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RELATIVE PERFROMANCE OF COMMERCIAL BANKS IN INDIA USING CAMEL APPROACH

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ABSTRACT

Due to the nature of banking and the important role of banks in the economy in capital formation, banks should be more closely watched than any other type of economic unit in the economy. The CAMEL supervisory system in banking sector is a substantial improvement over the earlier systems in terms of frequency, coverage and focus. In the present study an attempt is made to evaluate relative performance of banks in India using CAMEL approach. It is found that public sector banks have significantly improved indicating positive impact of the reforms in liberalizing interest rates, rationalizing directed credit and Investments and increasing competition.

KEYWORDS: CAMEL, bank performance, progress ratio.

1. INTRODUCTION

A sea change has taken place in the banking environment since the initiation of reform process in 1992-93. The period of little more than one and half a decade, witnessed remarkable changes in perceptions, policies and practices of banks. In the light of changes in banking policies various studies were undertaken to assess the performance of banks in India. These studies attempted to compare the performance across the three categories of banks - public, private and foreign using profitability measures such as return on capital employed, return on assets and efficiency measures such as net interest margin, operating cost ratio. It was widely believed that foreign banks excelled over public and private banks. Banks have been increasingly diversifying into non-interest income activities as against traditional banking. Although domestic private and foreign banks performed better than public-sector banks initially during 1995–96, no observable relationship between ownership and performance is found in the Indian banking industry during 1999–2000 (Sarkar, Sarkar and Bhaumik (1998), Sayuri Shirai (2001)). Studies on the impact of privatization on banks performance and efficiency revealed that partially privatized banks have performed better than fully public sector banks and they are catching up with the banks in the private sector (Sathye (2005)). It was observed by some of the researchers that there exits convergence in performance between public and private sector banks in the post-reform era (Ram Mohan and Ray (2004)). The major factors affecting the profitability and efficiency of the banks were directed investments (cash reserves and statutory liquidity requirements), directed credit (priority sector advances), growth in assets, growth in advances and increased proportion of other income in total income of the banks (Bhaumik and Dimova (2004)).

Over the past years, the bank regulators have introduced a number of measures to link the regulation of commercial banks to the level of risk and financial viability of these banks. The regulators have augmented bank supervision through CAMEL (capital adequacy, asset quality, management quality, earnings and liquidity) rating model to include explicit assessment of bank's ability to manage its performance. A large number of studies evaluating the performance of commercial banks in the reform period have come up. But, studies assessing the overall relative performance of banks using CAMEL (Capital adequacy, Asset quality, Management quality, Earnings quality and Liquidity) ratios remains untouched. In this paper an attempt is made to evaluate the relative performance of the banks using CAMEL approach after first phase of reforms (i.e., 1999) and after second phase of reforms (i.e., 2009)[1].

Due to the nature of banking and the important role of banks in the economy (i.e. capital formation), banks should be more closely watched than any other type of economic unit in the economy. The present supervisory system in banking sector is a substantial improvement over the earlier system in terms of frequency, coverage and focus as also the tools employed. Nearly one-half of the Basle core principles for Effective Banking Supervision have already been adhered to and the remaining is at a stage of implementation. Two Supervisory Rating Models, based on CAMELS (capital adequacy, asset quality, management quality, earnings, liquidity and systems) and CACS (capital, asset quality, compliance and systems & control) models for rating of the Indian Commercial Banks and Foreign Banks operating in India respectively, have been worked out on the lines recommended by the Padmanabhan Working Group (1995). These ratings would enable the Reserve Bank to identify the banks whose condition warrants special supervisory attention Following sections explain various types of CAMEL approaches adopted by regulators and rating agencies to evaluate the performance of the banks.

1.1 CAMEL RATING

In the 1980s, the US supervisory authorities, through the use of the CAMEL rating system, were the first to introduce ratings for on-site examinations of banking institutions. The concept introduced a uniform system of rating a banking institution in the United States. It is based on examiner assessment of a banking institution under certain supervisory criteria, and is used by all three US supervisory agencies, i.e. the Federal Reserve System, Office of the Comptroller of the Currency (OCC) and the Federal Deposit Insurance Corporation (FDIC)[2]. Under this system, each banking institution subject to on-site examination is evaluated on the basis of five (now six) critical dimensions relating to its operations and performance, which are referred to as the

[1] It should be noted that policies initiated in first phase and second phase of reforms are being continued till date.

[2] In the United States, banks are supervised by different agencies depending on their charter. The OCC supervises

Nationally - chartered banks. State-chartered banks that are members of the Federal Reserve System are supervised by the Federal Reserve and the FDIC supervises state-chartered banks that are not members of the Federal Reserve System

component factors. These are Capital, Asset Quality, Management, Earnings and Liquidity and are seen to reflect the financial performance, financial condition, operating soundness and regulatory compliance of the banking institution. In 1996, in an effort to make the rating system more risk-focused, a sixth component relating to Sensitivity to market risk was added to the CAMEL rating, making it CAMELS. Each of the component factors is rated on a scale of 1 (best) to 5 (worst).

A composite rating is assigned as an abridgement of the component ratings and is taken as the prime indicator of a bank's current financial condition. The composite rating ranges between 1 (best) and 5 (worst), and also involves a certain amount of subjectivity based on the examiners' overall assessment of the institution in view of the individual component assessments.

The new approach to inspection of banks (CAMEL) has been adopted from the cycle of inspections commencing since July 1997. It focused on the mandated aspects of solvency, liquidity, financial and operational health, based on CAMEL model. In India, CAMEL ratings are normally assessed every year as every banking institution is generally examined once a year. In the case of problem banks (those with a CAMEL rating of 4 or 5), the ratings may be assessed more frequently, as these banks are subject to more frequent on-site examination. Conversely, in the case of sound banks (those with a CAMEL rating of 1 or 2), on-site examinations may be conducted after an interval of 18 months, and the ratings would accordingly be updated once every one and a half years.

1.2 CAMEL RANKING

It is a technique of using CAMEL ratios to estimate the relative positions of various banks. All the banks in the list may be ranked on each of the sub parameter of major parameter (for example Capital adequacy). These sub parameter ranks are combined either by simple average or weighted average. After obtaining the ranks for each major parameter, these are aggregated using the same method as mentioned above. CAMEL rating a subjective model which indicates financial strength of a bank, where as CAMEL ranking indicates the banks relative position with reference to other banks.

Business standard (2003) used CAMEL ratios to rank banks in India by collecting data on a number of variables from the annual reports of banks. The data were combined under five heads – profitability, safety, productivity, efficiency and growth. Banks were ranked on the basis of these five indicators. Each indicator was essentially an index built from a set of variables. The variables were normalised and converted into an index number. Indices of specific variables have been worked out relative to the banking sector's average. Based on the arrived index numbers for each variable, ranks were assigned in descending order of index numbers. The composite rank for each bank was worked out with weighted average[3] of the ranks assigned to banks for all the five indicators.

[3] In arriving at an assessment of which was the best bank, the inherent bias in favour of smaller and private sector banks has to be neutralized. For instance, productivity in the case of public sector banks turns out to be low as their staff strength is huge even after the successful

ICFAI publications (2006), also used CAMEL ratios to rank banks in India by using data from PROWESS database developed by Centre for monitoring Indian Economy (CMIE). Banks were classified into Public sector, Private sector, foreign sector and category wise ranks were assigned based on aggregate average of ranks under each group of parameters under CAMEL. All the banks in the list were ranked on each of the sub parameter of major parameter (for example Capital adequacy). These sub parameter ranks are combined to get overall rank of the bank based on a major parameter. After obtaining the ranks for each major parameter, these are aggregated using the same method as mentioned above. For example, consider ranking of two banks A and B using above methodology. According to ratios considered in Capital adequacy bank A is assigned 2nd rank for ratio 1, 10th rank for ratio 2 and 15th rank for ratio 3. Group score is obtained by estimating simple average of the three ranks. In the above case, bank A will get group score of 9 in Capital adequacy category. Similarly, if we assume that bank B got group score of 10, bank A gets 1st rank and bank B gets 2nd rank in Capital adequacy category. Similarly, if we assume that bank A got 2nd rank in Asset quality, 1st rank in management quality,2nd rank in earnings quality and 1st in Liquidity position, then the composite score of bank A will be 1.4 [(1+2+1+2+1)/5]. Bank B will get a composite score of 1.6 ([2+1+2+1+2]/5).Finally, bank A gets 1st rank and bank B gets 2nd rank, as composite score of bank A is lower than that of bank B. The above mentioned methodology is also used in Financial Express – Earnst & Young banking survey[4] and Business today – KPMG banking survey[5] to identify the best banks in Indian banking system

1.3 MODIFIED CAMEL APPROACH[6]

In this approach each ratio considered in the components of CAMEL is scaled using following formulae

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implementation of a voluntary retirement scheme. On the other hand, private and foreign banks have a slender work force and naturally their employees are more productive. To neutralise the bias, the weightage given to productivity is low in identifying the best bank.

[4] http://www.financialexpress.com/news/fee&y-best-banks-methodology-overview/42326/1

[5] http://www.indiatoday.com/itoday/20070226/m-banks.html.

[6] One of the limitations of the method used by Financial Express- Earnst &Young, KPMG and Business Today, Business Standard and ICFAI Press is that degree of change in the performance of two banks cannot be reflected in the analysis. For example, consider three banks A,B and C with composite scores 1,5 and 15 respectively. According to CAMEL ranking technique A, B and C will be given 1st, 2nd and 3rd ranks respectively. It can be observed that the difference in ranks between the banks is same, but It is clearly evident that the degree of poor performance of C is more than that of B. This limitation led us to devise a modified CAMEL ranking approach to rank the performance of the banks

Component score (cs_j) = $\sum w_i$ (R – LL / UL – LL)

Composite Score(CS) = W_j cs_j

(cs_j) Component score of each category in CAMEL

w_i Weights assigned to i^{th} ratio in each component of CAMEL

R value of the ratio considered

LL Lower limit used to scale the value of the ratio (it is a value slightly lower than the minimum ratio among all the banks considered)

UL Upper limit used to scale the value of the ratio (it is a value slightly higher than the maximum ratio among all the banks considered)

All scaled ratios are averaged to get component score and finally all component scores are averaged to get overall composite score of each bank. These scores are used for ranking the banks performance. It is noteworthy that scaled ratios can be added to get component score as these are dimension free. (i.e., free from units).We have estimated the composite scores for the years 1999 and year 2009 and estimated a measure called "progress " which is the ratio between composite score of bank in 2009 and composite score of bank in 1999. the higher the ratio the better is the progress of the bank between 1999 and 2009. Progress ratio indicates the relative performance of the bank with reference to its own performance in base year (in present study base year is1999).

Progress Ratio = Composite score of bank in 2009/ Composite score of bank in 1999

Further, all the banks categorized into very good, good, medium, bad and very bad progressive banks using the following distribution formulae

EXHIBIT 1: DEFINITION OF RELATIVE DEGREE OF PROGRESSIVE BANKS

Progress ratio lesser than m – 0.842 s	Very Bad Progression (VG)
Progress ratio between m – 0.842 s and m - 0.253 s	Bad Progression (B)
Progress ratio between m - 0.253 s and m + 0.253 s	Medium Progression (M)
Progress ratio between m + 0.253 s and m+ 0.842 s	Good Progression (G)
Progress ratio greater than m+ 0.842 s	Very Good Progression (VB)
Note: s – Standard Deviation of Progress Ratio and m- Mean of Progress Ratio	

2. METHODOLOGY AND FRAME WORK OF CAMEL RATIOS

To ascertain relative positions of banks, CAMEL ratios were computed for a panel data taken from 'STATISTICAL TABLES RELATING TO BANKS' published by RBI (2009). Our data set consists of public (26), domestic private sector (19) and foreign banks (16) and rankings are given to various banks for the years 1999 and 2009. The significance of taking these time periods is that recommendations of Narasimham committee Report – I were adapted by the end of 1998 and the latest year of the study.

Various ratios were considered in assessing the relative performance of the banks by Business Standard, ICFAI, Business Today – KPMG and FE – Earnst & Young. In consultation with some of the practicing bankers we arrived at the following list of ratios to assess the relative performance of the banks. A brief discussion on the ratios considered in the analysis is presented as follows

2.1 CAPITAL ADEQUACY

Capital Adequacy indicates whether the bank has enough capital to absorb unexpected losses. It is required to maintain depositors' confidence and preventing the bank from going bankrupt. Some of the ratios considered to assess the capital adequacy of the banks by researchers were total capital as a percentage of total assets, total loans as a percentage of total capital, total assets to total shareholders' funds, ratio of total shareholders' funds to total net loans, ratio of total shareholders' funds to total deposits, ratio of shareholders' funds to contingency liabilities, ratio of total shareholders' funds to total risk weighted assets (CAR).Debt- Equity ratio, Coverage ratio[7]. However following ratios are considered in the present study.

1. Capital Adequacy Ratio (CAR)
2. Debt-Equity ratio (D/E)
3. Coverage ratio

2.2. ASSET QUALITY

This indicates what types of advances the bank has made to generate interest income. When loans are given to highly rated companies, the rates attracted are lower than that of lower rated doubtful companies. Thus asset quality indicates the type of debtors of the bank. Some of the ratios considered to assess the asset quality of the banks by researchers are total loan as a percentage of total assets, loan loss provision to total net loans, ratio of loan loss provision to gross loans. On performing assets to net advances, investments in government securities to total investments and Standard advances to total advances[8]. However following ratios are considered in the present study.

[7] See Gunsel Nil (2007), Marie-Joe Bou-Said and Philippe Saucier (2003)
[8] Ibid 10

1. Non-Performing Assets / Net advances (NNPA/NADV):

2. G-secs to investments (GSEC/TINV)

3. Standard advances / Total advances (STDADV/TADV)

2.3. MANAGEMENT QUALITY

This parameter is used to evaluate management quality so as to assign premium to better quality banks and discount poorly managed ones. It involves analysis of efficiency of management in generating business (top-line) and in maximizing profits (bottom-line).Some of the ratios considered to assess the management quality of the banks are operating expense as a percentage of total assets, deposit interest expense as a percentage of total deposits, total of risk weighted assets to total assets, total advances to total deposits (CD ratio), profit per employee, business per employee and return on net worth[9]. However following ratios are considered in the present study.

1. Total advances to total deposits (CDR)

2. Business per Employee (BEMP)

3. Profits per Employee (PEMP)

2.4. EARNINGS QUALITY

This parameter lays importance on how a bank earns its profits. This also explains the sustainability and growth in earnings in the future. Some of the ratios considered to assess the earnings ability of the banks were net income as a percentage of total assets, net-interest income as a percentage of total assets, ROA, ROE, Pre-tax profit/total assets, income spread to total assets, cost to income ratio, operating profit to total assets, interest income to total income and non - interest income to total income[10]. However following ratios are considered in the present study.

1. Return on assets (ROA)

2. Income Spread/Total assets (SPREAD/TA)

3. Operating Profit/ Total assets (OP/TA)

4. Cost to Income ratio (COST/INCOME**)**

2.5. LIQUIDITY

Banks are in a business where liquidity is of prime importance. Among assets cash and investments are the most liquid of a bank's assets. In this category of ratios, the ability of banks

[9] Ibid 10
[10] Ibid 10

to meet its obligations is assessed. Some of the ratios considered to assess the earnings ability of the banks were Liquid assets as a percentage of total assets, liquid assets as a percentage of total deposits, total deposits as a percentage of total loans, deposits/total assets, liquid assets to demand deposits, cash to total assets and investments in government securities to total assets[11]. However following ratios are considered in the present study.

1. Liquid Assets/Total Deposits (LA/TD)

2. Cash Assets/Total Assets (CASH/TA)

3. Government securities /Total Assets (GSEC/TA)

Subsequent to the thorough discussions with practicing bankers and academicians, following set of variables with appropriate weights are included in the present study (Table 2).

TABLE 1 : DESCRIPTION OF PARAMETERS CONSIDERED IN CAMEL RANKING

Category	Ratios	Description	Interpretation
Capital Adequacy	CRAR	Capital Adequacy Ratio is the ratio of TIER-I[12] and TIER-II[13] Capital to the aggregate of risk weighted assets (RWA).	It measures the ability of a bank in absorbing losses arising from risk assets. The higher the value of this ratio, the better the financial health of a bank
	D/E	This is calculated as the proportion of total outside liability to net worth. Thus this ratio is equal to (Capital + Reserves)/(Deposits + Borrowings + Other Liabilities).	This ratio thus indicates the bank's financial leverage. In the case of manufacturing sector the ideal ratio is 2:1. However, in the case of commercial banks, there is no standard norm for debt – equity ratio
	COVERAGE RATIO	It is the ratio between net worth minus net NPAs to	This ratio indicates availability of capital to meet any incidence of loss assets in NPAs. Higher NPAs

[11] Ibid 10

[12] TIER-I Capital: This refers to the core capital that provides the most permanent and ready support against unexpected losses such as paid –up capital, statutory reserves, capital reserves and other disclosed free reserves. Equity investments in subsidiaries, intangible assets, losses in current period and those brought forward from previous years are not included in TIER-I Capital

[13] TIER-II Capital consists of the following components: Undisclosed reserves and cumulative perpetual preference shares, revaluation reserves, general provisions and loss reserves, hybrid debt capital instruments

		total assets.	erode net worth of the bank and reduces availability of capital. Higher the ratio the better for the bank, indicating availability of high amount of capital.
Asset Quality	NNPA/NADV	NPAs are the assets that are doubtful to return the principal and/or interest due in the near future. This results in huge losses to a bank. Net advance indicate the net of advances after deducting provisions made for NPAs. Thus Non-Performing Assets / Net advances indicate the level of non performing assets in net advances.	The lower the ratio, the better for the company.
	GSEC/TINV	It is the ratio of government securities and total investments.	This ratio indicates a bank's strategy as being high-profits high-risk or low profits-low risk. Government securities are generally considered as the most safe debt instrument carrying the lowest return
	STDADV/ TADV	This ratio indicates the proportion of standard advances to total advances of a bank. Standard advances are the net of total advances and gross NPAs.	A higher ratio means that the bank has high performing assets which results in higher earnings
Management Quality	BEMP	This ratio is used to find out whether a bank is relatively over or under staffed	The higher the ratio the better will be the performance of the bank.
	PEMP	This is also a ratio to check efficiency of bank in maximizing profits per	The higher the ratio the better will be the performance of the bank.

		employee.	
	CDR	It is the ratio of the total advances to deposits	It indicates the ability of a bank to convert its deposits into higher earning advances.
Earning Quality	ROA	It is the ratio of Net profit after tax and Total assets	Higher return on asset means greater returns earned on assets deployed by the bank.
	SPREAD/TA	Income Spread is the difference between Interest Income earned and Interest Expended. It is the ratio between spread and total assets	This ratio shows how much a bank can earn for every rupee of investments made in assets. The higher the ratio the better will be the performance of the bank
	OP/TA	This ratio indicates how much a bank can earn from its operations after meeting operating expenses for every rupee of investments made in assets..	The higher the ratio the better will be the performance of the bank
	COST/ INCOME	It is the ratio between operating expenses to Net Interest income and other income.	It indicates the ability of the company to meet operating expenses from the revenues generated by the banks. The lower the ratio, the better for the bank.
Liquidity	CASH/TA	Cash has the highest liquidity and safety among all assets..	This ratio measures cash as a proportion of total assets
	GSEC/TA	Government securities are the most liquid and safe investments.	This ratio measures Government securities as a proportion of total assets.

	LA/TD	Liquid assets consist of cash balance and investments.	This proportion indicates ability of the bank to meet its deposit obligations with available liquid funds. The higher the ratio, the better for the bank
Source: Authors			

TABLE 2 : WEIGHTS OF VARIABLES CONSIDERED IN CAMEL RANKING

Category	Ratios	Weight	Reasons	Composite weights	Reasons
Capital Adequacy	CRAR	0.70	CRAR indicates availability of capital for a given level of risk weighted assets and considered as more important variable indicating capital adequacy of a bank	0.20	In CAMEL parameters Asset quality and Earnings quality are considered very important because assets size indicates growth of the bank and earnings efficiency ensures survival of the bank. Next important categories are Capital adequacy which ensures safety of depositors
	D/E	0.15			
	COVERAGE RATIO	0.15			
Asset Quality	NNPA/NADV	0.10	Standard advances in total advances contribute to higher earnings to banks where as NPAs results in decreasing profit levels. Therefore STDADV/TADV parameter is given higher weight.	0.25	
	GSEC/TINV	0.30			
	STDADV/ TADV	0.60			
Management Quality	BEMP	0.25	CDR indicates top-line of banks income statements and should be given higher weight.	0.2	
	PEMP	0.25			
	CDR	0.50			
Earning Quality	ROA	0.25	All the four variables explain the earnings quality from various viewpoints such as earnings from interest and non interest	0.25	
	SPREAD/TA	0.25			
	OP/TA	0.25			

	COST/ INCOME	0.25	activities and ability to meet costs from income generated by the banks. All the variables are given equal weights because of their equal importance		and Management quality which indicates productivity of the banks. Though liquidity is essential, it is given least weight as high liquidity deteriorates profitability of the banks and affects the overall performance of the banks.
Liquidity	CASH/TA	0.25	Liquid assets to total deposits ratio is considered more important as it ensures higher credibility in the minds of depositors.	0.10	
	GSEC/TA	0.25			
	LA/TD	0.50			

Source: Discussions with bank officers

3. ANALYSIS OF THE CAMEL MODEL RATIOS FOR THE YEAR 2009

3.1. OVERALL RANK FOR EACH BANK

The overall rank of each bank for the years 1999 and 2009 are computed using the above model and variables (Table 3). During the year 2009 the top three performing banks in all the categories of CAMEL are Mashreq Bank, China Trust Commercial Bank and Bank of Ceylon and the worst three performers are American Exprss Bank, Development Credit Bank and Catholic Syriyan Bank. During 1999-2009 Mashreq Bank improved its position from 59th rank to 1st rank, and China Trust Commercial Bank improved from 7th rank to 2nd and Bank of Ceylon detoriated from 1st rank to 3rd rank. American Experss Bank drastically declined from 20th rank to 61th, Development Credit Bank drastically declined from its 17th rank to 60th rank and Catholic Syrian Bank slided from 57th rank to 59th ranks. Further, Mashreq Bank, Indian Bank, Oman International Bank,Punjab & Sind Bank,Abu Dhabi Bank, United Bank of India, Ratnakar Bank, China Trust Commercial Bank, Uco Bank are very progressive banks with high Progress Ratios during 1999-2009. UTI Bank,Jammu & Kashmir Bank,Indus Ind Bank, Development Credit Bank,American Express Bank, Sonali Bank are very bad progressive banks with low progress ratios during 1999-2009.

TABLE 3 : COMPARISION OF COMPOSITE RANKS OF SELECTED BANKS DURING 1999 AND 2009

SN	BANK NAME	RD	COM 2009	RNK 2009	COM 1999	RNK1999	PR	PC
1	STATE BANK OF INDIA	10	0.451	46	0.363	36	124.17	M
2	STATE BANK OF BIKANER & JAIPUR	11	0.465	43	0.374	32	124.21	M
3	STATE BANK OF HYDERABAD	9	0.457	38	0.386	29	118.30	M
4	STATE BANK OF INDORE	14	0.463	36	0.394	22	117.35	B
5	STATE BANK OF MYSORE	-3	0.456	42	0.354	45	128.72	M
6	STATE BANK OF PATIALA	15	0.468	40	0.389	25	120.27	M
7	STATE BANK OF TRAVANCORE	-2	0.465	32	0.366	34	127.05	M
8	ALLAHABAD BANK	-8	0.438	44	0.338	52	129.46	G
9	ANDHRA BANK	-6	0.467	27	0.374	33	125.05	M
10	BANK OF BARODA	-17	0.453	31	0.351	48	128.90	M
11	BANK OF INDIA	-25	0.464	24	0.351	49	132.25	G
12	BANK OF MAHARASHTRA	13	0.444	53	0.357	40	124.39	M
13	CANARA BANK	-19	0.464	34	0.338	53	137.42	G

14	CENTRAL BANK OF INDIA	16	0.433	57	0.356	41	121.52	M
15	CORPORATION BANK	-1	0.450	26	0.387	27	116.25	B
16	DENA BANK	13	0.438	51	0.360	38	121.84	M
17	INDIAN BANK	-42	0.473	19	0.225	61	210.51	VG
18	INDIAN OVERSEAS BANK	-9	0.458	41	0.348	50	131.53	G
19	ORIENTAL BANK OF COMMERCE	-1	0.466	29	0.385	30	121.02	M
20	PUNJAB & SIND BANK	-27	0.465	28	0.303	55	153.72	VG
21	PUNJAB NATIONAL BANK	-13	0.469	22	0.364	35	129.04	G
22	SYNDICATE BANK	6	0.447	50	0.355	44	126.18	M
23	UCO BANK	-2	0.428	54	0.301	56	141.84	VG
24	UNION BANK OF INDIA	-2	0.452	35	0.361	37	125.43	M
25	UNITED BANK OF INDIA	0	0.423	58	0.292	58	144.76	VG
26	VIJAYA BANK	3	0.441	49	0.352	46	125.45	M
27	UTI BANK	10	0.443	23	0.417	13	106.26	VB
28	BANK OF RAJASTHAN	2	0.413	56	0.311	54	132.93	G
29	CATHOLIC SYRIAN BANK	2	0.408	59	0.299	57	136.37	G

30	CITY UNION BANK	12	0.459	33	0.396	21	116.05	B
31	DEVELOPMENT CREDIT BANK	43	0.402	60	0.408	17	98.51	VB
32	DHANALAKSHMI BANK	-12	0.460	39	0.343	51	134.00	G
33	FEDERAL BANK	-33	0.471	14	0.352	47	134.02	G
34	HDFC BANK	4	0.487	16	0.419	12	116.31	B
35	ICICI BANK	2	0.446	30	0.386	28	115.45	B
36	INDUSIND BANK	42	0.435	52	0.431	10	100.79	VB
37	JAMMU & KASHMIR BANK	36	0.439	45	0.432	9	101.60	VB
38	KARNATAKA BANK	11	0.439	37	0.387	26	113.48	B
39	KARUR VYSYA BANK	9	0.462	25	0.411	16	112.36	B
40	LAKSHMI VILAS BANK	16	0.438	55	0.359	39	122.11	M
41	NAINITAL BANK	5	0.468	20	0.411	15	113.80	B
42	RATNAKAR BANK	-33	0.513	10	0.356	43	144.28	VG
43	SBI COMMERCIAL & INTERNATIONAL BANK	1	0.470	15	0.414	14	113.38	B
44	SOUTH INDIAN BANK	5	0.430	47	0.356	42	120.93	M
45	TAMILNAD MERCANTILE BANK	-6	0.470	17	0.394	23	119.37	M

46	ABN AMRO BANK	3	0.543	9	0.464	6	117.01	B
47	ABU DHABI COMMERCIAL BANK	-14	0.587	5	0.399	19	147.15	VG
48	AMERICAN EXPRESS BANK	41	0.347	61	0.397	20	87.57	VB
49	BANK OF AMERICA	0	0.632	4	0.493	4	128.28	M
50	BANK OF BAHRAIN & KUWAIT	-19	0.530	12	0.382	31	138.84	G
51	BANK OF CEYLON	2	0.655	3	0.570	1	114.77	B
52	CHINATRUST COMMERCIAL BANK	-5	0.655	2	0.456	7	143.71	VG
53	CITIBANK	-1	0.553	7	0.452	8	122.46	M
54	DEUTSCHE BANK	3	0.523	8	0.466	5	112.18	B
55	HONG KONG & SHANGHAI BANKING CORPORATION	0	0.455	18	0.405	18	112.30	B
56	MASHREQ BANK	-58	0.705	1	0.290	59	243.39	VG
57	OMAN INTERNATIONAL BANK	-39	0.480	21	0.272	60	176.34	VG
58	SOCIETE GENERALE	-13	0.490	11	0.393	24	124.69	M
59	SONALI BANK	46	0.456	48	0.565	2	80.75	VB
60	STANDARD CHARTERED BANK	2	0.504	13	0.419	11	120.34	M

61	STATE BANK OF MAURITIUS	3	0.586	6	0.514	3	114.15	B
	mean (m)		0.476		0.383		126.9	
	Standard deviation (s)		0.063		0.062		24.01	
	m - 0.842 s		0.423		0.330		106.7	
	m - 0.253 s		0.460		0.367		120.9	
	m + 0.253 s		0.492		0.398		133.0	
	m+ 0.842 s		0.530		0.435		147.1	
RD- Rank Difference, COM- Composite score, RNK- Rank, PR- Progress Ratio, PC- Progress Category								

3.2. CHANGES IN THE PERFORMANCE OF THE BANKS

During the period 1999-2009, 18 banks have improved and 19 banks have deteriorated out of 61 banks[14] (Tables 4 and 5). Further, nine public sector banks, five foreign banks and four private sector banks improved their performance and 8 private sector banks, two foreign banks and nine public sector banks have deteriorated during the period 1999-2009. 24 banks from all the groups did not change significantly during the study period (if the change in the ranks is in the range of -5 to 5, it assumed that there is no significant change in the performance of the banks)

During the period 1999-2009, in public sector bank group 21 banks out of 26 banks were below average in 1999, but their performance has improved tremendously. Out of 26 banks nine banks have improved their ranks; where as nine banks have deteriorated. Further, of these nine banks, three banks have improved their ranks by more than 20 ranks and the banks were Punjab and Sind BankState, Bank of India and Indian Bank (Table 3)..

In private sector banks, out of 19 banks, 12 banks were above average in 1999, but their performance has deteriorated significantly. Out of 19 banks eight banks have deteriorated their ranks where as four banks have improved. Further, of these eight banks, three banks have deteriorated by more than 20 ranks and the banks were Development Credit Bank, Indusind Bank, Jammu & Kashmir Bank (Table 2).

TABLE 4 : FREQUENCY DISTRIBUTION OF COMPOSITE RANKS IN 1999 AND CHANGES IN COMPOSITE RANKS DURING 1999-2009

		Changes in composite ranks between 1999 and 2006							Total
		-5 to 5	6-10	11-20	>20	-10 to -6	-20 to -11	<-20	
Composite ranks in 1999	0-10	7	0	0	0	0	0	3	10
	11-20	5	0	1	0	2	0	2	10
	21-30	3	1	1	0	1	4	0	10
	31-40	2	1	2	0	1	4	0	10
	41-50	3	1	1	3	1	1	0	10

[14] The merger between HDFC and Times Bank, ICICI and Bank of Madura, Centurion Bank and Bank of Punjab, Oriental Bank of Commerce and Global Trust Bank may be one of the reasons for the improvement or deterioration of the banks performance which is beyond the scope of the present study

	51-61	4	1	2	4	0	0	0	11

In foreign banks, out of 16 banks, 13 banks were above average in 1999, and their performance remained balanced. Out of 16 banks two banks have deteriorated their ranks and five banks have improved. Further, of these banks, two banks have

TABLE 5 : FREQUENCY DISTRIBUTION OF COMPOSITE RANKS IN 1999 AND CHANGES IN COMPOSITE RANKS DURING 1999-2009 - BANK GROUP WISE

TYPE			Changes in composite ranks between 1999 and 2006							Total
			-5 to 5	6-10	11-20	>20	-10 to -6	-20 to -11	<-20	
PUB	Composite ranks in 1999	0-10	0	0	0	0	0	0	0	0
		11-20	0	0	0	0	0	0	0	0
		21-30	2	0	0	0	1	2	0	5
		31-40	2	1	1	0	1	3	0	8
		41-50	2	1	1	1	1	1	0	7
		51-61	2	1	1	2	0	0	0	6
	Total		8	3	3	3	3	6	0	26
PRI	Composite ranks in 1999	0-10	0	0	0	0	0	0	2	2
		11-20	3	0	0	0	2	0	1	6
		21-30	1	1	0	0	0	2	0	4
		31-40	0	0	0	0	0	1	0	1
		41-50	1	0	0	2	0	0	0	3
		51-61	2	0	1	0	0	0	0	3

	Total		7	1	1	2	2	3	3	19
		0-10	7	0	0	0	0	0	1	8
FOR	Composite ranks in 1999	11-20	2	0	1	0	0	0	1	4
		21-30	0	0	1	0	0	0	0	1
		31-40	0	0	1	0	0	0	0	1
		41-50	0	0	0	0	0	0	0	0
		51-61	0	0	0	2	0	0	0	2
	Total		9	0	3	2	0	0	2	16

deteriorated by more than 20 ranks such as American Express Bank and Sonali Bank and two banks have improved by more than 20 ranks such as Oman International Bank and Mashreq bank (Table 3). The above analysis indicates that public sector banks have significantly improved where as private sector banks have drastically deteriorated in their performance. The reasons for the better performance of public sector banks can be attributed to increased profitability and cost efficiency due to the reforms initiated since 1991. Increased competition, deregulation of interest rates, reforms in priority sector lending, decline in SLR and CRR investments and adoption of technology in providing banking services are some of the reasons for the relative improved performance of public sector banks

CONCLUSION

CAMEL approach is significant tool to assess the relative financial strength of a bank and to suggest necessary measures to improve weaknesses of a bank. In India, RBI adopted this approach in 1996 followed on the recommendations of Padmanabham Working Group (1995) committee. In the present study, modified version of CAMEL ranking approach is used to assess relative positions of commercial banks. It is found that during the year 2009 the top three performing banks in all the categories of CAMEL are Mashreq Bank, China Trust Commercial Bank and Bank of Ceylon because of high capital adequacy, and liquidity. The worst three performers are American Exprss Bank, Development Credit Bank and Catholic Syriyan Bank during the study period because of low capital adequacy, low assets and earnings quality and

poor management quality. Further, Mashreq Bank, Indian Bank, Oman International Bank,Punjab & Sind Bank,Abu Dhabi Bank, United Bank of India, Ratnakar Bank, China Trust Commercial Bank, Uco Bank are very progressive banks with high Progress Ratios during 1999-2009. UTI Bank, Jammu & Kashmir Bank,Indus Ind Bank, Development Credit Bank,American

Express Bank, Sonali Bank are Very bad Progressive banks with low Progress Ratios during 1999-2009 . Public sector banks have significantly improved indicating positive impact of the reforms in liberalizing interest rates, rationalizing directed credit and Investments and increasing competition

REFERENCES

1. Bhaumik Sumon Kumar and Dimova Ralitza (2004), "How Important is Ownership in a Market with Level Playing Field? The Indian Banking Sector Revisited", Journal of Comparative Economics, Vol. 32, pp 165–180

2. Business Standard (2003), Banking Survey 2002-2003.

3. Gunsel Nil (2007), "Financial Ratios and the Probabilistic Prediction of Bank Failure in North Cyprus" European Journal of Scientific Research, Vol.18, No.2

4. ICFAI University press (2006), "Indian Banking 2005-06 - Performance Snapshot", The Analyst, October.

5. Padmanabhan Working Group (1995), "On-site Supervision of Banks", RBI.

6. Ram Mohan T T & Ray Subhas C (2004), "Comparing Performance of Public and Private Sector Banks", Economic and Political Weekly, Vol. 39, No. 12, March 20 - March 26

7. Report on Banking Statistical Returns (1998-2009), RBI

8. Report on Trends and Progress of Banking in India (1998-2009), RBI

9. Sarkar Jayati, Subrata Sarkar and Sumon K. Bhaumik (1998), "Does Ownership Always Matter?—Evidence from the Indian Banking Industry", Journal of comparative economics, Vol. 26, pp 262–281

10. Sathye, M (2005), "Privatization, Performance, and Efficiency: A Study of Indian Banks", Vikalpa, Vol 30, No1, pp 7-16

11. Sayuri Shirai (2001), "Assessment of India's Banking Sector Reforms from the Perspective of the Governance of the Banking System, "This paper was presented at the ESCAP-ADB Joint Workshop on "Mobilizing Domestic Finance for Development: Reassessment of Bank Finance and Debt Markets in Asia and the Pacific", Bangkok, pp 22-23, November

ONLINE REFERENCES

12. http://www.financialexpress.com/news/fee&y-best-banks-methodology-overview/42326/1http://www.indiatoday.com/itoday/20070226/m-banks.html.