Financial Soundness of Commercial Banks in India– An Application of Bankometer

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ABSTRACT

A robust banking system with a strong battery of banks results into a strong financial system, because it plays a vital role in fuelling the growth of the economy. India in the new economic regime has emerged out as one of the most preferred banking destinations in the world as its economy is not only growing relatively at a faster pace, but it is also transcending and transforming to higher level of maturity. It is in this perspective, it would be interesting to assess and appraise the financial performance of commercial banks in India during the past decade on a comparative ownership and business philosophy divide. This study is an attempt to predict the relative financial strength of the selected banks and their vulnerability to financial distress. For the purpose, we have used the modified 'bankometer' model covering the period of 2001-02 to 2014-15. We have used the 'bankometer' model because it measures the financial strength and vulnerability to financial distress. The study revealed that all the selected banks are solvent.

Keywords : Commercial banks, Bankometer model, Financial performance, Vulnerability, Financial distress, Solvency and financial soundness

1. Introduction

With rapidly changing domestic and global economic environment, the Indian banking system has undergone a metamorphic change since the early 1990s. This metamorphic change in the Indian banking system has taken place as an outcome of massive reforms introduced as a sequel of larger economic reforms. The reforms in the Indian banking system were initiated on the report of the committee headed by Mr. M. Narasimham in 1991.

Based on the recommendations of the Narsimham Committee, several reforms were introduced by the Government of India with the objective of strengthening the Indian banking sector and making it more resilient and vibrant. In the process of reform, a host of prudential norms relating to income recognition, asset classification and provisioning were introduced. The reforms were introduced to deregulate the interest rates to a greater extent. Further, a phased reduction in the SLR and CRR were also initiated.

The reform process in the banking sector, which was initiated as part of the larger economic reforms in the year 1991, did strengthen the system significantly, but, at the same time it necessitated the second dose of reform measures for further restructuring and strengthening. Accepting the need of the hour, the Government of India constituted a new committee in the name of "Committee on Banking Sector Reforms" (CBSR), under the Chairmanship of Shri M. Narasimham.

The CBSR submitted its report in the year 1998 and suggested a number of reform measures for the Indian banking system. On the recommendations of the CBSR, the RBI and the Government of India strengthened the earlier prudential norms relating to capital adequacy, Non-Performing Assets (NPAs), provisioning for NPAs and income recognition so as to bring them at par with the international standards. A new Act in the name of "The Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002" was enacted for securitisation of NPAs. Some other crucial reform measures included enactment of the 'Recovery of Debts Due to Banks and Financial Institutions Act' which led to the establishment of Debt Recovery Tribunals (DRTs). Further, for directly mobilising capital from public, the public sector banks were permitted to access the capital market. In the continuation of the reform process, entry and operations of new private banks and foreign banks was allowed. As a result, a good number of new private banks and foreign banks entered the Indian banking system.

The reform measures as mentioned above have been very crucial and are of far reaching implications. The reform measures in the banking sector, together with the larger economic reforms in the country, have resulted into a complete change in the macro- economic environment for banking business. They have given a new shape, composition and direction to the Indian banking system, and banks are now operating in a different economic environment with a different business philosophy. It is interesting to note that more than a decade has gone by for Indian commercial banks since the second wave of reforms were enunciated in the year 1998. As such, for the past decade the commercial banks in India have been operating and doing banking business with new banking

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philosophy and under the new economic environment. It is in this light it would be interesting and appropriate to assess and appraise the financial performance of commercial banks in India during the past decade.

2. Literature Review

Makkar & Singh (2012) in their study on "Evaluating the Financial Soundness of Indian Commercial Banks: An Application of Bankometer" have attempted to evaluate the solvency of 37 Indian commercial banks using Bankometer Model covering the period of 2006-07 to 2010-11. Bankometer model used is developed according to the guidelines of IMF (2000) to check the vulnerability of financial distress on the banks better than the conventional methods like CAMELS and CLSA Stress test. The study found that all the Indian banks are financially solvent. The findings of the study revealed that private sector banks have performed well and are financially more sound as compared to public sector banks. Top five financially sound banks include Kotak Mahindra, Federal, ICICI, HDFC and Development Credit Bank. The Worst five banks include Central Bank of India, UCO, Syndicate Bank, Bank of Maharashtra and State Bank of Travancore.

Sangmi & Tabassum (2010) have made an effort to evaluate the financial performance of the two major banks operating in northern India. This evaluation has been done by using CAMEL Parameters, the latest model of financial analysis. Through this model, it is highlighted that the position of the banks under study is sound and satisfactory so far as their capital adequacy, asset quality, management capability and liquidity is concerned.

Makkar (2013) in her study has made a comparative analysis of the financial performance of 37 Indian commercial banks. Study primarily based on CAMELS rating methodology. The study found that the IDBI Bank was the best performing bank followed by KM Bank and ICICI Bank. Dhanalaxmi Bank had the worst performance followed by J & K Bank and Karnataka Bank Ltd. The results of the 't' - test disclosed that there is a significant difference in the Capital Adequacy, Asset Quality and Earning Capacity of public and private sector banks in India, while there is no significant difference in the Management, Liquidity Position and Sensitivity to market risk of the two different banks groups. The study concluded that on an average, there is no statistically significant difference in the financial performance of the public and private sector banks in India.Study suggested that there is a need for overall improvement in the public sector banks to make their position strong in the competitive market.

Sriharsha Reddy K. (2012) in his study made an attempt to evaluate relative performance of banks in India using CAMEL approach. Study 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.

3. Objectives of the Study

- To analyze and appraise the financial soundness (solvency) of the selected commercial banks.
- To compare the public and private banks on the basis of their financial soundness.

4. Research Methodology

Since the study primarily aims to explore the relative performance of selected commercial banks in India, we have selected our sample banks from two large groups, i.e. public sector banks and private sector banks. We have selected top five banks from public sector banks and top five banks from private sector banks on the basis of their net worth. Selected Banks are follows:

Public Sector Banks

1. State Bank of India
2. Bank of Baroda
3. Punjab National Bank
4. Canara Bank
5. Bank of India

Private Sector Banks

1. ICICI Bank
2. HDFC Bank
3. Axis Bank
4. KM Bank
5. IndusInd Bank

The period of the study range from 2001-02 to 2014-15. The study aims to examine the financial soundness of selected commercial banks; it is based on use of secondary data.Our main source of data and relevant information regarding financial performance of commercial banks are annual reports of respective banks, various reports and publications of the Government of India, the RBI reports and publications, and the report and publications of other agencies related to banking and finance. Bankometer model has been used to evaluate the financial soundness of selected banks.

5. Application of 'Bankometer' Model

In our study I have analysed the financial performance of selected PSBs and Pvt.SBs using some parameters of liquidity and solvency. I have done so with a view to predict the relative financial strength of the selected banks and their vulnerability to financial distress. For the purpose, I have used the following modified 'bankometer' model. I have used the 'bankometer' model because it measures the financial strength and vulnerability to financial distress. The bankometer model is developed by Amir Hussain Shar, Muneer ali Shah and Hajan Jamali. The model has drawn some cues from the Occasional Paper 192 (Macroprudential Indicators of Financial System Soundness) of the IMF, recommendations of IMF and the Altman model of predicting corporate sickness (Altman, E.I., 1968). Amir Hussain Shar, Muneer ali Shah and Hajan Jamali took initiative and introduced a model named as 'bankometer' for measuring the financial health of a bank. However, the model is not very popular and suffers with limitations, which the propounders themselves have admitted (Shar et.al., 2000). But still, the model does provide a cue to financial health of banks wherever it has been applied. In order to assess the financial health of the selected banks, we have applied the bankometer model with the following parameters:

- Capital Adequacy Ratio: 40 %$\leqslant$ CAR$\geqslant$ 8%; revised 40 %$\leqslant$CAR$\geqslant$10%
- Capital to Assets Ratio Capita / Asset: $\geqslant$04%
- Equity to total Assets Equity / Asset: $\geqslant$02%
- NPLs to Loans NPLs / Loans: $\leqslant$15%
- Cost to Income ratio Cost / Income: $\leqslant$40%
- Loans to Assets Loan / Asset: $\leqslant$65%

A bank that satisfies the above ratios may be categorized as healthy and solvent bank under the bankometer procedure. In order to predict whether or not a bank is vulnerable to financial distress in near future, the bankometer model uses the following equation to calculate the solvency (S) score:

S = 1.5* CA+1.2* EA +3.5 * CAR+0.6*NPL+ 0.3*CI +04*LA

Where 'S' stands for solvency

CAR stands for capital adequacy ratio

CA stands for capital to assets ratio

EA stands for equity to assets ratio

NPL stands for non-performing loans to total loans

CI stands for cost to income

LA stands for loans to assets

Banks with 'S' value greater than 70 are solvent and healthy banks. Banks having 'S' value below 50 are financially not sound and not solvent. The score area between 50 and 70 is defined as gray area, for which nothing could be said with certainty.

The following results were found when the 'bankometer' procedure on the selected banks for the above parameters for gauging the financial soundness and solvency.

'**CA**': Capital to Assets Ratio- According to IMF guidelines the bank should have this ratio more than 4%. It was found that out of all selected banks, it is only BOI which has the ratio below the prescribed minimum limit.

When comparing the capital to assets ratio of the selected banks, it was found that among all the selected banks, KM Bank has the highest average capital to assets ratio of 10.23%. KM Bank is followed by the ICICI Bank, HDFC Bank, Axis Bank, IndusInd Bank, PNB, BOB, CB, SBI and BOI with the capital to assets ratio of 8.66%, 7.76%, 6.74%, 6.48%, 5.28%, 5.23%, 5.21%, 5.20% and 1.16% respectively.

'**EA**': Equity to Assets Ratio- Equity to Assets Ratio reveals as to how much assets are funded through shareholders equity. A higher EA ratio indicates sound financial position from long term point of view. With a higher EA ratio, the firm is less dependent on external sources of finance. As per the model, EA ratio must be more than 2%. Of all the selected banks, it is only the BOI which has the EA ratio below the prescribed limit of 2%.

While comparing the average EA ratio of selected banks, it was found that KM Bank has the highest average EA ratio of 11.80%. KM Bank is followed by the ICICI Bank, HDFC Bank, Axis Bank, IndusInd Bank, CB, BOB, PNB, SBI and BOI, with the EA ratio of 10.41%, 8.41%, 7.11%, 6.83%, 6.15%, 6.03%, 5.93%, 5.72% and 1.34% respectively.

'**CAR**': Capital Adequacy Ratio- RBI has prescribed a minimum capital adequacy ratio of 9% to be maintained by banks on a sole basis as per the Basel Capital Accord II. The researcher did not consider the Basel Capital Accord III because the implementation of the same is to be in phased manner.Given the 9% norm, it was found that all the selected banks have a CRAR of more than 9%.

While comparing the CRAR of all the selected banks, we find that KM Bank has the highest CRAR of 16.62%. KM Bank is followed by the ICICI Bank, HDFC Bank, BOB, Axis Bank, IndusInd Bank, PNB, CB and BOI, with the CRAR of 15.11%, 14.47%, 13.23%, 13.06%, 12.77% and 11.73% respectively.

'**NPL**': Non Performing Loans to Total Loans Ratio- NPL to Total Loans ratio exhibitsas to how much of the total loans are classified as non-performing loans. A higher ratio is an indicator of erosion in income and inefficient management of the loan assets of the bank. Based on IMF recommendations, the Bankometer requires that non-performing loans ratio should be below 15%.It is interesting to note that all the selected banks which form part of the study have this ratio below 15%.

While comparing the NPL to total loans ratio of all the selected banks, it was found that HDFC Bank has the lowest NPL to total loans ratio of 1.52% and Axis Bank has the second lowest NPL to total loans ratio of 1.84%. In this order, HDFC Bank and Axis Bank is followed by the KM bank, IndusInd Bank, CB, BOI, ICICI Bank, BOB, SBI and PNB, with the NPL to total loans ratio of 2.05%, 2.58%, 3.07%, 4.39%, 4.59%, 4.76%, 5.31% and 5.32% respectively.

'CI': Cost to Income Ratio- The CI ratio indicates the proportion of expenses in relation to income. The lower be the CI Ratio,the greater would be the profitability. On the same token, the higher be the CI Ratio, the lower would be the profitability. Based on IMF guidelines, the bankometer requires that the CI Ratio be less than 40%. It is interesting to note that all the selected banks which form part of the study have this ratio below 40%.

While comparing the average CI Ratio of selected banks, it was found that the Canara Bank has the lowest cost to income ratio of 17.67%. On this count CB is followed by the IndusInd Bank, with the second lowest CIRatio of 19.43%. In this order, CB and IndusInd Bank are followed by the BOI, PNB, ICICI Bank, BOB, Axis Bank, SBI, HDFC Bank and KM Bank, with the CI ratio of 19.43%, 20.58%, 20.60%, 20.78%, 21.06%, 22.63%, 25.11%, and 36.12% respectively.

'LA': Loans to Assets Ratio-The ratio reveals as to what proportion of loan assets constitute the total assets. Higher ratio is considered good as it reflects better profitability of the concerned bank. However, it should not be too high and should be in limit so as to ensure adequate liquidity at hand for the banks. Based on IMF guidelines, this bankometer requires that the ratio be below 65%. It is interesting to see that all the selected banks have loans to assets ratio below the prescribed limit, i.e., below 65%.

While comparing the LA ratio of all the selected banks, it was found that CB has the highest LA ratio of 63.04%. On this count CB is followed by the BOB, PNB, KM Bank, IndusInd Bank, SBI, ICICI Bank, HDFC Bank and Axis Bank, with the LA ratio of 57.92%, 57.38%, 56.78%, 55.09%, 54.65%, 53.87%, 51.08% and 50.96% respectively.

Apart from appraising the performance of selected banks on the above parameters of the bankometer, we have calculated the 'S' Score (Solvency Score).The results of solvency score reveal that all the selected banks, except the BOI, have sound financial position as all of them have a S score higher than 70%. The S score of BOI is 59.57% which falls in the grey area of 50% to 70%. The bank is solvent but financially unsound and is vulnerable to become an insolvent bank. This is definitely a cause of concern for BOI.

While comparing the solvency score of all the selected banks, it was found that KM Bank ranks first with the highest solvency score of 122.46%. On this count KM Bank is followed by the ICICI Bank, HDFC Bank, BOB, IndusInd Bank, Axis Bank, CB, PNB, SBI and BOI, with the solvency score of 108.85%, 101.23%, 93.66%, 93.02%,

Table 1: Final Result of Bankometer Model

Banks	CAR	C/A	EA	NPL	C/I	L/A	S	Rank
	40%⩽CAR⩾8%	⩾4%	⩾2%	⩽15%	⩽40%	⩽65%	MAX 70% MIN 50%	
SBI	13.00	5.20	5.72	5.31	22.63	54.65	92.00	9
BOB	13.23	5.23	6.03	4.76	20.78	57.92	93.66	4
PNB	12.77	5.28	5.93	5.32	20.58	57.38	92.05	8
CB	12.75	5.21	6.15	3.07	17.67	63.04	92.20	7
BOI	11.73	1.16	1.34	4.39	19.60	16.64	59.57	10
ICICI	15.11	8.66	10.41	4.59	20.60	53.87	108.85	2
HDFC	14.47	7.76	8.41	1.52	25.11	51.08	101.23	3
Axis	13.12	6.74	7.11	1.84	21.06	50.96	92.35	6
KM	16.62	10.23	11.80	2.05	36.12	56.78	122.46	1
IndusInd	13.06	6.48	6.83	2.58	19.43	55.09	93.02	5

Source: Compiled and Computed from the publications, RBI.

6. Findings and Suggestions

This study highlighted that all the selected banks, except BOI are financially sound, as none of them has solvency score of 'Bankometer' below 70 percent. The BOI is found 'solvent' but not 'sound' as it has the solvency score 59 percent, which fall in the gray area of 50 to 70 percent. This is definitely a cause of concern for BOI. While comparing the selected banks on the basis of their solvency score, it was found that the KM Bank has the highest solvency score of 122.46%. This implies that among all the selected banks, KM Bank is top the rank in terms of financial soundness. On this count the KM Bank is followed by the ICICI Bank, HDFC Bank, BOB, IndusInd Bank, Axis Bank, CB, PNB, SBI and BOI with the solvency score of 108.85%, 101.23%, 93.66%, 93.02%, 92.35%, 92.20%, 92.05%, 92.00% and 59.57% respectively.

On examination of the individual variables, it was found that of all the selected banks, it is the BOI only which has the C/A ratio below the prescribed minimum limit of 4% and EA ratio below the prescribed limit of 2%. Rest of the selected banks have succeeded in maintaining the all the prescribed minimum limit of all the individual variables as per the 'bankometer, model.This is definitely a cause of concern for BOI. It is suggested to management of BOI to devise measures to improve its C/A ratio and EA ratio, so as to be comparable with that of other selected banks.

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