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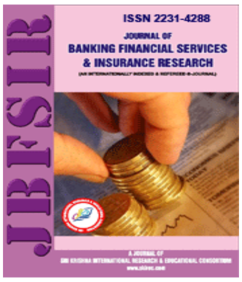

A CAMEL MODEL ANALYSIS OF PUBLIC & PRIVATE SECTOR BANKS IN INDIA

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ABSTRACT

Banking sector is one of the fastest growing sectors in India. Today's banking sector becoming more complex. Evaluating Indian banking sector is not an easy task. There are so many factors, which need to be taken care while differentiating good banks from bad ones. To evaluate the performance of banking sector we have chosen the CAMEL model which measures the performance of banks from each of the important parameter like Capital Adequacy, Assets Quality, Management Efficiency, Earning Quality and Liquidity. After deciding the model we have chosen all public sector banks and thirteen private sector banks for study. According to the importance of study each parameter is given equal weights. Results shown that on average Karur vysya bank was at the top most position followed by Andhra bank, Bank of Baroda also it is observed that Central Bank of India was at the bottom most position. The largest Public sector bank in India availed 36th position.

KEYWORDS*: public & private sector Banks, Performance Evaluation, CAMEL Model and Ranking Method.*

INTRODUCTION

During the 20th century in most of the nations domestic banking was generally subjected to heavy regulations and financial repression. The growth and financial stability of the country depends on the financial soundness of its banking sector.

The Indian banking sector has been working in a more open and globalize environment for a decade and half since liberalization. The liberalization process of Indian Economy has made the entry of new private sector banks possible and allowed the foreign sector banks to increase their branches in the banking sector. Besides, following India's commitment to the WTO, foreign banks have been permitted to open more branches with effect from 1998-99. With the increased competition and the emphatic on profitability, the public sector banks are now moving towards on economic-oriented model departing from the social approach followed for decades. Thus, the restructuring of public sector banks and the emergence of new banks in the private sector as well as the increased competition from foreign banks, have improved the professionalism in the banking sector. The increased presence of the private and foreign banks during the past decade has made the market structure of the banking sector in terms of competitive pricing of services, narrow spreads, and improving the quality of the services. The public sector banks, which had dominated the banking sector for decades, are now feeling the heat of the competition from private and foreign sector banks.

In the above back drop the present study is necessitated to examine the performance of public & private sector banks during the period 2006-10. The study is based on twenty ratios of the variables relating to capital adequacy, assets quality, management efficiency, earnings quality and liquidity.

REVIEW OF LITERATURE

In the process of continuous evaluation of the bank's financial performance both in public sector and private sector, the academicians, scholars and administrators have made several studies on the CAMEL model but in different perspectives and in different periods. This has been made me to take up the study on those areas where the study is incomplete. Hence, the knowledge on the current topic of the financial performance of the banks is reviewed here under to appraise the need for the present study.

Cole, Rebel A. and Gunther have made a study on "A CAMEL Rating's Shelf Life" and their findings suggest that, if a bank has not been examined for more than two quarters, off-site monitoring systems usually provide a more accurate indication of survivability than its CAMEL rating.

Lace well, Stephen Kent (2001). This study consists of multiple stages. Stage one in the estimation of cost and alternative profit efficiency scores using a national model and a size-specific model. Previous research referred in the paper asserts that an efficiency component should be added to the current CAMEL regulatory rating system to account for the ever-increasing diverse components of modern financial institutions. Stage two is the selection and Computation of financial ratios deemed to be highly correlated with each component of the CAMEL rating. The research shows that there is definitely a relationship between bank efficiency scores and financial ratios used to proxy a bank's CAMEL rating.

Richard S Barr, Kory A Killgo, Thomas F Siems, & Sheri Zimmel. (2002) This study reviews previous research on the efficiency and performance of financial institutions and uses Siems and Barr's (1998) data envelopment analysis (DEA) model to evaluate the relative productive efficiency of US commercial banks 1984-1998. It explains the methodology, discusses the input and output measures used and relates bank performance measures to efficiency.

Godlewski has tested the validity of the CAMEL rating typology for bank's default modelisation in emerging markets. He focused explicitly on using a logical model applied to a database of defaulted banks in emerging markets.

Said and Saucier examined the liquidity, solvency and efficiency of Japanese Banks using CAMEL rating methodology, for a representative sample of Japanese banks for the period 1993-1999, they evaluated capital adequacy, assets and management quality, earnings ability and liquidity position.

Prasuna analyzed the performance of Indian banks by adopting the CAMEL Model. The performance of 65 banks was studied for the period 2003-04. The author concluded that the competition was tough and consumers benefited from better services quality, innovative products and better bargains.

Derviz et al. investigated the determinants of the movements in the long term Standard & Poor’s and CAMEL bank ratings in the Czech Republic during the period when the three biggest banks, representing approximately 60% of the Czech banking sector's total assets, were privatized (i.e., the time span 1998-2001).

Kapil (2005) examined the relationship between the CAMEL ratings and the bank stock performance. The viability of the banks was analyzed on the basis of the Offsite Supervisory Exam Model—CAMEL Model. The M for Management was not considered in this paper because all Public Sector Banks, (PSBs) were government regulated, and also because all other four components—C, A, E and L—reflect management quality. The remaining four components were analyzed and rated to judge the composite rating.

Satish, Jutur Sharath and Surender adopted CAMEL model to assess the performance of Indian banks. The authors analyzed the performance of 55 banks for the year 2004-05, using this model. They concluded that the Indian banking system looks sound and Information Technology will help the banking system grow in strength in future. Banks’ Initial Public Offer will be hitting the market to increase their capital and gearing up for the Basel II norms.

Sarker examined the CAMEL model for regulation and supervision of Islamic banks by the central bank in Bangladesh. With the experience of more than two decades the Islamic banking now covers more than one third of the private banking system of the country and no concerted effort has been made to add a Shariah component both in on-site and off-site banking supervision system of the central bank. Rather it is being done on the basis of the secular supervisory and regulatory system as chosen for the traditional banks and financial institutions. To fill the gap, an attempt had been made in this paper to review the CAMEL standard set by the BASEL Committee for off-site supervision of the banking institutions. This study enabled the regulators and supervisors to get a Shariah benchmark to supervise and inspect Islamic banks and Islamic financial institutions from an Islamic perspective. This effort added a new ‘S’ to the CAMEL rating system as Shariah rating and CAMEL has become ‘CAMELS’ rating system.

Bhayani analyzed the performance of new private sector banks through the help of the CAMEL model. Four leading private sector banks – Industrial Credit & Investment

Corporation of India, Housing Development Finance Corporation, Unit Trust of India and Industrial Development Bank of India - had been taken as a sample.

Singh, D., & Kohli, G. (2006). The banking and financial sector in India underwent a significant liberalization process in the early 1990s, which led to reforms in the banking and financial sector and changed the Indian banking structure. During the period from 1992 to 1997, interest rates were liberalized and banks were allowed to fix lending rates. By 1977 CRR was reduced to 9.5% and SLR was reduced to 25%. As a sequel to these reforms, new private sector banks were allowed entry in the market. Many of these private sector banks brought with them new technologies. Private sector banks started product innovation and competition. Even then Indians prefer nationalized banks for their services. The failure of Global Trust Bank made Indian depositors to question the sustainability of private sector banks. This paper attempts to undertake SWOT analysis of 20 old and 10 new private sector banks. These banks have also been ranked on the basis of financial data for the years 2003-2005. The study has used CAMEL model for evaluating these banks.

Gupta and Kaur conducted the study with the main objective to assess the performance of Indian Private Sector Banks on the basis of Camel Model and gave rating to top five and bottom five banks. They ranked 20 old and 10 new private sector banks on the basis of CAMEL model. They considered the financial data for the period of five years i.e. from 2003-07.

METHODOLOGY

CAMEL is basically ratio based model for evaluating the performance of banks. It is a management tool that measures capital adequacy, assets quality, efficiency of management, quality of earnings and liquidity of financial institutions. Various ratios are explained as follows.

CAPITAL ADEQUACY

It is important for a bank to maintain depositors' confidence and preventing the bank from going bankrupt. It reflects the overall financial condition of banks and also the ability of management to meet the need of additional capital. The following ratios measure capital adequacy:

- **CAPITAL ADEQUACY RATIO (CAR):** The capital adequacy ratio is developed to ensure that banks can absorb a reasonable level of losses occurred due to operational losses and determine the capacity of the bank in meeting the losses. The higher the ratio, the more will be the protection of investors. The banks are required to maintain the capital adequacy ratio (CAR) as specified by RBI from time to time. As per the latest RBI norms, the banks should have a CAR of 9 per cent.

- **Debt-Equity Ratio (D/E):** This ratio indicates the degree of leverage of a bank. It indicates how much of the bank business is financed through debt and how much through equity. It is the proportion of total outside liability to net worth. Higher ratio indicates less protection for the creditors and depositors in the banking system.

- **ADVANCE TO ASSETS RATIO (ADV/AST):** This is the ratio indicates a bank's aggressiveness in lending which ultimately results in better profitability. Higher ratio of advances/ deposits including receivables (assets) is preferred to a lower one

- **GOVERNMENT SECURITIES TO TOTAL INVESTMENTS (G-SEC/INV):** It is an important indicator showing the risk-taking ability of the bank. It is a bank's strategy to have high profits, high risk or low profits, low risk. It also gives a view as to the availability of alternative investment opportunities.

ASSETS QUALITY

The quality of assets in an important parameter to gauge the strength of bank. The prime motto behind measuring the assets quality is to ascertain the component of non-performing assets as a percentage of the total assets. This indicates what types of advances the bank has made to generate interest income. The ratios necessary to assess the assets quality are:

- **NET NPAS TO TOTAL ASSETS (NNPAS/TA):** This ratio discloses the efficiency of bank in assessing the credit risk and, to an extent, recovering the debts. It is arrived at by dividing the net non-performing assets by total assets

- **NET NPAS TO NET ADVANCES (NNPAS/NA):** It is the most standard measure of assets quality measuring the net non-performing assets as a percentage to net advances. Net non-performing assets are gross non-performing assets minus net of provisions on Non-performing assets and interest in suspense account.

- **TOTAL INVESTMENTS TO TOTAL ASSETS (TI/TA):** It indicates the extent of deployment of assets in investment as against advances. This ratio is used as a tool to measure the percentage of total assets locked up in investments, which, by conventional definition, does not form part of the core income of a bank.

- **PERCENTAGE CHANGE IN NPAS**: This measure tracks the movement in Net NPAs over previous year. The higher the reduction in the Net NPA level, the better it for the bank

MANAGEMENT EFFICIENCY

Management efficiency is another important element of the CAMEL Model. The ratio in this segment involves subjective analysis to measure the efficiency and effectiveness of management. The management of bank takes crucial decisions depending on its risk perception. The ratios used to evaluate management efficiency are described as:

- **TOTAL ADVANCES TO TOTAL DEPOSITS (TA/TD):** This ratio measures the efficiency and ability of the bank's management in converting the deposits available with the bank excluding other funds like equity capital, etc. into high earning advances. Total deposits include demand deposits, savings deposits, term deposits and deposits of other banks, total advances include the receivables.

- **PROFIT PER EMPLOYEE (PPE):** This shows the surplus earned per employee. It is known by dividing the profit after tax earned by the bank by the total number of employees.

- **BUSINESS PER EMPLOYEE (BPE):** Business per employee shows the productivity of human force of bank. It is used as a tool to measure the efficiency of employees of a bank in generating business for the bank. It is calculated by dividing the total business by total number of employees. Higher the ratio, the better it is for the bank

- **RETURN ON NET WORTH (RONW):** It is a measure of the profitability of a bank. Here, PAT is expressed as a percentage of Average Net Worth.

EARNING QUALITY

The quality of earnings is a very important criterion that determines the ability of a bank to earn consistently. It basically determines the profitability of bank and explains its sustainability and growth in earnings in future. The following ratios explain the quality of income generation.

- **OPERATING PROFIT TO AVERAGE WORKING FUNDS (OP/AWF):** This ratio indicates how much a bank can earn profit from its operations for every rupee spent in the form of working fund. This is arrived at by dividing the operating profit by average working funds

- **PERCENTAGE GROWTH IN NET PROFIT (PAT Growth):** It is the percentage change in net profit over the previous year.

- **NET PROFIT TO AVERAGE ASSETS (PAT/AA):** This ratio measures return on assets employed or the efficiency in utilization of assets. It is arrived by dividing the net profits by average assets, which is the average of total assets in the current year and previous year.

LIQUIDITY

Risk of liquidity is curse to the image of bank. Bank has to take a proper care to hedge the liquidity risk; at the same time ensuring good percentage of funds are invested in high return generating securities, so that it is in a position to generate profit with provision liquidity to the depositors. The following ratios are used to measure the liquidity:

- **LIQUID ASSETS TO DEMAND DEPOSITS (LA/DD):** This ratio measures the ability of bank to meet the demand from depositors in a particular year. To offer higher liquidity for them, bank has to invest these funds in highly liquid form.

- **LIQUID ASSETS TO TOTAL DEPOSITS (LA/TD):** This ratio measures the liquidity available to the total deposits of the bank.

- **LIQUID ASSETS TO TOTAL ASSETS (LA/TA):** It measures the overall liquidity position of the bank. The liquid asset includes cash in hand, balance with institutions and money at call and short notice. The total assets include the revaluation of all the assets.

- **G-SEC TO TOTAL ASSETS (G-SEC/TA):** It measures the risk involved in the assets. This ratio measures the Government securities as proportionate to total assets.

- **APPROVED SECURITIES TOTAL ASSETS (AS/TA):** This is arrived by dividing the total amount invested in Approved securities by Total Assets.

The period for evaluating performance through CAMEL in this study ranges from 2005-06 to 2009-10, i.e., for 5 years. The absolute data for twenty six public sector banks and thirteen private sector banks on capital adequacy, asset quality, management efficiency, earning quality and liquidity ratios is collected from various sources such as annual reports of the banks, Prowess, Ace Analyzer, Analyst journal and average of each ratio calculated for the period 2006-10. All the banks were first individually ranked based on the sub-parameters of each parameter. The sum of these ranks was then taken to arrive at the group average of individual banks for each parameter. Finally the composite rankings for the banks were arrived at after computing the average of these group averages. Banks were ranked in the ascending/descending order based on the individual sub-parameter.

RESULTS AND ANALYSIS

CAPITAL ADEQUACY: The various ratios measuring capital adequacy of sample banks are depicted in Annexure I. It is clear from these tables that all banks are maintained higher CAR than the prescribed level. According to the norms of RBI, each bank in India has to maintain 9 % of their risk weighted assets as Capital. It is found that the Tamilanadu mercantile bank secured the top position with highest average CAR of 16.63 followed by Yes Bank (16.17), kotak Mahindra bank Ltd (15.76), ICICI (15.00) and HDFC bank (14.12). UCO bank was at the bottom most position with a least average CAR of 11.38. In terms of Debt equity ratio City union bank was at the top position with least average of 0.08 followed by karur vysya bank (0.2), Karnataka bank (0.26) and south Indian bank (0.26).The largest private sector bank in India, ICICI bank availed 37th position with an average of 2.11. IDBI stood at the last position. In case of Advances to assets, SBT was at the first position with highest average of 62.95, followed by SBM (62.05), Karur vysya bank (61.85), city union bank (60.99) and Syndicate bank (60.76). HDFC bank was at the bottom most position with least average of 51.09. The largest private sector bank ICICI availed only the 34th position with an average of 55.04. State bank of Patiala was at the top most position in Government securities to Investments with highest average of 94.8, followed by SBBJ (94.57), SBT (91.62), SBM (91.42) and Laxmi vilas bank (89.84). AXIS was at the last position with the least average of 60.48.ICICIbank stood at the 38th place with an average of 66.36.

On the basis of group averages of four sub parameters of capital adequacy Karur vysya bank was at the top position with group average of 7, followed by city union bank (9.5), SBBJ (11.5), canara bank (12.75) and Andhra bank (13.5). ICICI bank stood at the last position due to its poor performance in D/E ratio, Adv/Ast, G-sec/ Inv following the other banks, AXIX bank, united bank of India, central bank of India and Karnataka bank ltd.

ASSETS QUALITY: Annexure II represents Asset Quality position of sample banks during 2006-10. Yes bank was at the top position with an average NNPAs/TA of 0.05, followed by Andhra bank (0.12), SBH (0.17), P&S bank (0.21) and Indian bank (0.22). IDBI was at the last position with an average of 22.9. In case of NNPAs/NA it's again Yes bank was at the top position with a least average of 0.096 followed by Andhra bank (0.12), SBH (0.24), karur vysya bank (0.322) and Indian bank (0.324). In terms of TI/TA, Bank of India was at the first position with an average of 24.96 followed by BOB (25.05), city union bank (25.54), SBBJ (25.63) and laxmi vilas bank (25.8). Karnataka bank was at the last position with highest average of 35.06. DCB was at the first position in percentage change in NPAs with an average of -39.2, followed by Tamilnadu mercantile bank ltd (-28), Jammu Kashmir bank ltd(-11.4), city union bank ltd(-5.74) and karur vysya bank (-5.55).Kotak Mahindra bank stood at last position.

On the basis of group averages of sub-parameters of assets quality, karur vysya bank was at the top position with group average (6.25), followed by Andhra bank (7.5), Bank of Baroda (7.75), Corporation bank(9.75) and , Indian Bank(12.75) The largest public and private sector banks SBI and ICICI positioned at 35^{th}. Kotak Mahindra bank availed the bottom most position due to its poor performance in all sub parameters of asset quality.

MANAGEMENT EFFICIENCY: Annexure III exhibits the various ratios representing the level of Management Efficiency of sample banks. IDBI was at the top most position with an average TA/TD of 125.1, followed by kotak Mahindra bank (96.49), ICICI bank (89.95), Yes bank(77.59) and SBT (76.03).United bank of India stood at last position with average TA/TD of 59.22. In terms of profit per employee United Bank of India secured the top position with 0.33 followed by ICICI (0.104), AXIS bank (0.095), Yes bank (0.092) and IDBI (0.088). At the front of Business per employee, IDBI was at the first place with an average 18.72, followed by AXIS (10.78), ICICI (10.25), OBC (9.42) and Yes bank (9.152). Laxmi vilas bank was at the bottom most position with 2.088. SBT was at the top position in RONW with the highest average 23.7 followed by IOB (23), SBH (21.1), UBI (20.84) and city union bank (20.59). IDBI excels well in TA/TD, PPE and BPE but was not good at RONW.

On the basis of group averages of sub-parameters, Yes bank was at the top most position with group average 8, followed by P&S bank (9.5), ICICI bank(10.5), union bank of India(10.75) and AXIS bank(11). DCB positioned at last due to its poor performance in all sub parameters of management efficiency.

EARNING QUALITY: Annexure IV presents the earning quality positions of sample banks in terms of operating profit by average working funds, percentage growth in net profit, net profit to average assets .HDFC and Tamilnadu mercantile bank positioned at top an average OP/AWF of 3.03 followed by AXIS bank(2.82), city union bank& Yes bank ltd(2.77). IDBI was at the bottom most position with least average of 1.1. In case of PAT growth DCB was at the first position with an average of 204.6, followed by Laxmi vilas bank, south Indian bank, bank of Maharashtra and Dena bank. Yes bank was at the last place. In case of PAT/AA, karur vysya bank stood at the top place with an average of 1.446, followed by Yes bank (1.428), city union bank (1.36), tamilnad mercantile bank (1.338) and P&S bank (1.27). DCB was at bottom most position average of0.588.

On the basis of group averages, AXIS bank was at the top position with group average (7) followed by HDFC (8.33), kotak Mahindra bank (8.33), Indian bank (8.67) and city union bank (9). SBI stood at 30th position. CBI failed in all sub-parameters and stood at last place.

LIQUIDITY: Annexure V presents liquidity position of sample banks. South Indian bank was at the first place in LA/TD with highest average of 259.03, followed by Yes bank (207.85), SBP (202.93), BOB (196.35) and BOI (192.11). SBI availed 34th and HDFC availed 38th position. In case of LA/TD, ICICI bank got first position with highest average of 20.062, followed by HDFC (17.224), Corporation bank (15.994), IDBI (15.91) and SBI (15.89). SBT was at the bottom most position with least average 8.636. In contest of LA/TA, BOB was at top with the average 13.3 followed by Corporation bank (13.25), HDFC (13.08), and DCB (12.20).Its again SBT was at the last position. Indian bank was at the top in G-Sec/TA with an average 27.142, followed by kotak Mahindra bank (27.13), united bank (27.03), BOM (26.1)**,** P&S bank and SBH. ICICI bank was at the bottom most position with least average 18.94. In terms of AS/TA, BOB (0.68) was at the top most position followed by IB (0.672), CBI (0.558), Allahabad bank (0.5) and PNB (0.46).

On the basis of group averages of the sub parameters, BOB stood at the top position with group average 10, followed by SBP (12.6),DCB(13.4) BOI (13.6)and IB (14.4) . Karur vysya bank completely failed in maintaining all these sub-parameters and placed at last.

OVERALL RANKING: As stated in initial part of this paper, CAMEL model is used to rating the banks according to their performance. It is clear from Annexure VI that karur vysya bank is ranked at top position with composite average 13.49, followed by Andhra bank (14.04), BOB(14.54),P&S bank(14.81), city union bank(14.99) and Corporation bank (15.75) SBI the largest bank in India availed only 36thth position . Central bank of India was at the bottom most position.

CONCLUSION: Economic development of any country is mainly influenced by the growth of the banking industry in that country. The current study has been conducted to examine the economic sustainability of a sample of thirty nine banks in India using CAMEL model during the period 2006-10. The study revealed that

- Karur vysya bank stood at top position in terms of capital adequacy and asset quality.
- In front of management efficiency Yes bank was at top most position.
- In context of earnings quality AXIS bank positioned at first.
- In terms of liquidity BOB sustained the top position.
- Overall performance table shows that, karur vysya bank is ranked first followed by Andhra bank, bank of Baroda, P&S bank, city union bank and Corporation Bank, Punjab national bank. The largest public sector bank in India SBI availed 36th position and ICICI placed at 24th.
- In bottom five, central bank of India was at the last position, following the other banks UCO bank, bank of Maharashtra, state bank of India and Karnataka bank ltd.

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ANNEXURE 1 : CAMEL RATINGS (2006-10) : CAPITAL ADEQUACY										
	CAR(%)		D/E(times)		Adv/Ast(%)		G-sec/Inv		Group	
Bank	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank
Allahabad Bank	12.93	19	0.68	9	58.28	22	76.84	32	20.5	21
Andhra Bank	12.82	20	0.73	11	59.39	15	87.39	8	13.5	5
AXIS Bank Ltd	13.7	7	1.55	30	54.42	35	60.48	39	27.75	38
Bank of Baroda	13.35	11	0.81	14	58.49	21	77.53	29	18.75	16
Bank of India	12.29	29	1.67	33	59.94	10	79.99	23	23.75	26
Bank of Maharashtra	11.68	37	1.12	22	57	24	85.45	13	24	28
Canara Bank	13.1	16	0.91	16	60.39	8	85.88	11	12.75	4
Central Bank of India	11.44	38	0.93	18	55.77	32	83.73	16	26	35
City union bank Ltd	12.99	18	0.08	1	60.99	4	84.14	15	9.5	2
Corporation Bank	13.56	9	0.93	18	56.93	25	78.31	28	20	20
Dena Bank	11.86	36	0.69	10	59.74	11	82.29	21	19.5	17
Development Credit Bank Ltd	13.22	14	0.92	17	53.79	37	77.04	31	24.75	31
HDFC Bank Ltd	14.12	5	0.75	12	51.09	39	78.75	27	20.75	22
ICICI Bank Ltd	15	4	2.11	37	55.04	34	66.36	38	28.25	39
IDBI Bank	12.67	22	6.81	39	60.11	9	72.4	33	25.75	34
Indian bank	13.38	10	0.42	7	55.39	33	83.16	18	17	12
Indian Overseas Bank	13.15	15	1.17	24	58.74	19	87.22	9	16.75	11
Jammu & Kashmir bank Ltd	13.25	13	0.31	5	56.12	31	71.93	34	20.75	22
Karnataka bank Ltd	12.18	30	0.26	3	53.84	36	71.6	35	26	35
Karur Vysya Bank Ltd	14.1	6	0.2	2	61.85	3	83.57	17	7	1

Kotak Mahindra bank Ltd	15.76	3	2.06	36	56.93	25	84.82	14	19.5	17
Laxmi Vilas Bank Ltd	12.01	34	0.38	6	59.74	11	89.84	5	14	6
Oriental Bank of Commerce	12.52	27	0.48	8	59.24	16	85.83	12	15.75	9
Punjab & Sindh Bank	12.18	30	2.03	35	58.79	18	86.52	10	23.25	24
Punjab National bank	13.08	17	0.95	20	58.83	17	83.05	19	18.25	15
South Indian Bank Ltd	13.61	8	0.26	3	58.59	20	79.77	25	14	6
State bank of Bikaner & Jaipur	13.26	12	1.33	26	60.75	6	94.57	2	11.5	3
State bank of Hyderabad	12.67	22	1.01	21	56.22	29	89.14	6	19.5	19
State bank of India	12.81	21	1.52	28	56.28	28	79.86	24	25.25	32
State Bank of Mysore	12.07	32	1.64	31	62.05	2	91.42	4	17.25	13
State Bank of Patiala	12.62	25	1.15	23	59.42	14	94.8	1	15.75	9
State bank of travancore	12.66	24	1.66	32	62.95	1	91.62	3	15	8
Syndicate Bank	12.01	34	1.3	25	60.76	5	88.62	7	17.75	14
Tamilnad Mercantile Bank Ltd	16.63	1	2.11	37	57.37	23	71.53	36	24.25	29
UCO Bank	11.38	39	1.72	34	60.47	7	82.21	22	25.5	33
Union Bank of India	12.5	28	1.41	27	59.7	13	79.62	26	23.5	25
United Bank of India	12.62	25	0.77	13	52.04	38	77.25	30	26.5	37
Vijaya Bank	12.03	33	0.87	15	56.18	30	82.92	20	24.5	30
Yes Bank Ltd	16.17	2	1.54	29	56.84	27	66.6	37	23.75	26

source: secondary data available in Ace analyzer and Prowess data base compiled by Ms-Excel work sheet

ANNEXURE II : CAMEL RATINGS (2006-10) : ASSETS QUALITY										
	NNPAs/TA(%)		NNPAs/NA(%)		TI/TA(%)		Ch.in.NPAs(%)		Group	
Bank	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank
Allahabad Bank	0.56	17	0.734	16	30.17	29	15.5	17	19.75	22
Andhra Bank	0.12	2	0.122	2	26.49	8	15.8	18	7.5	2
AXIS Bank Ltd	0.23	6	0.407	8	31.03	33	17.7	22	17.25	16
Bank of Baroda	0.35	10	0.466	11	25.05	2	0.87	8	7.75	3
Bank of India	0.61	19	0.84	20	24.96	1	31.6	28	17	15
Bank of Maharashtra	0.84	28	1.208	31	30.43	31	28.9	26	29	37
Canara Bank	0.7	23	0.934	25	27.08	14	13.5	16	19.5	20
Central Bank of India	1	34	1.382	33	30.15	28	-4.05	7	25.5	28
City union bank Ltd	0.79	27	1.054	28	25.54	3	-5.74	4	15.5	9
Corporation Bank	0.23	6	0.366	7	27.67	17	1.53	9	9.75	4
Dena Bank	0.99	32	1.1	30	27.24	15	6.31	12	22.25	25
Development Credit Bank Ltd	0.99	32	2.12	38	30.78	32	-39.2	1	25.75	29
HDFC Bank Ltd	0.28	9	0.414	9	32.84	37	61.3	35	22.5	26
ICICI Bank Ltd	0.91	30	1.412	34	28.67	22	29.8	27	28.25	35
IDBI Bank	22.9	39	0.994	26	27.93	19	16.1	19	25.75	29
Indian bank	0.22	5	0.324	4	32.69	36	-4.93	6	12.75	5
Indian Overseas Bank	0.73	26	1.084	29	28.72	23	60.2	34	28	34
Jammu & Kashmir bank Ltd	0.6	18	0.74	17	29.88	26	-11.4	3	16	11
Karnataka bank Ltd	0.72	25	1.032	27	35.06	39	10.7	14	26.25	31
Karur Vysya Bank Ltd	0.23	6	0.322	4	26.71	10	-5.55	5	6.25	1

Kotak Mahindra bank Ltd	1.09	35	1.446	35	31.99	35	282	39	36	39
Laxmi Vilas Bank Ltd	1.33	38	2.195	39	25.8	5	64.8	36	29.5	38
Oriental Bank of Commerce	0.46	14	0.658	14	26.65	9	35.5	29	16.5	13
Punjab & Sindh Bank	0.21	4	0.35	6	29.83	25	17.6	21	14	6
Punjab National bank	0.35	10	0.414	9	27.05	13	106	38	17.5	18
South Indian Bank Ltd	0.63	21	0.854	22	27	12	21.7	23	19.5	20
State bank of Bikaner & Jaipur	0.66	22	0.856	23	25.63	4	7.52	13	15.5	9
State bank of Hyderabad	0.17	3	0.24	3	28.82	24	47.9	31	15.25	8
State bank of India	1.12	36	1.612	37	28.24	20	16.2	20	28.25	35
State Bank of Mysore	0.43	13	0.594	12	26.88	11	37.9	30	16.5	13
State Bank of Patiala	0.55	16	0.626	13	25.99	6	24	25	15	7
State bank of travancore	0.71	24	0.922	24	27.61	16	11.3	15	19.75	22
Syndicate Bank	0.61	19	0.822	19	26.04	7	22.3	24	17.25	16
Tamilnad Mercantile Bank Ltd	0.87	29	0.838	20	31.49	34	-28	2	21.25	24
UCO Bank	1.21	37	1.554	36	28.6	21	5.37	11	26.25	31
Union Bank of India	0.35	10	0.692	15	27.71	18	49	32	18.75	19
United Bank of India	0.97	31	1.274	32	34.83	38	4.24	10	27.75	33
Vijaya Bank	0.53	15	0.796	18	30.33	30	51.1	33	24	27
Yes Bank Ltd	0.05	1	0.096	1	29.88	26	79.5	37	16.25	12

source: secondary data available in Ace analyzer and Prowess data base compiled by Ms-Excel work sheet

ANNEXURE III : CAMEL RATINGS (2006-10) : MANAGEMENT EFFICIENCY										
	TA/TD(%)		PPE(crores)		BPE(crores)		RONW(%)		Group	
Bank	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank
Allahabad Bank	66.65	31	0.046	16	5.894	21	20.31	8	19	20
Andhra Bank	68.87	19	0.048	13	6.514	12	19.67	10	13.5	9
AXIS Bank Ltd	68.54	21	0.095	3	10.78	2	17.54	18	11	5
Bank of Baroda	68.49	22	0.046	17	7.112	8	14.89	28	18.5	19
Bank of India	71.24	10	0.042	22	6.75	10	19.58	11	13.25	8
Bank of Maharashtra	65.1	33	0.02	35	5.25	27	13.38	30	31.25	35
Canara Bank	69.74	15	0.044	19	6.726	11	18.76	14	14.75	12
Central Bank of India	62.67	37	0.018	37	4.434	34	9.828	35	35.75	38
City union bank Ltd	69.29	18	0.068	6	4.654	30	20.59	5	14.75	12
Corporation Bank	68.82	20	0.068	6	8.642	6	14.93	26	14.5	11
Dena Bank	67.52	27	0.0375	26	6.395	13	15.28	23	22.25	26
Development Credit Bank Ltd	67.48	28	-0.023	39	2.258	38	-7.71	39	36	39
HDFC Bank Ltd	67.29	29	0.042	22	6.176	15	17.72	17	20.75	23
ICICI Bank Ltd	89.95	3	0.104	2	10.25	3	10.05	34	10.5	3
IDBI Bank	125.1	1	0.088	5	18.72	1	1.77	38	11.25	6
Indian bank	64.37	34	0.05	11	4.084	35	18.28	16	24	29
Indian Overseas Bank	70.15	14	0.04	25	5.612	23	22.96	2	16	14
Jammu & Kashmir bank Ltd	63.8	36	0.0475	13	6.058	19	15.09	24	23	28
Karnataka bank Ltd	61.23	38	0.042	22	4.494	33	15.66	22	28.75	33
Karur Vysya Bank Ltd	71.7	9	0.0625	8	5.918	20	18.47	15	13	7

Kotak Mahindra bank Ltd	96.49	2	0.045	18	3.142	37	10.93	32	22.25	26
Laxmi Vilas Bank Ltd	68.19	25	0.0125	38	2.088	39	6.09	37	34.75	37
Oriental Bank of Commerce	68.39	23	0.06	9	9.42	4	10.47	33	17.25	17
Punjab & Sindh Bank	70.42	12	0.05	12	6.953	9	20.53	6	9.5	2
Punjab National bank	69.74	15	0.044	19	5.412	26	20.23	9	17.5	18
South Indian Bank Ltd	65.72	32	0.032	30	4.05	36	14.9	27	31.25	35
State bank of Bikaner & Jaipur	73.42	8	0.03	31	4.546	32	18.99	12	20.75	23
State bank of Hyderabad	67.99	26	0.044	19	6.166	16	21.06	3	16.25	16
State bank of India	73.8	7	0.034	29	4.608	31	14.85	29	24	29
State Bank of Mysore	74.44	6	0.03	32	4.914	28	18.79	13	19.5	22
State Bank of Patiala	71.09	11	0.038	26	7.316	7	16.43	20	16	14
State bank of travancore	76.03	5	0.038	26	5.6	24	23.7	1	14	10
Syndicate Bank	69.33	17	0.03	32	5.844	22	20.5	7	19.25	21
Tamilnad Mercantile Bank Ltd	67.01	30	0.056	10	5.553	25	15.84	21	21.5	25
UCO Bank	68.25	24	0.02	35	6.128	17	15.06	25	25.25	31
Union Bank of India	70.42	12	0.048	13	6.382	14	20.84	4	10.75	4
United Bank of India	59.22	39	0.33	1	4.732	29	8.73	36	26.25	31
Vijaya Bank	64.09	35	0.026	34	6.058	18	11.78	31	29.5	34
Yes Bank Ltd	77.59	4	0.092	4	9.152	5	17.31	19	8	1
source: secondary data available in Ace analyzer and Prowess data base compiled by Ms-Excel work sheet										

ANNEXURE IV : CAMEL RATINGS (2006-10) : EARNINGS QUALITY								
	OP/AWF		PAT Growth(%)		PAT/AA(%)		Group	
Bank	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank
Allahabad Bank	2.11	16	20.03	28	1.042	12	18.7	17
Andhra Bank	2.23	14	17.46	31	1.062	11	18.7	17
AXIS Bank Ltd	2.82	3	49.32	8	1.085	10	7	1
Bank of Baroda	2.01	23	51.71	6	0.876	24	17.7	15
Bank of India	2.08	18	49.6	7	0.914	21	15.3	11
Bank of Maharashtra	1.44	34	141.5	4	0.516	32	23.3	26
Canara Bank	2.03	21	24.48	25	0.956	17	21	22
Central Bank of India	1.4	36	20.62	27	0.432	38	33.7	39
City union bank Ltd	2.77	4	28.67	20	1.36	3	9	5
Corporation Bank	2.48	9	25.16	23	1.002	15	15.7	12
Dena Bank	1.92	27	58.67	5	0.74	29	20.3	21
Development Credit Bank Ltd	1.12	38	204.6	1	-0.588	39	26	29
HDFC Bank Ltd	3.03	1	30.07	18	1.264	6	8.33	2
ICICI Bank Ltd	2.33	11	11.96	36	0.928	18	21.7	24
IDBI Bank	1.1	39	34.76	15	0.51	33	29	34
Indian bank	2.64	7	43.55	12	1.214	7	8.67	4
Indian Overseas Bank	2.28	12	5.112	38	1.02	14	21.3	23
Jammu & Kashmir bank Ltd	2.27	13	41.69	13	0.913	21	15.7	12
Karnataka bank Ltd	2.05	20	5.95	37	1.03	13	23.3	27
Karur Vysya Bank Ltd	2.58	8	26.81	21	1.446	1	10	6

Kotak Mahindra bank Ltd	2.68	6	47.84	10	1.106	9	8.33	3
Laxmi Vilas Bank Ltd	1.43	35	198.9	2	0.473	36	24.3	28
Oriental Bank of Commerce	1.8	30	16.85	32	0.696	31	31	36
Punjab & Sindh Bank	2.01	23	49	9	1.27	5	12.3	7
Punjab National bank	2.37	10	28.82	19	1.132	8	12.3	7
South Indian Bank Ltd	1.89	28	149.1	3	0.798	26	19	19
State bank of Bikaner & Jaipur	2.03	21	13.82	35	0.752	27	27.7	33
State bank of Hyderabad	2.08	19	22.6	26	0.904	23	22.7	25
State bank of India	1.98	25	17.86	30	0.874	25	26.7	30
State Bank of Mysore	2.1	17	40.64	14	0.924	19	16.7	14
State Bank of Patiala	1.86	29	24.99	24	0.746	27	26.7	30
State bank of travancore	1.98	25	32.25	16	0.924	19	20	20
Syndicate Bank	1.6	32	15.67	33	0.726	30	31.7	38
Tamilnad Mercantile Bank Ltd	3.03	1	15.56	34	1.338	4	13	9
UCO Bank	1.37	37	30.21	17	0.48	35	29.7	35
Union Bank of India	2.21	15	26.22	22	0.974	16	17.7	15
United Bank of India	1.5	33	45.61	11	0.462	37	27	32
Vijaya Bank	1.77	31	19.39	29	0.514	33	31	36
Yes Bank Ltd	2.77	4	-258	39	1.428	2	15	10

source: secondary data available in Ace analyzer and Prowess data base compiled by Ms-Excel work sheet

ANNEXTURE V : CAMEL RATINGS (2006-10) : LIQUIDITY												
	LA/DD(%)		LA/TD(%)		LA/TA(%)		G-Sec/TA(%)		AS/TA(%)		Group	
Bank	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank
Allahabad Bank	119.51	29	9.802	38	8.566	35	23.2	19	0.5	4	25	32
Andhra Bank	152.33	11	13.502	18	11.618	14	23.02	22	0.22	20	17	13
AXIS Bank Ltd	66.783	39	14.385	11	11.43	16	19.63	37	0	35	27.6	38
BOB	196.35	4	15.582	6	13.3	1	19.34	38	0.68	1	10	1
BOI	192.11	5	14.27	13	12.002	9	19.88	35	0.43	6	13.6	4
BOM	105.69	31	11.402	30	9.99	27	26.1	4	0.21	21	22.6	26
Canara Bank	136.07	17	11.33	31	9.804	29	23.24	18	0.31	14	21.8	24
CBI	133.11	18	12.246	26	10.884	24	25.18	9	0.56	3	16	11
City union bank Ltd	126.99	23	12.508	24	11.022	21	21.45	31	0.08	32	26.2	34
Corporation Bank	97.552	33	15.994	3	13.25	2	21.55	30	0.17	26	18.8	20
Dena Bank	136.52	16	12.635	23	11.175	19	22.43	26	0.28	17	20.2	21
Development Credit Bank Ltd	121.74	26	15.325	7	12.205	4	23.67	16	0.31	14	13.4	3

HDFC Bank Ltd	70.946	38	17.224	2	13.082	3	25.33	7	0	35	17	13
IB	150.71	12	11.492	29	9.892	28	27.14	1	0.67	2	14.4	5
ICICI Bank Ltd	184.13	6	20.062	1	12.072	7	18.91	39	0	35	17.6	16
IDBI Bank	128.52	21	15.914	4	7.99	38	20.35	34	0.01	34	26.2	34
IOB	126.03	24	11.968	28	10.004	25	25.02	11	0.26	19	21.4	23
Jammu & Kashmir bank Ltd	100.7	32	13.88	15	12.195	5	21.34	33	0.08	32	23.4	28
Karnataka bank Ltd	154.15	10	10.31	35	9.074	32	24.95	12	0.1	31	24	29
Karur Vysya Bank Ltd	89.89	35	10.338	34	8.934	33	22.33	27	0.16	27	31.2	39
Kotak Mahindra bank Ltd	78.31	37	14.452	10	8.49	36	27.13	2	0	35	24	29
Laxmi Vilas Bank Ltd	170.02	8	13.7675	16	12.0475	8	23.16	20	0.19	24	15.2	7
OBC	145.42	13	13.226	21	11.462	15	22.84	23	0.27	18	18	17
P&S BANK	171.63	7	12	27	10	25	25.79	5	0.37	11	15	6
PNB	127.06	22	13.99	14	11.768	11	22.44	25	0.46	5	15.4	9
SBBJ	143.54	15	13.41	19	11.09	20	24.24	15	0.2	23	18.4	19
SBH	123	25	14.388	11	11.856	10	25.78	6	0.14	29	16.2	12

SBI	95.032	34	15.892	5	12.102	6	22.61	24	0.4	8	15.4	9
SBM	119.93	28	9.878	36	8.232	37	24.56	14	0.39	10	25	32
SBT	158.16	9	8.636	39	7.14	39	25.32	8	0.18	25	24	29
South Indian Bank Ltd	259.03	1	14.89	9	11.664	13	21.41	32	0.21	21	15.2	7
State Bank of Patiala	202.93	3	13.65	17	11.432	16	24.6	13	0.31	14	12.6	2
Syndicate Bank	131.33	20	12.91	22	11.332	18	23.09	21	0.15	28	21.8	24
Tamilnad Mercantile Bank Ltd	85.673	36	10.8125	33	9.2675	31	22.07	28	0.41	7	27	37
UBI	116.52	30	11.332	31	9.618	30	22.04	29	0.33	13	26.6	36
UCO Bank	131.48	19	9.846	37	8.73	34	23.47	17	0.4	8	23	27
United Bank	120.4	27	12.432	25	10.916	23	27.03	3	0.34	12	18	17
Vijaya Bank	145.35	14	13.322	20	11.666	12	25.18	9	0.11	30	17	13
Yes Bank Ltd	207.85	2	14.94	8	11.004	22	19.85	36	0	35	20.6	22
source: secondary data available in Ace analyzer and Prowess data base compiled by Ms-Excel work sheet												

ANNEXURE VI : COMPOSITE RANKING :OVERALL PERFORMANCE							
Bank	**C**	**A**	**M**	**E**	**L**	**Avg**	**Rank**
Karur Vysya Bank Ltd	7	6.25	13	10	31.2	13.49	1
Andhra Bank	13.5	7.5	13.5	18.7	17	14.04	2
Bank of Baroda	18.75	7.75	18.5	17.7	10	14.54	3
Punjab & Sindh Bank	23.25	14	9.5	12.3	15	14.81	4
City union bank Ltd	9.5	15.5	14.75	9	26.2	14.99	5
Corporation Bank	20	9.75	14.5	15.7	18.8	15.75	6
Punjab National bank	18.25	17.5	17.5	12.3	15.4	16.19	7
State bank of travancore	15	19.75	14	20	12.6	16.27	8
Bank of India	23.75	17	13.25	15.3	13.6	16.58	9
Yes Bank Ltd	23.75	16.25	8	15	20.6	16.72	10
Indian bank	17	12.75	24	8.67	26.2	17.724	11
State Bank of Patiala	15.75	15	16	26.7	15.2	17.73	12
State bank of Hyderabad	19.5	15.25	16.25	22.7	15.4	17.82	13
HDFC Bank Ltd	20.75	22.5	20.75	8.33	17	17.866	14
Canara Bank	12.75	19.5	14.75	21	21.8	17.96	15
AXIS Bank Ltd	27.75	17.25	11	7	27.6	18.12	16
State bank of Bikaner & Jaipur	11.5	15.5	20.75	27.7	16.2	18.33	17
Union Bank of India	23.5	18.75	10.75	17.7	23	18.74	18
State Bank of Mysore	17.25	16.5	19.5	16.7	24	18.79	19
Oriental Bank of Commerce	15.75	16.5	17.25	31	18	19.7	20
Jammu & Kashmir bank Ltd	20.75	16	23	15.7	23.4	19.77	21
South Indian Bank Ltd	14	19.5	31.25	19	18.4	20.43	22
Allahabad Bank	20.5	19.75	19	18.7	25	20.59	23

ICICI Bank Ltd	28.25	28.25	10.5	21.7	14.4	20.62	24
Indian Overseas Bank	16.75	28	16	21.3	21.4	20.69	25
Dena Bank	19.5	22.25	22.25	20.3	20.2	20.9	26
Tamilnad Mercantile Bank Ltd	24.25	21.25	21.5	13	27	21.4	27
Syndicate Bank	17.75	17.25	19.25	31.7	21.8	21.55	28
IDBI Bank	25.75	25.75	11.25	29	17.6	21.87	29
Kotak Mahindra bank Ltd	19.5	36	22.25	8.33	24	22.016	30
Laxmi Vilas Bank Ltd	14	29.5	34.75	24.3	15.2	23.55	31
United Bank of India	26.5	27.75	26.25	27	18	25.1	32
Development Credit Bank Ltd	24.75	25.75	36	26	13.4	25.18	33
Vijaya Bank	24.5	24	29.5	31	17	25.2	34
Karnataka bank Ltd	26	26.25	28.75	23.3	24	25.66	34
State bank of India	25.25	28.25	24	26.7	25	25.84	36
Bank of Maharashtra	24	29	31.25	23.3	22.6	26.03	37
UCO Bank	25.5	26.25	25.25	29.7	26.6	26.66	38
Central Bank of India	26	25.5	35.75	33.7	16	27.39	39
Source : Authors own calculation							