameter decrease.

#### **Literature Review:**

**K. Ravichandran, R.B. Sharma, 2012** analyzed the performance of banks in Saudi Arabia through CRAMEL Model. The conclusion was all the banks in Saudi Arabia are performing well except in Asset quality.

**Karthikeyan, Sivagami** 2014, has evaluated the performance of the national banks through CRAMEL Model and concluded that Punjab National bank was at the Top and Bank of Maharashtra stood at last.

**Ajith Kumar,** 2017 has evaluated the performance of the banks. According to him CAMEL approach is a tool to measure the banks performance on the basis of Capital adequacy, Asset quality, Management quality, Earnings quality and Liquidity.

Vinod Kumar, Bhawna Malhotra 2017, emphasized the performance evaluation of banking sector is the effective measure of country's economic system. CAMEL approach has been used to measure the financial strength of Axis banks, ICICI, IndusInd, Kotak Mahindra and HDFC banks.

Lavanya and Sreenivas, 2018 noticed that a country's financial system depends upon the financial soundness of banking industry, it is very much essential to measure it. The main objective of this study is to analyze the financial performance of select private sector banks and compare them using CAMEL Model.

- **P.** Muralidhara and Chokkalingam 2017 opined that banks have a vital role to play in a country's economy. The study analyzed the performance of nationalized banks. Based on them out of different techniques and financial tools, the CAMEL analysis is the efficient technique used to measure the performance of banks. Findings were performance of banks is different from each other and different banks follow different criteria for analysis.
- **C. Dudhe** 2018, pronounced the importance of regulatory requirements for banks like BASEL III norms. The study précised that the regulatory measures have affected the performance of banks. To analyze the author has followed CAMEL approach and one way ANOVA method.

# **Syed Masood Shah, Muhammad Faizan Malik**, **Sikandar Shah** 2020, has considered Profitability ratios as dependent variable and CRAMEL ratios as independent variable. Data was analyzed, Ordinary least square, fixed effect and random effect models. Secondary data of twenty listed commercial banks on Pakistan stock exchange are used from the period of 2008 to 2017.

# **K.** Selva Sheela K. Hema Sundareswari 2015, has considered that apart from accepting deposits for future business, the banks also has to concentrate on forecasting of profits because the authors think that banks are significant part of economy.

**Tetiana Payanok, Mariya Kamenchuk** (2019), has explored the external and internal factors which influence the forecasting of financial performance indicators. According to the authors conclusion they have recommended partial correlation method to assess the relationship between factors and their affect on overall indicators.

Jayakkodi Duraisamy, Dr. P Rengarajan(2016), has studied the impact of nonperforming assets on ROA of public sector and private sector banks. The analysis was done through ratios and correlation. Private Banks perform in a better way than public sector banks in managing the NPA's.

**Prof. Nitin Bajirao Borse** (2016) has opined that an increase in NPA will decrease the ROA. The author analyzed the data by applying correlation and identified that ROA is moderately negative correlated with the NPA.

Malihe Rostami (2015) has emphasized that CAMELS model as a tool to measure the efficiency of the banking operations and to anticipate the risk the banks has to face in future.

Nabilah Rozzani\* and Rashidah Abdul Rahman\*(2013) has adopted US CAMELS Ratios for Each parameter used in Analysis rating method and evaluated the overall strength through composite ranking and CAMEL approach.

#### **Objectives of the study:**

- To compare the yearly performance of banks through CRAMELS Analysis by composite ranking.
- 2. To forecast Return on Net worth
- To study the relationship between Return on Assets and Gross nonperforming assets.

**Research methodology:** The data is secondary data collected from bank websites. The data from 2017 to 2021 was collected. CRAMELS model has been used to study the financial strength of the banks. For this purpose various ratios of CRAMELS parameters are calculated. Then the average of each ratio is taken for ranking. Finally the composite ranking method is followed based on ranks of each parameter. A part from the CRAMELS analysis, forecast of Return on Net worth is studied through excel and relationship between Return on assets and Gross nonperforming assets are examined through excel.

Capital	Resources	Asset quality	Management	Earnings	Liquidity	Sensitivity
Adequacy	deployed		efficiency	quality	ratios	
Capital	Total assets	Net Non	Total advances	Net Profit	Govt	Gross
adequacy		Performing	/Total Deposit	to average	Securities to	NPA%
ratio.		assets./Total		assets	total assets.	
		assets.				
Total	Liquid	Net NPA's/total	Profit per	Net interest	Liquid	Net NPA%
advances to	assets	advances.	employee	margin/Tot	assets to	
total assets.				al assets.	total assets.	
Debt Equity	Investments	Total	Return on net	ROA	Liquid	Net NPA to
	and	investments/total	worth.		assets to	advances.
	advances.	assets				

					total	
					deposits.	
Investments.	Advances.	% change in	Business per	% change		
		NPA.	employee	in Net		
				Profit.		

Authors own creation. With ref to Rostami., 2(11): November, 2015] ISSN 2349-4506

**Composite Score**: A method is to compensate, if the banks performance in one or two parameters is good and the rest are average. (Source: Wrinkar & Tanko (2008); Sarker (2006))

- The banks with composite rating 1
   exhibit the strongest performance and
   risk management practices and no
   supervisory concerns will be there.
- If the banks **composite rating is 2** rating exhibits less supervisory concerns and a moderate risk management practices have to be followed.
- Banks with a composite 3 rating will have a combination of moderate to severe weaknesses but more often will not cause any parameter to be addressed more severely.
- If the banks composite rating is 4 that shows that banks problems and weaknesses are not addressed satisfactorily and resolved.
- Banks with a composite 5 rating will
  have deficient performance and
  inadequate risk-management practices
  relative to the institution's size,
  complexity, and risk profile. They are of
  the greatest supervisory concern.

Scope of the study: Several researchers have studied on performance of banks, through CAMEL approach not CRAMELS approach which includes study of Resources deployed as well as Sensitivity ratios. Very few researchers have tried comparing the performance of banks through CRAMELS approach, on yearly basis

and composite ranking. This study concentrates on yearly performance of Axis Bank and Union Bank of India. Apart from the performance through CRAMELS approach, the study also emphasized on the forecasting of Return on Net worth and relationship between ROA and GNPA's because, the impact of Nonperforming assets on ROA and forecasting of RON has gained importance and is considered as acute issues for banks.

#### Justification and significance of study:

The CRAMELS system is identified as an essential tool to assess the financial strengths and weaknesses of the banks. If there any corrective measures are to be made, the bankers may use CRAMELS method. Generally CAMELS is more popular in analyzing performance of bank. In these study "R" resources deployed ratios are included while measuring performance. It provides the information about total assets, liquid assets, investments and advances which link to the disbursements of funds, made by the bank. Since Resources deployed is included, a need for forecasting Return on Net worth is observed to find the return on the capital deployed. Also the relationship between Return on assets and gross nonperforming assets analyzed to further confirm performance of the banks. Gross nonperforming assets reflect the quality of loans made. It affects the Return on Net worth and Return on assets. In this regard the researcher has analyzed the performance through CRAMELS, Forecasting of Return on Net worth and relationship between return on assets and gross nonperforming assets.

#### **Limitation of the Study:**

Since the ratios under CRAMELS method are calculated manually, only five years data was chosen for analysis, and that too based on annual

Table: 1 Capital Adequacy Ratios.

reports. Due to time constraints, data was chosen only for five years.

#### **Data Analysis and interpretation:**

Year.		Axis Bank				Union Bank of India.			
	CAR	Total	DE	Investments.	CAR	Total	DE	Investments	
		advances to				advances to			
		total assets.				total assets.			
2017	16.57	0.727	9.31	0.722	10.56	0.685	17.91	0.789	
2018	15.84	0.737	9.48	0.676	11.50	0.648	18.10	0.798	
2019	17.53	0.722	10.52	0.68	11.78	0.659	18.92	0.755	
2020	20.4	0.75	9.28	0.804	12.81	0.627	16.44	0.703	
Average	18.18	0.735	9.378	0.7384	12.1	0.648	17.55	0.7548	
Ranks	1	1	1	2	2	2	2	1	

Authors own creation.

Table 2:

Name of the banks.	Composite Ranking- Capital Adequacy ratios.				
Axis	Rank Averages of CAR ratios.	1.25	1.		
Union Bank of India.	Rank Averages of CAR ratios.	1.75	2.		

Authors own creation.

#### **Interpretation:**

Capital adequacy ratio is the Tier I and Tier II capital to the total risk weighted assets to protect from the losses from the weighted risk assets. From the table 1, it is observed that Axis bank has

maintained a good ratio. The Debt-equity capital ratios of Union Bank of India are less than Axis bank. The total advances to total assets ratio for axis bank is large and investments are more from Union Bank of India. The UBI stood at the top in composite ranking.

Table 3: Resources deployed

year		Axis Bank				Union bank of India.			
	Total	Liquid	investments	Advances	Total assets	Liquid	investments	Advances	
	assets	assets				assets			
2017	601467.67	8.36	21.41	0.727	452704.44	7.25	24.77	0.685	
2018	691329.58	6.29	22.26	0.737	487406.00	10.14	25.396	0.648	

2019	800996.53	8.39	21.84	0.722	494038.84	8.71	25.514	0.659
2020	915164.82	10.63	17.12	0.75	550683.27	10.01	27.677	0.627
2021	996118.42	6.20	22.70	0.739	1071705.84	7.87	30.93	0.621
Average	801015.40	7.97	21.07	0.735	611307.67	8.80	26.86	0.648
Ranks	1	2	2	1	2	1	1	2

Authors own creation.

Table: 4

Name of the banks.	Composite Ranking- resources deployed.				
Axis	Rank Averages for resources deployed	1.25	1.5		
Union Bank of India.	Rank Averages for resources deployed	1.25	1.5		

#### **Interpretation:**

The resources deployed are the investments made by the banks from the total assets.

The Axis banks investment ratio is  $1/5^{\text{th}}$  in total assets.

The Union Bank of India investment ratio is 1/4<sup>th</sup> in total assets.

When compared through average, both the banks have very few investments made from their total assets.

Table: 5 Asset Quality ratios of selected banks.

		Bank.	Union Bank of India					
		T	I			T	T	
year	Net Non	Net	Total	%	Net Non	Net	Total	%
	Performing	NPA's/tot	investments/to	change	Performing	NPA's/	investments/t	change
	assets./Total	al	tal assets	in	assets./Total	total	otal assets	in
	assets.	advances.		NPA.	assets.	advanc		NPA.
						es.		
2017	1.43	2.312.	21.41	2.00	4.159	6.574	24.77	7.00
2018	2.40	3.773	22.26	4.00	4.990	8.424	25.396	8.42
2019	1.41	2.289	21.84	2.00	4.11	6.84	25.514	6.85
2020	1.02	1.638	17.12	1.56	3.142	5.492	27.677	5.49
2021	0.70	1.121	22.70	1.05	2.545	4.616	30.93	4.62
Average	1.392	2.227	21.066	2.122	3.7892	6.3892	26.8574	6.476
Ranks	1	1	2	1	2	2	1	2

Authors own creation.

Table: 6

Name of the banks.	Composite Ranking- Asset Quality ratios.				
Axis	Rank Averages of asset quality ratios.	1.25	1.		
Union Bank of India.	Rank Averages of asset quality ratios.	1.75	2.		

Authors own creation.

#### **Interpretation:**

From the table 6, it is identified that the axis bank is following aggressive policy in collecting the loans. Union bank of India has invested more in

Investments than Axis bank. When it comes to the composite ranking of asset quality ratios Axis bank is considered as a better bank in debt collection.

Table: 7 Management Efficiency Ratios for selected banks.

Authors own creation.

year		Axis	Bank			Union Ba	nk of India.	
	Total	Profit per	Return	Business per	Total	Profit per	Return	Business per
	advances	employee	on Net	employee	advances	employee	on Net	employee
	/Total		worth.		/Total		worth.	
	Deposit				Deposit			
2017	90.03	649854.14	6.59	139083338.45	75.71	150558.10	2.36	180290737.45
2018	96.92	46244.39	0.43	149842826.65	70.69	-1396059.41	-20.90	185506217.10
2019	90.21	755022.33	7.01	168432242.98	71.39	-791006.47	-12.15	191306806.53
2020	89.27	219478.74	1.91	163410991.87	69.90	-776509.06	-9.46	205187271.37
2021	88.18	841368.03	6.48	169975387.64	63.97	371597.29	4.87	193701978.99
Averag	90.922	502400.13	4.484	158149557.52	70.33	-488283.91	-7.056	191198602.29
e								
Rank	1	1	1	2	2	2	2	1

Table: 8

Name of the banks.	Composite Ranking- Management efficiency ratios.				
Axis	Rank Averages of Management efficiency ratios.	1.25	2.		

Union Bank of India.	Rank Averages of	1.75	1.
	Management efficiency		
	ratios.		

Authors own creation.

#### **Interpretation:**

The average of ROE, Profit per employee and total advances to total deposits of Axis bank are

larger than UBI ratios average. But the business per employee ratio is more for UBI. The composite rank for management efficiency ratios of UBI is greater than Axis bank.

Table 9: Earnings capacity ratios for selected banks.

		Axis Bank		Union Bank of India				
Year	Net Profit to	Net interest	ROA	%	Net Profit to	Net interest	ROA	% change
	average	margin/Total		change	average	margin/Total		in Net
	assets	assets.		in Net	assets	assets.		Profit.
				Profit.				
2017	0.57	2.93	0.61	-55.26	0.012	1.97	0.12	-58.92
2018	0.037	2.8	0.03	-92.51	-1.069	1.91	-1.07	-1045.11
2019	0.544	2.7	0.58	1596.3	-0.056	2.1	-0.59	-43.83
2020	0.170	2.7	0.17	-65.21	-0.357	2.1	-0.52	-1.68
2021.	0.61	3.0	0.66	304.89	0.26	2.30	0.27	-2.00
Average	0.39	2.83	0.41	337.64	-0.242	2.076	-0.358	-230.31
Rank	1	1	1	1	2	2	2	2

Authors own creation.

Table: 10

Name of the banks.	Composite Ranking- Earnings capacity ratios.			
Axis	Rank Averages of Earnings capacity ratios.	1	1	
Union Bank of India.	Rank Averages of Earnings capacity ratios	2	2.	

Authors own creation

#### **Interpretation:**

The averages of the Axis bank for all the ratios under earnings capacity ratios are more than UBI.

The UBI earnings ratios are all in negative mode that means in losses. Even in composite rank also Axis bank stood first.

Table: 11 Liquidity ratios for selected banks.

Year		Axis Bank		Union Bank of India.		
	Govt	Liquid assets	Liquid assets	Govt Securities	Liquid	Liquid assets to
	Securities to	to total assets.	to total	to total assets.	assets to	total deposits.
	total assets.		deposits.		total assets.	
2017	50.52	8.36	12.12	195.47	7.25	8.67
2018	44.89	6.29	9.57	202.68	10.14	12.10
2019	40.09	8.39	12.25	196.30	8.71	10.35
2020	36.98	10.63	15.195	196.80	10.01	12.23
2021	65.10	6.20	8.73	22.56	7.87	9.14
Average	37.42	7.97	11.57	162.77	8.80	10.498.
Rank	2	2	1	1	1	2

Authors own creation.

**Table: 12** 

Name of the banks.	Composite Ranking- liquidity ratios.				
Axis	Rank Averages of liquidity ratios.	1.25	2.		
Union Bank of India.	Rank Averages of liquidity ratios.	1	1.		

Authors own creation.

#### **Interpretation:**

The liquidity ratios of UBI are far superior to Axis bank. The composite rank of UBI's liquidity ratios ranked first.

**Table: 13: Sensitivity Ratio's** 

Year	Axis Bank			Union Bank of India.			
	Gross	Net NPA %	Net NPA to	Gross	Net NPA %	Net NPA to	
	NPA%		advances.	NPA%		advances.	
2017	5.00	2.00	2.00	11.17	6.57	7.00	
2018	7.00	4.00	4.00	15.73	8.42	8.00	
2019	5.00	2.00	2.00	14.98	6.85	7.00	

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2020	5.00	1.56	2.00	14.15	5.49	5.00
2021	4.00	1.05	1.00	13.74	4.62	5.00
Average	5.2	2.12	2.2	13.94	6.39	6.4
Rank	1	1	1	2	2	2

Authors own creation.

**Table 14:** 

Name of the banks.	Composite Ranking- Sensitivity Ratio's			
Axis	Rank Averages for Sensitivity Ratio's	1	1	
Union Bank of India.	Rank Averages for Sensitivity Ratio's	2	2	

Authors own creation

#### **Interpretation:**

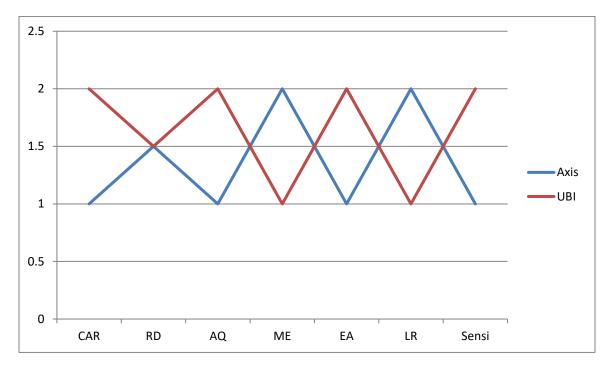
The gross NPA's, Net NPA's and Net NPA to advances are very high for UBI. The composite rank of axis bank is high when compared to UBI.

Table: 15 Composite Rankings- over all Comparision

Name of	Capital	Asset	Management	Earnings	Liquidity	Resources	Sensitivity	Avera	Rank
the bank	Adequacy	Quality	efficiency	ability		Deployed		ge	
Axis	1	1	2	1	2	1.5	1	1.35	1
Union	2	2	1	2	1	1.5	2	1.64	2
Bank of									
India									

Authors own creation.

#### **Composite ranking Chart**



#### **Interpretation:**

Table 15 shows that the composite ranking two banks from 2017 to 2021. By considering all the CRAMELS parameters, the Axis bank has performed well when compared to Union Bank of India. Axis bank has performed in all the CRAMELS parameters except maintaining the Asset Quality and earnings ability ratios and

sensitivity ratios. But union bank of India ratios are more consistent than Axis bank.

## 2. To forecast Return on Net worth Using Excel.

Generally RON is forecasted based on Profits and sales. In the present study RON is forecasted using Excel.

Table:16 Forecast of RON

Year	RON of UBI	RON of Axis bank.
2017	2.36	6.59
2018	-20.9	0.43
2019	-12.15	7.01
2020	-9.46	1.91
2021	4.87	6.48
2025	2.82	<b>5.24</b>
<b>2026</b>	<b>4.466</b>	<b>5.366</b>
2027	<b>6.112</b>	5.492
2037	<b>22.572</b>	<mark>6.752</mark>

Authors own creation.

#### **Interpretation:**

The above table clearly indicates when forecast of RON, is made with excel, both the banks RON is positive and in increasing manner. But the Axis banks RON is more consistent when compared to UBI's RON.

### 3. To study the relationship between Return on Assets and Gross NPA.

Table: 17 Correlations between ROA and GNPA.

ROA Axis	<b>GNPA</b> Axis	ROA UBI	GNPA UBI
0.61	5%	0.12	11.17
0.03	7%	-1.07	15.73
0.58	5%	-0.59	14.98
0.17	5%	-0.52	14.15
0.66	4%	0.27	13.74
Correlation=-0.7984		Correlation= -0	0.7858

Authors own creation.

#### **Interpretation:**

The correlation for both banks is negatively correlated. If GNPA increases, then ROA decreases. If the banks ROA has to be increased then bank has to decrease its GNPA.

#### **Conclusion and Recommendations:**

The economic development of the country is based on the growth in banking industry. The present study is about the performance of one private sector bank and one public sector bank, through CRAMELS method, and composite ranking method, forecasting of Return on Net worth and study the relationship between ROA and GNPA. The findings through CRAMELS ratios are the axis bank's overall performance is good when composite ranking method is followed. The forecast of Return of Net worth's for both the banks indicates that the Return on Net worth's are positive for 2025, 2026, 2027, and 2037. But when Comparision is made Axis banks

future Return on Net worth's are more consistent than UBI banks return on Net worth's. The Return on assets and Gross nonperforming assets for the both banks are negatively correlated and implies the bank's asset quality ratio. The conclusion is it indicates that both banks have to follow a stringent credit policy to increase their Return on Assets and Return on Net worth. So that it may gain bank customers confidence and will operate the day to day business smoothly.

#### **References:**

- Dr.K.Ravichandran, Dr. R.B. Sharma. (2012) "Ranking of Saudi Banks using CRAMEL Model" International Academic Research Journal of Economics and FinanceVol.No.1, Issue No.1, Page no.18-26.
- M.Karthikeyan, Dr. P.Sivakami (2014) "Performance of Public Sector Banks in India (A Study Using Cramel

- Model)" PARIPEX INDIAN JOURNAL OF RESEARCH Volume : 3 | Issue : 4 | April 2014 ISSN 2250-1991.
- Syed Masood Shah, Muhammad Faizan Malik, Sikandar Shah (2020), "Impact of Cramel Model on the Financial Performance of Commercial Banks in Pakistan". Global Economics V(III). Review. 67-77. https://doi.org/10.31703/ger.2020(VIII). 07 URL: http://dx.doi.org/10.31703/ger.2020(V-III).07 Pages: 67 77 DOI: 10.31703/ger.2020(V-III).07 p-ISSN: 2521-2974 e-ISSN: 2707-0093 ISSN:2521-2974 Vol. V, No. III (Summer 2020)
- Ramachandran and Kavitha .(2009)."

  Profitability of the Indian Scheduled
  Commercial Banks: A case analysis".

  IUP Journal of Bank Management, Vol.

  VIII, issue 3 &4.pp 129-139
- B. Lavanya , T. Srinivas (2018)

  "PERFORMANCE ANALYSIS USING
  CAMEL MODEL- A STUDY OF
  SELECT PRIVATE BANKS" © 2018
  JETIR June 2018, Volume 5, Issue 6
  www.jetir.org (ISSN-2349-5162)
- C.Dudhe (2018) "A Selective Study: Camels Analysis of Indian Private Sector Banks" International Journal of Engineering and Management Sciences 3(5):277-283

DOI: 10.21791/IJEMS.2018.5.28.

- K. Selva Sheela. K. Hema Sundareswari (2015) "A survey of forecasting financial and customer analysis banking institution'. International Journal **Applied** of Engineering Research 10(12):32689-32695
- Tetiana Payanok, Mariya Kamenchuk (2019). "Analysis and Forecasting of the Bank's Performance: The Case of the

- Privat bank,", Institute of Accounting and Finance, issue 4, pages 78-87, December.
- Jayakkodi Duraisamy, Dr. P Rengarajan(2016)" Impact of nonperforming assets on return on assets of public and private sector banks in India" ISSN Print: 2394-7500ISSN Online: 2394-5869Impact Factor: 5.2IJAR 2016; 2(9): 696-702.
- Prof. Nitin Bajirao Borse (2016) "The Study of the Effect of Non Performing Assets (NPA) on Return on Assets (ROA) of Major Indian Commercial banks". IJMSS Vol.04 Issue-01 (January, 2016) ISSN: 2321-1784, International Journal in Management and Social Science.
- Malihe Rostami (2015)" CAMELS' analysis in banking industry" Global Journal of Engineering Science and Research Management 2(11):10-26.
- Nabilah Rozzani\* and Rashidah Abdul Rahman\*(2013) "Camels and Performance Evaluation of Banks in Malaysia: Conventional Versus Islamic" Journal of Islamic Finance and Business Research Vol. 2. No. 1. September 2013 Issue. Pp. 36 45
- Www. Moneycontrol.com
- www.good returns.com