

A Camel Study Of Sbi, Pnb, Bob, Ubi And Canara Bank

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Abstract: Banking sectors are involved as a vital role in economic development, and a significant change came after nationalization. Nationwide, now many branches of banks and financial institutions have opened. Presently banking sector is facing high-level competition. Banks or financial institutions which have maximum profit are showing maximum growth rate. By optimizing the resources of banks, cost becomes minimum and profit maximum. This manuscript is an effort to make an analytical performance study of selected top public sector banks from 2015-20. This study is based on the tool of Camel. The prime factor of this study belongs to Different ratios, P&L and Balance-Sheet statements of the selected banks. This research paper will be very fruitful for banks, scholars, investors (public), borrowers, industrialists and society to understand the given parameters.

Key Words: Capital related ratio, Assets related ratio, Management capability ratio, Earning ratio, Liquidity ratio, Performance study, Leverage, Finance, Other Ratios, Banks.

Introduction

After banking nationalization, the banking system has considerably developed with many branches and financial instruments. Day by Day banking industries sector in India is growing very fast. In the earlier age, banking function was minimal by two tasks: deposits and lending. Now, this sector has become more complex. Now banking has to lead various types of products and services like retail banking, Investment banking, Capital banking, marketing collection, money marketing etc. Now banks have many customers, transactions, accounts by the latest technologies and strategies. Now banks have two objectives maximize profit and growth (wealth) and customer satisfaction. Banking Sector growth is very important for the fiscal and wealth maximization of the nation. To maintain control and stability in monetary demand and supply, banks are working as the backbone of the economy. It works as the promoter of economic growth and the development of finance. Banks accept the money in deposits from those customers who have excess money and want to invest. This fund is provided to needy industrialists and individuals in the form of loans by the bank. Nowadays, banks earn profits by providing agent services and lending money at a higher rate to industries. It also provides the service of exchanging the money across different countries and again earning profit. This manuscript will be very helpful for the customers to understand the bank's services and many more technical aspects.

In this manuscript, banking performance has been measured by ratio analysis of capital adequacy, assets quality, profitability, operational efficiency, liquidity, overall financial strength, and fiscal position in the economy. Camel approach is used for knowing about the better performance and growth of selected top listed public sector banks. This is not an easy task to measure the performance of banking sectors (Nurazi & Evans, 2005; Gupta, 2014; Karthikeyan & Shangari, 2014). To measure the performance of the chosen banks, many factors are applied in this approach, and these aspects are essential for the study. Under this approach, banks ratings are given from 1-5 scaling based. A rating scale of 1 or 2 represents a few, whenever 3, 4 or 5 shows moderate to excessive degrees of performance also used in Richard, B. (2002).

In the quantitative assessment of economic banks, ratios play a crucial role. Ratios are an excellent tool for measuring the success of an organization. Bank managers, shareholders, and market analysts use ratios to judge the money characteristics of bank activities, like name and performance. The problem lies in scheming a not relation, however in deciding that quantitative relation best selected quantitative captures the most half.

Ratios are accustomed to categorical the results of company selections and, therefore, the influence of external variables. Conversely, bank analysts, researchers, or managers face obstacles in selecting key mix ratios from unnumbered choices. The range of ratios derived from public reports might result in more confusion than clarity. Therefore, indicators of liquidity, plus management, capital maintenance, profitableness, and risk exposure need industry-specific ratios.

This analysis aims to provide vital information about various public sector banks' financial efficiency and effectiveness. The following aspects measure the efficiency and effectiveness of the banks: capital adequacy, asset management, management capability, earnings and liquidity based ratios.

Literature Review

Camel approach is used not only for performance-based but also regulatory based. Many studies utilize this method to determine the profitability and performance of banks. Camel tool is an effective and efficient tool for researchers and examiners. The bank's rating shows the performance and healthy conditions of a bank by different aspects from the help of different types of data, ratios, etc. Sarkar investigated the various kinds of financial performances of Islamic banks and financial organizations in Bangladesh from an Islamic perspective. Naurazi and Evans explained the bank's failure by using Camel study in different aspects with the statistical study. Satish, Jutur, and Surender concluded that the Indian financial system appears to be sound. With information technology, they will have a more significant future scope, and some researchers focused on the objectives of the performance of ten banks. Five banks were taken from the top rank, and the other five from the lower position in ten banks. It was also observed that the two leading bank's failure responsible factors were poor asset management and low-level liquidity. Alabede looked at the effects of global financial conditions on asset quality and market sectors, two of the essential aspects in determining a Nigerian bank's efficiency. The results of this study were used to reduce non-performing assets and maintain a strategy that encourages banks to compete fairly. The State bank's financial performance group was studied using ANOVA and CAMEL methods. Rohit et al. investigated five commercial banks using the CAMEL model to learn more about commercial bank financial performance.

Gupta et al. also worked to find the public sector bank's performance and the combined profitability of selected four private sector banks. To analyze the different categories' financial performances, various profitability ratios were calculated and tested by the ANOVA tool. Using ratio analysis and the ANOVA technique, several profitability metrics for five sizeable private sector banks were calculated during ten years.

To determine the performance of five public sector banks, Garg et al. applied the CAMEL model, WACC and regression analysis. Singh, R. (2003), Beck, T. and Levine, R. (2004) had surveyed and found that NPA was the weakest section of both categories banks, public and private sectors and how banks could manage from this. The Bank of Baroda was likewise in the lead over the others. Muralidhara et al. selected five public sector banks to analyze the financial performance for the different periods. Kajal Kiran and S. Panboli et al. used CAMEL rating Analysis to examine the financial capacity of various public and private sector banks throughout time.

Research Methodology

Research Design, data collection method, statistical tools and techniques used in this manuscript are as follows:

The current research is based on an analytical and descriptive research design. Annual reports, financial statements, RBI rules, different websites, and periodicals are all collected by secondary data, and ratios can be calculated using these data.

In this model, these ratios are used for analyzing and statistical tools purpose. The Camel specialized technique is employed in this manuscript. Nurazi, R. and Evans, M. (2005) also used this model to determine the financial performance of the top five public sector banks. The study banks names are SBI, PNB, BOB, UBI and Canara bank.

This model uses five main metrics to assess the financial performance of the chosen public sector banks. C, A, M, E, and L are the essential indicators. C- Capital Adequacy Ratios, A-Asset Quality Ratios, M- Management Efficiency Ratios, E- Earning Capacity Ratios, and L-Liquidity Ratios are the acronyms for these indicators also used by Mishra, Bansal and Ongore et al. (2018).

In this manuscript, different ratios are ranked as individual and mixed group-based. For analyzing the performance of banks, Arithmetic mean and Standard deviations are also calculated.

The Study's Objective

The primary goal of this research is to use the CAMEL model to evaluate the financial performance of the top five public sector banks from 2015 to 2020.Hypothesis of the Study

The following hypothesis is being tested in this investigation.

The null hypothesis (H0) states that the financial performance of five top-ranked public sector banks is not significantly different.

Alternative hypothesis (H1): The performance of the selected five public sector banks differs significantly.

Data Analysis and Interpretation

Some components (aspects) of the Camel model are taken in this manuscript. These are as follows:

C-Capital Adequacy Ratio-Analyze: The first financial key indicator (C) is the capital adequacy ratio in this technique. This indicator depicts the adequacy or soundness of capital to withstand unexpected losses and the banks' overall fiscal position. This ratio satisfies management's increased capital requirement while safeguarding depositors from bankruptcy and promoting global industry efficiency and stability. The following ratios can be used to assess the capital adequacy of industries and banks:

- **a**) Capital Adequacy Ratio: This ratio shows that banks have sufficient capital to cover the operations losses. Higher the ratio indicates the strongest position of the banks and investor's protection
- **b**) Total Advances to Loan Funds Ratio: This ratio helps determine the creditworthiness of the banking industry. It is determined by dividing entire bank advances by loan money, and receivables are accounted for ahead of time. In comparison to a smaller ratio, a larger ratio is better.
- c) Debt- Equity Ratio shows how much the bank has borrowed for every rupee of equity invested. This ratio is significant to know the volatility in banks income due to the Government laws and regulations. Higher this ratio indicates a high fixed cost in the form of interest and loan raised despite its revenues. It is calculated by dividing the total debt to Owners funds or total equities.
- **d**) Investment Deposit Ratio: Some percentage of deposit is invested in different securities for investment purposes. This ratio indicates the proportion between securities investment and total deposits of the bank. The higher ratio expressed the higher non operating income of the bank.

	Capita	al	Total		Total De	bt to	Investment		Group Rank	
	Adequa	асу	Advances to		Owne	ers	Deposit R	atio		
	Ratio)	Loan Fu	inds	Funds I	Ratio				
			Ratio)						
Name	Average	Ran	Average	Ran	Averag	Ran	Average	Ran	Overall	Ran
of	Capital	k	Advanc	k	e Total	k	Investme	k	Average	k
Bank	Adequa		es to		Debt		nt		Rank of	
	cy Ratio		Loan		to		Deposit		Capital	
			Funds		Owner		Ratio		Adequa	
			Ratio		S				су	
					Funds				Aspect	
					Ratio					
State	12.94	2	70.98	1	15.82	2	34.96	1	1.5	5
Bank										
of										
India										
Punjab	11.20	5	65.85	5	16.78	3	30.37	2	3.75	2
Nation										
al										
Bank										
Bank	13.04	1	67.45	3	15.14	1	24.62	5	2.5	4

 Table 1: Camel model Rating (2015-20): As per C- Capital Adequacy Aspect

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of										
Baroda										
Union	11.69	4	68.50	2	17.95	4	29.62	3	3.25	3
Bank										
of										
India										
Canara	12.54	3	67.37	4	19.89	5	28.47	4	4	1
Bank										

Asset Quality-Assess: These banking ratios are found in the model's second category (A). This metric reflects the banking industry's credit risk management and financial strength. This is a ratio that pertains to a specific asset. Alabede, J. O. (2012) and Zafar et al. (2012) also had worked on the banks' performance. The following ratios can be used to assess asset quality in the banking, industrial, and corporate sectors:

- a) Net NPAs to Net Advances Ratio: The percentage of net NPAs to net advances is represented by this ratio. This is a valuable technique to determine the quality of assets in the banking sector. A low ratio indicates that the bank's advances exceed their non-performing assets (NPA) and that their loan (advance) coverage is adequate. This ratio suggests that the banks have a solid reputation ahead of time.
- b) Net NPAs to Total Assets Ratio: This ratio measures a bank's ability to recover advance funds. This ratio is computed by dividing the bank's net non-performing assets by its total assets. A lower ratio indicates that banks are of higher quality.

c) Total Investment to Total Assets Ratio: This ratio measures the blocked portion of total assets in total investment. It's derived by dividing total assets by total investment. A low ratio shows that total investments are fewer than total assets, with minimal investment blockage money.

	Net NPA to Net		Net NPA to Total		Total Investment		Group Rank	
	Advances Ratio		Assets Ratio		to Total Assets			
			Ratio		0			
Name of	Average	Rank	Average	Rank	Average	Rank	Overall	Rank
Bank	Net NPA		Net NPA		Total		Average	
	to Net		to Total		Investme		Rank of	
	Advances		Assets		nt to		Assets	
	Ratio		Ratio		Total		Quality	
					Assets		Aspect	
					Ratio			

Table 2: Camel model Rating (2015-20): As per A- Assets Quality Aspect

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State	3.70	1	2.27	1	28.5	4	2	4
Bank of								
India								
Punjab	8.0	5	17.12	5	94.14	5	5	1
National								
Bank								
Bank of	4.35	2	2.61	2	22.02	1	1.67	5
Baroda								
Union	6.52	4	3.96	4	24.97	3	3.67	2
Bank of								
India								
Canara	5.96	3	3.62	3	24.48	2	2.67	3
Bank								

M- Management effectiveness – Evaluation: This type of ratio has come in this model's third category (M). This indicator evaluates the better management quality to make the right decisions at the right and appropriate time. This tool had also used by Gupta & Kaur, (2008), Atikoğullari, M. (2009), and Al-Tamimi, H. A. (2010). The following ratios are beneficial to management evaluation in banking, industries and corporate sectors:

- a) Business per Employee Ratio: Employees working capability and efficiency are expressed by this ratio. A higher ratio indicates higher business of the bank and shows a positive attitude of customers.
- b) Profit per Employee Ratio: Bank's Profitability and employee's satisfaction level can be measured by this ratio. This ratio is calculated from the proportion between banks profit and the total number of employees. The highest ratio expressed the maximum satisfaction level, positive attitude and support of the employees.
- c) Credit Deposit Ratio: Proper utilization and movability of bank deposits can be measured by this ratio. This ratio measures how banks utilize their deposits to provide credit or lending, and a high ratio suggests banks are proper to use their resources.
- d) Return on Net worth Ratio: Return in the form of income on shareholders' wealth or net worth is calculated by this ratio. When equities increase, this ratio is also increased. For calculating this ratio, net income has divided by net worth. A high ratio is benefitted to the perspective of the investors'.

 Table 3: Camel model Rating (2015-20): As per M- Management Efficiency Aspect

|--|

	Employe	e	Employ	yee	Deposit		Worth R	atio		
	Ratio		Ratio	C	Rati	0				
Name	Average	Ra	Average	Ran	Averag	Ran	Average	Ran	Overall	Ra
of	Business	nk	Profit	k	e	k	Return	k	Average	nk
Bank	per		per		Credit		on Net		Rank of	
	Employe		Employ		Deposi		Worth		Manage	
	e Ratio		ee Ratio		t Ratio		Ratio		ment	
									Efficienc	
									y Aspect	
State	1450509	5	262421	1	76.88	1	3.52	1	2	4
Bank	78.49		.62							
of										
India										
Punjab	1503964	4	(67639	5	69.71	4	(12.84)	5	4.5	1
Nation	75.18		5.03)							
al										
Bank										
Bank	1900002	1	(21458	2	69.46	5	(2.78)	2	2.5	3
of	84.89		3.06)							
Baroda										
Union	1868547	2	(48639	4	74.17	2	(6.7)	4	3	2
Bank	34.05		8.80)							
of										
India										
Canara	1619171	3	(27173	3	70.05	3	(5.38)	3	3	2
Bank	83.75		8.72)							

E- Income or Earnings Quality – Persistence of chosen banks' earnings quality: This model's fourth category (E) contains these types of ratios. This ratio depicts a company's or industry's profitability or earnings. Olweny et al. (2011), Reddy et al. (2011) also studied banks' profitability. The banks' earning quality is reflected by the following ratios:

a) Return on Assets (ROA): This metric measures how assets are used effectively, efficiently, and monetized. It illustrates the banks' earnings on assets. Return on assets (ROA) and return on investment (ROI) are two terms that can be used interchangeably (ROI). This ratio is calculated by dividing net income by total assets, and a high percentage shows that bank assets are being used more effectively.

b) Net Interest Margin to Total Assets Ratio: This ratio shows how much net interest revenue compared to total assets. It demonstrates how to make good use of assets to earn interest. A high ratio indicates a higher return on assets, which is advantageous to banks.

c) Operating Profit to Total Asset Ratio: This ratio measures the operating income-earning quality of a company's assets. A high ratio aids the banks' perspective.

d) Interest Income to Total Income Ratio: This ratio represents the interest income portion of the bank's total income. It depicts the ability of banks to earn interest as a percentage of total revenue. For banks, a high ratio is advantageous.

	Return c	n	Net Inter	est	Operatio	ng	Interest In	come	Group Rank	
	Assets Ra	tio	Margin t	to	Profit t	0	to Total In	come		
			Total Ass	ets	Total Ass	set	Ratio			
			Ratio	Ratio		Ratio				
Name	Average	Ra	Average	Ra	Average	R	Average	Ran	Overall	Ran
of	Return	nk	Net	nk	Operati	an	Interest	k	Average	k
Bank	on Assets		Interest		ng Profit	k	Income		Rank of	
	Ratio		Margin		to Total		to Total		Earning	
			to Total		Asset		Income		Quality	
			Assets		Ratio		Ratio		Aspect	
			Ratio							
State	0.22	1	2.35	1	(0.97)	1	0.86	3	1.5	4
Bank										
of										
India										
Punjab	(0.65)	5	2.12	3	(1.75)	5	0.85	4	4.25	1
Nation										
al										
Bank										
Bank	(0.16)	2	2.14	2	(1.03)	2	0.88	1	1.75	3
of										
Baroda										
Union	(0.34)	4	2.01	4	(1.32)	4	0.88	1	3.25	2
Bank										
of										
India										
Canara	(0.25)	3	1.86	5	(1.31)	3	0.87	2	3.25	2
Bank										

Table 4: Camel model Rating (2015-20): As per E- Earning Quality Aspect

3735 | Shipra Gupta Bank **L- Liquidity measurement- Identify the liquid status of the banks:** This type of ratio has come in the fifth and last category (L) of this CAMEL model. The capability to covering this key factor identifies the short term requirements of the banks. A very high ratio represents the excess cash position, and a very low ratio shows the cash deficiency in the banks. Following ratios are expressed short term cash requirement or liquidity position of the banks:

- a) Current Ratio: This ratio reflects a bank's ability to make short-term payments. It's determined by dividing current assets by current liabilities. When current assets exceed current liabilities, the ratio is considered high, and this is preferable from the standpoint of the banks.
- b) Quick Ratio: A highly liquid ratio is a quick or acid-test ratio. This ratio expressed the proportion between liquid assets and liquid liabilities. For calculating liquid assets, stock and prepaid expenditures are excluded from current assets and for liquid liabilities, bank overdraft is excluded from current liabilities. A high ratio is better for the banks.

	Current Ratio		Quick F	Ratio	Group Rank		
Name of	Average	Rank	Average	Rank	Overall	Rank	
Bank	Current		Quick		Average		
	Ratio		Ratio		Rank of		
					Liquidity		
					Aspect		
State	0.39	1	13.35	4	2.5	2	
Bank of							
India							
Punjab	0.32	2	9.39	5	3.5	1	
National							
Bank							
Bank of	0.05	4	19.49	3	3.5	1	
Baroda							
Union	0.05	4	35.53	1	2.5	2	
Bank of							
India							
Canara	0.06	3	26.43	2	2.5	2	
Bank							

 Table 5: Camel model Rating (2015-20): As per L- Liquidity Aspect

Overall Combined CAMEL Model Ratings: The overall financial performance of selected public sector banks are revealed by the overall composite ratings of this model. These ratings have been calculated with the help of group ranking of the banks from 2015-20. The table below shows their results. As per table 6, it has been analyzed that SBI is on first overall combined rank with a 1.9 average value. Bank of Baroda has a 2.38 ranking average on its excellent Camel Model parameter-based performance used Sarker, A (2005). Canara Bank is in the third position with 3.08. In comparison, Union Bank of India is at fourth position with a 3.13 ranking average, so these two banks come under fair performance as per Camel Model factors based. Punjab National Bank is at fifth position with 4.2 combined ranking average to its poor performance as per Camel Model. This model is also used by Satish et al. (2005), Bodla et al. (2006), Bolda et al. (2007).

Banks	Capital	Assets	Manageme	Earning	Liquidity	Mean(X)	Rank		
	Adequacy(Quality(nt	Quality((L)				
	C)	A)	Efficiency(E)					
			M)						
State	1.5	2	2	1.5	2.5	1.9	1		
Bank of									
India									
Punjab	3.75	5	4.5	4.25	3.5	4.2	5		
National									
Bank									
Bank of	2.5	1.67	2.5	1.75	3.5	2.38	2		
Baroda									
Union	3.25	3.67	3	3.25	2.5	3.13	4		
Bank of									
India									
Canara	4	2.67	3	3.25	2.5	3.08	3		
Bank									
		2.94							
	Standard Deviation 0.78								

Table 6: Overall Combined CAMEL Model Ratings (2015-20)

Figure: 6 Overall Combined CAMEL Model Rankings



Table 7: Classification of Public Sector Banks Based on CAMEL Model Criteria

Rank	Camel Criteria	Mean= 2.94 SD= 0.78	Study Banks Name
Excellent	Up to (Mean-SD)	Up to 2.16	SBI
Good	From(Mean-SD) to	2.17 - 2.94	BOB
	Mean		
Fair	From Mean to	2.95 - 3.72	UBI, Canara Bank
	(Mean+ SD)		
Poor	Above (Mean+ SD)	Above 3.72	PNB

Conclusion

In this competitive era, banks provide various new services to their customers, and tremendous changes came in existing services like improvement in customer quality services, highly competitiveness, insurance policies sector, awareness and supervision of the banks as per times requirement. There are various universally accepted banking evaluation categories available to analyze banking performance by different parameters based. Multiple techniques are updated from time to time. This manuscript is based on the CAMEL model, and the five most essential parameters (C, A, M, E, L) are taken. These different banks are rated as per the different aspects of this approach. Statistically this manuscript represents, the financial performance of study banks are not significantly difference during the study period 2015-20. As per the analysis of this study, those banks with low ranks need to improve their performance to recovering their targets.

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References

Richard, B. (2002) 'Evaluating the Productive Efficiency and Performance of U.S. Commercial

Banks', Engineering Management, vol. 28, No.8, pp. 19-28.

Singh, R. (2003) 'Profitability Management in Banks under Deregulated 386 Environment', IBA

Bulletin, 25, No. 7, 19-26.

Beck, T. and Levine, R. (2004) 'Stock Market, Banks and Growth: Penal Evidence', Journal of Banking and Finance, vol. 28, pp. 423-42.

Sarker, A (2005), 'CAMEL Rating System in the Context of Islamic Banking: A Proposed 'S' for

Shariah Framework', Journal of Islamic Economics and Finance, vol. 1, No. 1, pp. 78-84. Nurazi, R. and Evans, M. (2005) 'An Indonesian Study of the Use of CAMEL(S) Ratios as

Predictors of Bank Failure', Journal of Economic and Social Policy, vol. 10, No. 1, pp. 1-23.

Satish, D., Jutur, S. and Surender, V. (2005), 'Indian Banking Performance and Development 2004-05', Chartered Financial Analyst, vol. 11, No. 10, pp. 6-15.

Bodla, B. S., and Verma, R. (2006) 'Evaluating Performance of Banks through CAMEL Model: A Case Study of SBI and ICICI', The ICFAI Journal of Bank Management, vol.5, No.3, pp.49-63.

Bolda B.S. and Verma, R. (2007), 'Determinants of Profitability of Banks in India: A Multivariate

Analysis, Journal of Services Research, Vol.6, No.2, pp.75-89.

Gupta & Kaur, (2008) 'A CAMEL Model Analysis of Private Sector Banks in India', Journal of Gyan Management, Vol. 2, No. 1, pp. 3-8.

Atikoğullari, M. (2009), 'An Analysis of the Northern Cyprus Banking Sector in the Post – 2001

Period Through the CAMELS Approach', International Research Journal of Finance and Economics, vol. 32, pp. 212–229.

Al-Tamimi, H. A (2010) 'Factors Influencing Performance of UAE Islamic and National Conventional Banks', Global Journal Business Research, Vol. 4, no. 2, pp. 1-7.

Olweny, T. and Shipho, T. M. (2011), 'Effects of Banking Sectoral Factors on the profitability of

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Bank	

Commercial Banks in Kenya', Economics and Finance Review, vol. 1, No. 5, pp. 1-30. Reddy, D. M. & Prasad, K. V. N. (2011) 'Evaluating Performance of Regional Rural Banks: An

Application of CAMEL Model', Journal of Arts, Science & Commerce, Vol. 2, No. 4, pp. 61-67.

Alabede, J. O. (2012) 'The Intervening Effect of Global Financial Condition on the Determinants

of Bank Performance: Evidence from Nigeria', Accounting and Finance Research, Vol. 1, No. 2, pp. 161-76.

Zafar, S.M, Maqbool, A. and Nawab Ali, S.I (2012), 'A study of ten Indian commercial bank's financial performance using CAMELS methodology', IMS Manthan, 7(1), 1-14.

Mishra S. K and Aspal P. K (2013) A Camel Model Analysis of State Bank Group, World Journal

of Social Sciences, 3(4), 36-55.

 Bansal R. and Mohanty A. (2013) A Study on Financial Performance of Commercial Banks in India: Application of Camel Model, Al-Barkaat Journal of Finance and Management, 5, 60-

79.

Ongore, V. O., Kusa, G. B. (2013), 'Determinants of Financial Performance of Commercial Banks in Kenya', International Journal of Economics and Financial Issues, vol. 3, No. 1, pp.237-52.

Gupta R. (2014), An Analysis of Indian Public Sector Banks Using Camel Approach, IOSR Journal of Business and Management (IOSR-JBM), Vol 16, No.1. Ver. IV, 94-102.

Karthikeyan P. and Shangari B. (2014) Calibrating Financial Soundness Among Selected Private

Sector Banks In India By Using Camel Model, International Journal Of Management Research And Review (IJMRR), Vol 4, No. 4, pp 449-454.