An Analysis of Indian Banks During the Financial Crisis: A Study Under the CAMEL Framework

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Abstract

CAMEL is a more broad system of organizational analysis as compared to merely financial analysis of the banking system when commenting on the performance evaluation of this sector as a whole. This paper analyzes the performance of Indian Banks during the global financial crisis on the basis of CAMEL framework. Though the net profit had increased for most of the private sector banks, unlike the public sector banks but still all private sector banks show increasing gross NPA during the period 2007-2009. The Banks were well capitalised and maintained a high credit to deposit ratios .However NPA ratios for the banks increased during the time period owing to the fact that the crisis entailed a decline in the quality of assets due to which the gross NPA ratios increased.

Keywords: Capital adequacy, Asset quality, Management, Earning quality, Liquidity

Introduction

CAMEL stands for Capital adequacy, Assets quality, Management, Earning quality and Liquidity. As the name indicates, CAMEL is a more comprehensive system of organizational analysis as compared to purely financial analysis. This is because; CAMEL includes both financial performance indicators as well as managerial aspects of organizational performance. It is effectively a structured methodology to evaluate risk and provides opinions on the type of risks that may affect the relative ability of banks to service the interest and principal payments on the rated instruments. It has been implemented as an improvement over annual financial inspection introduced by the RBI in 1992. However, Dave (2008) pointed that financial analysis of banks statements and ratios is not a sufficient measure of banks performance. Although in a CAMEL analysis that the author applied to banks, it had been shown that banks emphasize on the financial aspect more than the human capital aspect. Prasad (2011) et al. investigate the financial soundness of Indian Banks using the CAMEL model. They conclude the soundness of Indian Banks based on this framework. Prasuna (2003) studied the performance of 65 Indian banks according to the CAMEL Model. He concluded that in the age of tough competition, innovative products and better service quality was beneficial to the bank. Bodla and Verma (2006) studied SBI and ICICI bank under the CAMEL framework and concluded that SBI has an edge over ICICI in terms of its Capital adequacy, whereas in other respects such as Earnings quality and Asset Management, ICICI was found to have a stronger position. CAMEL analysis has also been found as an indicator of financial distress (Calomiris and Mason, 2000). Said (2003) evaluated Japanese Banks using CAMEL rating methodology.

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The banks still emphasize financial aspect more in order to measure and evaluate their performance. As the banks will converged to the Basel II Accord, they need to rethink on the lines of capital requirements, supervisory review and market discipline, i.e., the three pillars. Banks are under increasing pressure to improve their profitability to meet the high operating costs and to scale up their capital requirements. Along with this, banks are also readying themselves through adoption of newer technology, for strengthening their capital, reducing their NPAs, bringing down operating costs, enhancing corporate governance and alignment of regulatory and accounting capital. All this will help the banks to align with the competitive forces especially in the present times which promise some amount of consolidation in this industry. Use of CAMEL in the light of adherence to new norms of

Table 1: Ratings of Banks

Very Strong	Characteristics may include outstanding profitability and balance sheet integrity, franchise, management, operating environment, or prospects
Strong	Characteristics may include strong profitability and balance sheet integrity, franchise, management, operating environment or prospects
Adequate	Possesses one or more troublesome aspects on profitability and balance sheet integrity, franchise, and management, operating environment or prospects
Weak	Weaknesses of internal and/or external origin. There are concerns regarding profitability and balance sheet integrity, franchise, management, operating environment or prospects
Problematic	Has serious problems that either require or are likely to require external support
Support Rating	A bank for which there is a clear legal guarantee on the part of the state, or a bank of such importance both internationally and domestically that support from the state would be forthcoming, if necessary. The state in question must clearly be prepared and able to support its principal banks. A bank for which state support would be forthcoming, even in the absence of a legal guarantee. This could be, for example, because of the bank's importance to the economy or its historic relationship with the authorities. A bank or bank holding company that has institutional owners of sufficient reputation and possessing such resources that support would be forthcoming, if necessary. A bank for which support is likely but not certain. A bank or bank holding company, for which support, although possible, cannot be relied upon.

Source: Fitch IBCA

banking can be considered to be the first step at building a technologically sound and comprehensive performance management system. This may lead to further improvements and adoption of more modern systems such as the BSC, which incorporate the correlation between technology and customer relationship management as well as the correlation between technology and human resources.

Camel Ratings and Ratios:

Broadly, the following highlight the ratios associated with each letter of the acronym CAMEL.

C: CAPITAL ADEQUACY RATIO: The ratio of total shareholders' fund to total risk weighted assets.

L LIQUIDITY RATIO: The ratio of demand liabilities to total deposit

E: EARNING ABILITY RATIO: The ratio of net profit after tax to total shareholders' fund

A: ASSET QUALITY RATIO: The ratio of loan loss provision to total net loans

M: MANAGEMENT QUALITY RATIO: The ratio of risk weighted assets to total assets

The following classes of ratings have been created as an output to the method of risk analysis that CAMEL incorporates for a bank.

Following are the 5 dimensions of the CAMEL model:

(a) **Capital Adequacy:** Capital adequacy is measured by the ratio of capital to risk-weighted assets (CRAR). As per BASEL guidelines banks are required to maintain a prescribed level of capital with respect to their risk weighted assets.

(b) **Asset Quality:** One of the indicators for asset quality is the ratio of non-performing loans to total loans (GNPA). The gross non-performing loans to gross advances ratio is more outlines the quality of credit decisions made by bankers. Higher GNPA is indicative of poor credit decision-making.

(c) **Management:** The ratio of non-interest expenditures to total assets (MGNT) can be one of the measures to assess the working of the management. . This variable, which includes a variety of expenses, such as payroll, workers compensation and training investment, reflects the management policy stance.

(d) **Earnings:** It can be measured as the return on asset ratio.

(e) **Liquidity:** Cash maintained by the banks and balances with central bank, to total asset ratio (LQD) is an indicator of bank's liquidity. In general, banks with a larger volume of liquid assets are perceived safe, since these assets would allow banks to meet unexpected withdrawals. C/D Ratio is also a measure of liquidity as it tells that how much reliance is there on external debt (loans) from the total pool of deposits available.

Capital Adequacy

In addition to the aspect of credit risk of the banking sector, the Basel II accord also covers a wider spectrum of risks such as operating and market risk. Even despite the global financial crisis the Indian Banking sector has stood up with sound performance. The stipulated capital to risk-weighted asset ratio (CRAR) is 9%.Indian banks have shown an improved CRAR even during the recession time.

The average CAR of the banks tabulated in the following table, as per Basel II norms improved from 12.35 per cent for the year ended March 2008 to 13.48 per cent in FY '09. From 12.33 per cent in FY '08 to 12.35 per cent in FY '09, the average CAR of banks as per the Basel I formula stood firm demonstrating the soundness of resilient Indian banking sector.

Table 2: CAR of Indian Banks

S.No.	Name of the Bank	BASEL-I Year Ended Mar 09	BASEL-I Year Ended Mar 08	BASEL-I Change	BASEL-II Year Ended Mar 09	BASEL-II Year Ended Mar 08	BASEL-II Change
1	State Bank of Bikaner and Jaipur	13.18	13.50	-0.32	14.52	12.51	2.01
2	State Bank of Mysore	12.41	12.34	0.07	13.38	11.73	1.65
3	Indian Overseas Bank	12.70	11.93	0.77	13.20	11.59	1.61
4	Bank of Baroda	12.88	12.91	-0.03	14.05	12.94	1.11
5	Indian Bank	13.27	12.74	0.53	13.98	12.90	1.08
6	Bank of India	13.21	12.95	0.26	13.01	12.04	0.97
7	Uco Bank	9.75	10.09	-0.34	11.93	11.02	0.91
8	Syndicate Bank	11.37	11.22	0.15	12.68	11.82	0.86
9	Punjab National Bank	12.59	12.96	-0.37	14.03	13.46	0.57
10	State Bank of Travancore	12.13	12.68	-0.55	14.03	13.53	0.50
	Average	**12.35**	**12.33**	**0.02**	**13.48**	**12.35**	**1.13**

Source: Assocham Financial Pulse

Asset Quality

Table 3: Gross NPA/Gross Advances (%) of Private and Public Sector Banks

Private Sector Banks	FY09	FY08	Public Sector Banks	FY09	FY08
ICICI Bank	4.33	3.3	Bank of Baroda	1.27	1.84
HDFC Bank	1.91	1.7	Oriental bank of Commerce	1.53	2.31
Axis Bank	0.96	0.72	Corporation Bank	1.21	1.85
Yes Bank	0.68	0.1	Indian Bank	1.14	1.47

Source: IBA

PSU banks saw a reduction in NPAs for the 2008-09. As far as private sector banks are concerned, according to IBA, in 2008-09, ICICI Bank, HDFC Bank, Axis Bank and YES Bank have seen their gross non-performing assets as a proportion to their gross advances going up . Of them, ICICI Bank has seen the sharpest increase in its gross non-performing asset (GNPA) proportion, more than one percentage point to 4.33 per cent. Higher exposure to retail borrowers in case of ICICI Bank and HDFC Bank has led to higher slippages. In contrast to the rising trend in private banks' NPAs, leading government-owned banks showed fall in gross NPA proportion. Oriental Bank of Commerce has seen the sharpest decline in gross NPA (fall of 78 bps to 1.53 per cent), but Bank of Baroda, Central Bank of India, Indian Bank and Corporation Bank have also seen some moderation in gross NPA ratio. This may be attributed to a higher exposure to corporate credit and more conservative lending during a booming economy. Some steps have been taken to improve the condition of rising bad assets. These steps are as follows:

1) Restructuring of Advances by Banks:

The NPA scenario has been better somewhat owing to the restructuring of some advances done by banks. Almost all the banks which have declared results thus far have restructured (by way of having the allowed borrowers to postpone repayments) a portion of their advances, which will enable the banks to classify them as standard assets though there may be some delay in servicing of debt.

2) Higher Provisions set aside by banks:

The provision set aside for NPAs has seen a rise across all the banks whether government or private. Most of the Indian banks have increased their provision coverage to protect their balance sheets from future adversities and their results have shown strong net NPA proportion.

Calculating the Capital Adequacy Ratio:

Capital adequacy ratio is the ratio which determines the capacity of the bank in terms of meeting the time liabilities and other risk such as credit risk, operational risk.

It is a measure of the amount of a bank's capital expressed as a percentage of its risk weighted credit exposures.

Capital adequacy ratio is defined as:
CAR = Capital/Risk

Capital Adequacy Ratio under Basel I:
Capital Adequacy Ratio = Tier I Capital + Tier II Capital / Risk Weighted Assets

Capital Adequacy Ratio in New Accord of Basel II:
Capital Adequacy Ratio = Total Capital (Tier I Capital + Tier II Capital)/ Market Risk + Credit Risk + Operation Risk

Under Basel II norms, 8 per cent is the prescribed Capital Adequacy Norm.
Minimum Requirement of Capital Adequacy Ratio (CAR) for banks in India:

- In case of Scheduled Commercial Banks CAR= 9 per cent
- For New Private Sector Banks CAR = 10 per cent
- For Banks undertaking Insurance Business CAR = 10 per cent
- For Local Area Banks CAR =15 per cent

C/D Ratio:

Credit- deposit ratio is the proportion of loan-assets created by banks from the deposits received. The higher the ratio, the higher the loan-assets created from deposits.

Implication of Credit-Deposit Ratio:

Some experts contend that a high credit-deposit ratio could lead to a rise in interest rates.

CAMEL Analysis

Following tables depict the various parameters of the CAMEL framework for various banks from the period 2007 to 2009.The data has been taken from various issues of reports of Reserve Bank of India.

Public Sector Banks

Operational Expenses as a percentage of total expenses has been steadily decreasing for Bank of Baroda and SBI through the years. There has been no clear cut

Table 4: Capital Adequacy Ratio

Banks	Opr. Exp. as % to Total Expenses			Capital Adequacy - Basel I (%)			Capital Adequacy - Basel II (%)		
Years	2007	2008	2009	2007	2008	2009	2007	2008	2009
Allahabad Bank	24.69	20.46	21.19	12.52	11.99	13.11	-	N.A.	N.A.
Bank of Baroda	31.92	27.75	26.40	11.80	12.91	12.88	-	12.94	14.05
State Bank of India (SBI)	34.77	28.31	26.72	12.34	13.54	12.97	-	12.64	14.25
IDBI Bank Ltd.	12.04	11.52	11.49	13.73	11.95	11.57	-	N.A.	N.A.

Table 5: Asset Quality

Banks	Total Assets (Rs. Crores)			Gross NPA (Rs. Crores)			Net NPA Basel II (%)		
Years	2007	2008	2009	2007	2008	2009	2007	2008	2009
Allahabad Bank	67664	82939	97648	1094	1011	1078	440	400	422
Bank of Baroda	143146	179600	227407	2092	1981	1843	502	494	451
State Bank of India (SBI)	566565	721526	964432	9998	12837	15589	5258	7424	9552
IDBI Bank Ltd.	103839	130694	172402	1232	1565	1436	722	1083	949

Table 6: Management

Banks	Interest Expended (Rs. Crores)			Operating Expenses (Rs. Crores)			Total Expenditure (Rs. Crores)		
Years	2007	2008	2009	2007	2008	2009	2007	2008	2009
Allahabad Bank	3133	4499	5206	1027	1158	1399	4160	5656	6605
Bank of Baroda	5427	7902	9968	2544	3034	3576	7971	10936	13544
State Bank of India (SBI)	22184	31929	42915	11824	12609	15649	34008	44538	58564
IDBI Bank Ltd.	5687	7364	10306	778	959	1338	6466	8323	11644

increase or decrease in the CARs of the banks however. Mostly the CAR (according to Basel I) of the banks have been increasing between 2007 and 2008 and then showing a decrease. CAR (according to Basel 2) of two of the banks have shown an increasing trend. Higher the CAR, the more comfortable are the banks in absorbing losses.

Total assets of the banks have also increased through the years. Of the above banks, only Bank of Baroda has been able to decrease gross and net NPA through the years. Decrease in NPA is usually done through provisioning. Greater provisioning usually takes a hit on the profitability of the banks.

A decrease in the interest and operating expenditure of banks points towards greater management efficiency. Out of the above banks, none of them have been able to decrease their operating or total expenditures in the given time frame.

Allahabad bank and Bank of Baroda have steadily decreasing NPA as a percentage of net assets. Business per employee has been increasing across all the banks however profit per employee has only increased in Bank of Baroda and SBI. Increase in business per employee without increase in profit per employee points towards greater inefficiency of the banking staff or human resources.

Table 7: NPA ratios

Banks	Net NPA as % to Net Advances			Business Per Employee (Rs. Crores)			Profit Per Employee (Rs. Lacs)		
Years	2007	2008	2009	2007	2008	2009	2007	2008	2009
Allahabad Bank	1.07	0.80	0.72	4.95	6.04	7.06	3.68	4.85	3.75
Bank of Baroda	0.60	0.47	0.31	5.55	7.10	9.14	2.73	3.94	6.05
State Bank of India (SBI)	1.56	1.78	1.76	3.57	4.56	5.56	2.37	3.73	4.74
IDBI Bank Ltd.	1.12	1.30	0.92	13.87	18.09	20.30	8.44	8.86	8.42

Table 8: Earnings Quality

Banks	Interest Income (Rs. Crores)			Other Income (Rs. Crores)			Total Income (Rs. Crores)		
Years	2007	2008	2009	2007	2008	2009	2007	2008	2009
Allahabad Bank	4884	6171	7365	1.26	1.32	0.90	376	965	1142
Bank of Baroda	9004	11813	15092	0.80	0.89	1.09	1382	2051	2758
State Bank of India (SBI)	37242	48950	63788	0.84	1.01	1.04	6765	8695	12691
IDBI Bank Ltd.	6345	8041	11632	0.67	0.67	0.62	1027	1582	1390

Table 9: ROA

Banks	Return on Assets		
Years	2007	2008	2009
Allahabad Bank	5260	7136	8507
Bank of Baroda	10386	13865	17849
State Bank of India (SBI)	44008	57645	76479
IDBI Bank Ltd.	7373	9623	13022

Table 10: Earnings

Banks	Operating Profit (Rs. Crores)			Provisions & Contingencies (Rs. Crores)			Net Profit (Rs. Crores)		
Years	2007	2008	2009	2007	2008	2009	2007	2008	2009
Allahabad Bank	1100	1480	1901	350	505	1133	750	975	769
Bank of Baroda	2415	2929	4305	1389	1493	2078	1026	1436	2227
State Bank of India (SBI)	10000	13108	17915	5459	6378	8794	4541	6729	9121
IDBI Bank Ltd.	907	1299	1378	276	570	519	630	729	859

The above table shows that as the total assets and investments of these banks have increased through the years, so has the interest income too. The table below shows that simultaneously, total expenditure and also interest expenditure have also increased.

ROA of all the banks are showing an increasing trend through the years. ROA is the most commonly used measure of a bank's profitability.

Table 11: Liquidity

Banks	Deposits (Rs. Crores)			Investments (Rs. Crores)			Advances (Rs. Crores)		
Years	2007	2008	2009	2007	2008	2009	2007	2008	2009
Allahabad Bank	59544	71616	84972	18746	23400	29651	41290	49720	58802
Bank of Baroda	124916	152034	192397	34944	43870	52446	83621	106701	143986
State Bank of India (SBI)	435521	537404	742073	149149	189501	275954	337336	416768	542503
IDBI Bank Ltd.	43354	72998	112401	25675	32803	50048	62471	82213	103428

Table 12: Ratios

Banks	Credit Deposit Ratio			Investment Deposit Ratio			Spread as % of Assets		
Years	2007	2008	2009	2007	2008	2009	2007	2008	2009
Allahabad Bank	69.34	69.43	69.20	31.48	32.67	34.90	2.59	2.02	2.21
Bank of Baroda	66.94	70.18	74.84	27.97	28.86	27.26	2.50	2.18	2.25
State Bank of India (SBI)	77.46	77.55	73.11	34.25	35.26	37.19	2.66	2.36	2.16
IDBI Bank Ltd.	144.09	112.62	92.02	59.22	44.94	44.53	0.63	0.52	0.77

Table 13: Capital Adequacy

Banks	Opr.Exp.As % to Total Expenses			Return on Assets (in %)			CAR Basel I			CAR Basel II	
Years	2007	2008	2009	2007	2008	2009	2007	2008	2009	2008	2009
Axis Bank	28.86	32.78	28.56	1.10	1.24	1.44	11.57	13.73	-	-	13.69
HDFC Bank	43.23	43.39	38.31	1.33	1.32	1.28	13.08	13.60	15.09	-	15.69
ICICI Bank	29.03	25.77	23.66	1.09	1.12	0.98	11.69	14.92	15.92	13.97	15.53
ING Vysya Bank	38.06	34.02	32.69	0.52	0.74	0.70	10.56	10.20	11.68	-	11.65

Table 14: Asset Quality

Banks	Total Assets (Rs. Crores)			Gross NPA (Rs. Crores)			Net NPA (Rs. Crores)		
Years	2007	2008	2009	2007	2008	2009	2007	2008	2009
Axis Bank	73257.22	109577.85	147722.05	418.67	494.61	897.77	266.33	248.29	327.13
HDFC Bank	91235.61	133176.60	183270.77	657.76	906.97	1988.07	202.89	298.52	627.62
ICICI Bank	344658.11	399795.08	379300.96	4126.06	7579.54	9649.31	1992.04	3490.55	4553.94
ING Vysya Bank	19286.30	25539.90	31856.99	126.38	116.24	209.39	114.02	103.23	205.95

Even during the times of the financial crisis, i.e., 2007-2008 and even some part of 2009, Bank of Baroda, SBI and IDBI bank Ltd. Show an increase in the net profit, after accounting for provisioning for NPAs and other contingencies.

All the above banks show a healthy trend of increasing deposits and investments through the years.

Table 15: NPA

Banks	Net NPA to Net Advances (in %)		
Years	2007	2008	2009
Axis Bank	0.72	0.42	0.40
HDFC Bank	0.43	0.47	0.63
ICICI Bank	1.02	1.55	2.09
ING Vysya Bank	0.70	0.70	1.23

Table 16: Management

Banks	Interest Expended (Rs. Crores)			Operating Expenses (Rs. Crores)			Total Expenditure (Rs. Crores)		
Years	2007	2008	2009	2007	2008	2009	2007	2008	2009
Axis Bank	2993.32	4419.96	7149.27	1214.60	2154.93	2858.21	4207.92	6574.89	10007.49
HDFC Bank	3179.45	4887.11	8911.10	2420.80	3745.62	5532.81	5600.25	8632.73	14443.91
ICICI Bank	16358.50	23484.24	22725.93	6690.56	8154.18	7045.11	23049.05	31638.42	29771.05
ING Vysya Bank	822.04	1182.05	1590.27	505.02	609.49	772.47	1327.06	1791.54	2362.74

A higher C/D ratio speaks that a bank is relying more heavily on borrowed funds because credit is the loan-asset created from the pool of deposits available with it. This ratio is used to study the liquidity position of a bank. A high ratio shows that there is more amounts of liquid cash with the bank to meet its client's cash withdrawals.

Private Sector Banks

ROA is increasing steadily for only Axis bank so far. CARs are increasing for HDFC bank and ICICI bank. According to the available data, CAR (according to Basel 2) is increasing for ICICI Bank.

Unlike the public sector banks, all private sector banks are showing increasing gross and net NPA which is an unhealthy trend, through the years.

Also, net NPA to net advances have been increasing for the bottom three banks and decreasing for the first bank. Ideally, this ratio should be decreasing for all the banks through the years.

Interest and operating expenditure has been increasing too for all the banks except for ICICI bank which depicts decreasing values from 2008 to 2009.

Net profit is also increasing for all the banks except for ICICI bank.

Business per employee does not show any clear cut trend for any bank except ING Vysya bank in which case it is increasing. Profit per employee is increasing for all banks except HDFC bank.

Table 17: Earnings

Banks	Operating Profit (Rs. Crores)			Provisions & Contingencies (Rs. Crores)			Net Profit (Rs. Crores)		
Years	2007	2008	2009	2007	2008	2009	2007	2008	2009
Axis Bank	1263.85	2225.92	3724.88	604.82	1154.89	1909.52	659.03	1071.03	1815.36
HDFC Bank	2563.91	3765.42	5178.95	1422.46	2175.23	2934.02	1141.45	1590.19	2244.94
ICICI Bank	5874.41	7960.68	8925.23	2764.19	3802.95	5167.09	3110.22	4157.73	3758.13
ING Vysya Bank	226.31	307.47	424.82	137.40	150.54	236.04	88.91	156.93	188.78

Table 18: Business/Profit Per Employee

Banks	Business Per Employee (Rs. Lacs)			Profit Per Employee (Rs. Lacs)		
Years	2007	2008	2009	2007	2008	2009
Axis Bank	1024.0	1117.0	1060.00	7.59	8.39	10.02
HDFC Bank	607.00	506.00	446.00	6.13	4.97	4.18
ICICI Bank	1027.0	1008.0	1154.00	9.00	10.00	11.00
ING Vysya Bank	486.09	547.28	606.39	1.66	2.68	3.03

Table 19: Earnings Quality

Banks	Interest Income (Rs. Crores)			Other Income (Rs. Crores)			Total Income (Rs. Crores)		
Years	2007	2008	2009	2007	2008	2009	2007	2008	2009
Axis Bank	4461.66	7005.32	10835.49	1010.11	1795.49	2896.88	5471.77	8800.80	13732.36
HDFC Bank	6647.93	10115.01	16332.26	1516.23	2283.14	3290.60	8164.16	12398.15	19622.86
ICICI Bank	21995.59	30788.34	31092.55	6927.87	8810.76	7603.73	28923.46	39599.11	38696.28
ING Vysya Bank	1267.63	1680.44	2239.89	285.74	418.57	547.67	1553.36	2099.01	2787.56

Table 20: Liquidity

Banks	Deposits (Rs. Crores)			Investments (Rs. Crores)			Advances (Rs. Crores)		
Years	2007	2008	2009	2007	2008	2009	2007	2008	2009
Axis Bank	58785.60	87626.22	117374.11	26897.16	33705.10	46330.35	36876.48	59661.14	81556.77
HDFC Bank	68297.94	100768.59	142811.58	30564.80	49393.54	58817.55	46944.78	63426.89	98883.05
ICICI Bank	230510.19	244431.05	218347.82	91257.84	111454.34	103058.31	195865.60	225616.08	218310.85
ING Vysya Bank	15418.59	20457.56	24889.92	4527.81	6293.32	10495.54	11976.17	14649.55	16750.93

Table 21: Ratios

Banks	Credit-Deposit Ratio			Investment-Deposit Ratio			Spread as % of Assets		
Years	2007	2008	2009	2007	2008	2009	2007	2008	2009
Axis Bank	62.73	68.09	69.48	45.75	38.46	39.47	2.00	2.36	2.50
HDFC Bank	68.74	62.94	69.24	44.75	49.02	41.19	3.80	3.93	4.05
ICICI Bank	84.97	92.30	99.98	39.59	45.60	47.20	1.64	1.83	2.21
ING Vysya Bank	77.67	71.61	67.30	29.37	30.76	42.17	2.31	1.95	2.04

Interest income has been increasing and so has the total income through the years for all the banks.

Deposits have been increasing for all banks except ICICI bank in the given timeline. The same thing can be said for investments and advances also.

Credit-deposit ratio has been increasing through the years for ICICI bank and Axis bank. Spread as a percentage of assets has been increasing for all banks except ING Vysya bank through the same timeline.

Conclusion

Camel Analysis reveals various facets of the performance indicators of public as well as private sector banks under the study. The period chosen for the study specifically studies these performance indicators during the recession period from 2007 to 2009. The results can indicate that the recession and the global financial crisis did not make any major impact on the performance indicators under the CAMEL framework of the selected Indian Banks. The Banks are well capitalised, maintain a high credit to deposit ratios. However NPA ratios for the banks increased during the time period owing to the fact that the crisis entailed a decline in the quality of assets due to which the NPA ratios increased.

In light of the BASEL norms it may be pointed out that the internal processes of the banks and management efficiency and control should be strengthened to adapt to the changing norms and the regulatory environment.

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