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FINANCIAL PERFORMANCE OF TOP RANKING INDIAN BANKS IN THE POST CRISIS PERIOD

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The turmoil in the International financial markets of advanced economies that started in mid 2007 had far reaching effect not only in advanced economies but also in the emerging economies. The contagion spilled to the Indian economy, too, in the form of decline in real Gross Domestic Product (GDP) and business slowdown. The banking sector suffered huge setback in terms of loss in liquidity, asset quality, profitability and a short-term rise in demand for bank credit. The paper examines the impact of the global crisis on a sample of top ten ranking banks by using trend analysis of important financial indicators. Our results conclude that average profitability of the top ten ranking banks improved post crisis as their credit demand grew consistently. The capital adequacy of banks improved marginally in the post crisis years but liquidity of these banks as judged by the liquid assets to total assets, liquid assets to total deposits and investments to deposits ratio declined post crisis.

***Keywords**: Banks, Financial Performance, Liquidity*

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INTRODUCTION

The impact of the global financial crisis leading to recession, made International Monetary Fund (IMF) significantly revise its global growth estimates for 2009 in terms of Purchasing Power Parity (PPP) from 3.0 per cent made in October 2008 to 0.5 per cent in January 2009. The subprime crisis which hit the US in 2008 had a contagion effect throughout the World. Why it affected India can be answered by understanding the fact that India's two-way trade (merchandize exports plus imports), as a proportion of GDP, grew from 21.2 per cent in 1997-98, the year of the Asian crisis, to 34.7 per cent in 2007-08. The pre-crisis years, especially, 2003-2008 exhibited favorable conditions both globally and domestically. From a growth perspective, this was a dream period for the Indian economy, which averaged 8.9 per cent per year over those five years.

The crisis brought about by the sub-prime borrowers in the US, reduced the GDP growth to 7 per cent in 2008-09, the year in which the crisis precipitated, but recovered to 8 per cent in the subsequent year. Simultaneously, private consumption demand decelerated sharply leading to moderation in domestic aggregate demand. Capital flows to India were adversely affected due to the crisis back home. The current account deficit increased to US $ 10.7 billion during July-Sept 2008 as compared to US$ 6.3 billion in the previous quarter. During 2007-08, there was substantial accretion of foreign exchange reserves by US $110.5 billion but declined by US $ 23.4 billion during Sept 2008.

Impact was high in industrial output which slipped for the first time in Q4 of 2008-09 since 1990s. Export growth declined from a peak rate of about 40percent in Q2 2008–09 to (–) 22 per cent in Q4, i.e. the first contraction since 2001–02. The rising costs coupled by the huge rise in crude prices, inserted a downward pressure on sales, operating margins and earning of these accompanied companies by sharp increase in inflation-the Consumer Price Index (CPI) at 9.41 percent in July 2008 in comparison to Wholesale Price Index (WPI) at 12 percent. There was a sustainable jump in food as well as oil prices. Both these trends reinforced the inherent inflationary pressures that were being felt domestically as a result of the sustained high growth. This resulted in a sharp downturn in operating margins of firms, rising inventories and significant drop in other income.

The equity market was affected by global de-leveraging of assets and adverse sentiment from the overseas peers. Investor's wealth was wiped out by Rs. 40 lakh crores in 2008. The Sensex declined from an all-time high of 20873 on January 8, 2008 to a low of 8451 on November 20, 2008 citing a reversal of capital inflows following the collapse of Lehman Brothers. The liquidity concerns were very high in the immediate post crisis period as the call money rate breached the upper bound of the informal Liquidity Adjustment Facility (LAF) corridor during mid-September–October 2008. The total volume in the money market segments decreased during September and October 2008. As a measure, the average daily amount of liquidity injected into the banking system through the LAF increased substantially during September and October 2008. RBI also started with scheme of allowing deferment of payment of loans under Special Dispensation Mechanism.

The money market experienced tight liquidity as displayed by the increase in call rates. It also came under pressure because corporate were redeeming money market mutual funds to fund their operations and to reduce borrowings. Generally, surplus money of Non-Banking Finance Companies (NBFCs), Financial Institutions (FIs) and Banks were invested in Money Market Mutual Funds (MMMFs). On one hand, these immediate requirements created redemption pressure on MMMFs and on the other hand reduced lending operations. The foreign exchange market experienced recession due to portfolio investment outflows by FIIs and depreciation of the rupee.

The banking sector suffered huge setback in terms of loss in liquidity, asset quality, profitability and a short-term rise in demand for bank credit. Indian banks and corporate faced a drying up of their overseas financing and forced corporate to shift their credit demand to the domestic banking sector. Other segments of the financial system such as Mutual Funds (MFs) and non-banking financial companies (NBFCs) battled with reduced foreign funding and a subdued capital market. Moreover, the demand for bank credit increased due to the drying up of external sources. Against this backdrop, the Reserve Bank of India stepped in with liquidity-supplying measures – both in the rupee and in foreign currency – and the government implemented fiscal stimulus measures.

In this paper we aim to examine the belief that the Indian banking system has had no direct exposure to the sub-prime mortgage assets or to the failed institutions since it has limited off-balance sheet activities or securitized assets.

LITERATURE REVIEW

Badola and Verma (2006) identified high and low explanatory power indicators of profitability of public sector banks like NII, Provisions and Contingencies, Net profit were among the high indicators while CD Ratio, NPAs, Business per employee were among the low explanatory power indicators. Anand (2009) used ratios (Net NPA's as a percentage of Net Advances, Capital adequacy ratio, Return on assets) to analyze the performance of all Scheduled Commercial Banks during the period 2005-06 to 2007-08. The study concluded that the Indian Banking Industry is stable but growing at a slow pace. Acharya (2010) found that the resilience of public sector banks vis-à-vis the private financial sector was due to state ownership and government backing of these banks. The public sector banks performed better than private banks during the crisis in spite of having higher systemic risk. Private sector banks with higher vulnerability to a crisis experienced deposit contractions while the reverse was true for public sector banks.

Singh (2010) explored that macroeconomic variable GDP of a country affects the profitability of banks operating in the country while, the asset quality is measured by the NPA/TA ratio and expense management by OEXP/TA affects the performance of banks adversely. The study further highlighted that bank size does not affect the profitability of banks to a large extend. Shaikh (2010) identified the impact of global financial crises on financial sector including the banking sector, equity markets, ECBs and remittances. The study concluded that the larger banks were not much affected by the crises because of their strong balance sheet and timely action by the government.

OBJECTIVES OF THE STUDY

1. To study the impact of global crisis on the financial performance of selected scheduled commercial banks by studying their financial indicators.

2. To compare the financial indicators of the top ranking selected commercial banks during pre and post crisis.

RESEARCH METHODOLOGY

The Study: The present study is exploratory in nature. The paper attempts to study the impact of the global financial crisis on the Indian banking industry as a whole and on the selected banks. The commercial banks which have been ranked by KPMG (Business Today, November 27, 2011 issue) have been selected for the study.

The Sample: The sample consists of financial ratios of all scheduled banks in India and top ten ranking banks of set A with the balance sheet size of Rs.50, 000 crores, ranked by KPMG (Business Today, November 27, 2011 issue). The period taken for the study was from 2003-04 to 2010-11. KPMG ranked 63 scheduled commercial banks on three broad parameters namely growth of deposits, size of balance sheet and strength of quality of assets. Apart from the broad parameters, twenty-seven sub parameters were also considered namely loans and advances, fee income, operating profit, productivity, efficiency, quality of earnings, capital adequacy etc. KPMG grouped 63 scheduled banks into four sets and then ranking was done based on score for each of the 27 parameters. These sets of banks were:

Set A: 36 banks with balance sheet size greater than Rs 50,000 crore;
Set B: 14 banks with balance sheet size less than Rs 50,000 crore, and more than 10 branches;
Set C1: Seven banks with balance sheet size more than Rs 3,000 crore and 10 or less branches;
Set C2: Six banks with balance sheet size less than Rs 3,000 crore and less than 10 branches.

The top ten ranking banks taken from the KPMG report are:

1. Bank of Baroda (BOB)
2. Housing Development Finance Corporation Bank (HDFC)
3. Axis Bank
4. YES Bank
5. State Bank of Hyderabad (SBH)
6. Punjab National Bank (PNB)

7. Canara Bank
8. Andhra Bank
9. Corporation Bank
10. Indian Bank

Tools for Data Collection: The data for the banking industry as a whole has been taken form CMIE's (Centre for Monitoring Indian Economy Pvt. Ltd) Prowess database. For individual banks, financial statements and ratios have been taken from Capital line database.

Tools for Data Analysis: The trend analysis of financial indicators has been done for the financial year 2003-2004 to 2010-2011.

In this paper financial ratios are used as indicators of financial performance of banks. These indicators are as follows:

Capital Adequacy

Capital adequacy act as a buffer against risk evolved by exposure taken by a bank and to protect the depositors and general creditors against a possible loss. The various components of capital occupy a continuum in terms of their ability to absorb losses. While equity capital is at one end of this continuum, subordinated debt is at the other end. As per the Basel Accord of 1988, banks should maintain capital of Rs. 9 for every Rs. 100 of risk weighted assets. Technically, Capital adequacy ratio is the ratio of bank's capital to its risk weighted assets. The higher this ratio is, the stronger would the bank be, as it ensures higher safety against bankruptcy. In this paper, the components of capital adequacy are used to calculate the percentage of Tier 1 and Tier II capital to risk weighted assets .Whereas Tier 1 covers permanent shareholders' equity, disclosed reserves and innovative tier 1 capital, Tier 2 includes revaluation reserves, general provisions/general loan-loss reserves, hybrid debt capital instruments and subordinated debt.

Asset Quality

Credit risk, Market Risk and Operational Risk are among the various risks faced by a bank. With the help of ratios concentrated on asset and credit risk we have analyzed the movement in asset quality. The specific ratios used to highlight this factor are net NPA to Net advances and Total investments to Total assets. While the former give a picture of the level of NPAs that have not been provided for, the latter would indicate the extent of deployment of assets in investment as against advances. High Total investments to total assets ratio would indicate low credit off take and may impact the profitability of the bank.

Profitability

In today's scenario, banks are not only expected to consistently grow and compete but also to provide return to its shareholders. Profitability ratios explain the sustainability and growth in earnings in the future. The ratios studied under this are:

i. Interest expended to interest earned
ii. Other income to total income
iii. Interest income to total funds
iv. Interest expended to total funds
v. Operating expenses to total income
vi. Operating expenses to total funds
vii. Net Interest Income to total funds
viii. Non-interest income to total funds
ix. Profit before provisions to total funds
x. Net profit to total funds
xi. Return on Net worth (RONW)
xii. Return on Assets (ROA)

The return on assets and return on equity measures the overall profitability but they can be analyzed further by studying their components. Spread or Net Interest Income is the difference of interest income and interest expense and is a major function to reflect the profitability in banks.

Non-interest income is another important component of bank income since banks have diversified their activities and entered into businesses generating fee income. Operating expenses or non interest expenses of which employee expense is the largest component, is an important indicator of bank's efficiency. Operating expenses to total funds can be used to analyze the efficiency of a bank's intermediation process.

Liquidity

An analysis of the liquidity profile of a bank involves analysis of the level of liquidity compared to funding needs. Liquidity is the ability to efficiently fulfill commitment on current liabilities like deposits, loan-portfolio growth and off-balance sheet exposures. Cash, bank balances and money at call and short notice are liquid assets of a bank. Liquid assets are readily convertible to cash without undue loss which help to mitigate liquidity problems. Banks cannot rely on short-term, volatile funds to fund long-term assets as it is a threat to liquidity. Post crisis, maximum impact of the crisis was felt on liquidity of banks and several steps were taken by RBI for overcoming the liquidity problems. The liquidity condition of banks tightened due to the increase in call rates, redemption of money market mutual funds, portfolio investment outflows by FIIs, depreciation of the rupee, reduced deposit growth and increase in bank credit. The liquidity also worsened because of high fluctuation in the Central government's cash balances, advance tax payments in mid-Sept '08 and volatility in domestic equity and foreign exchange markets due to the sudden disturbance in international financial market. There was no market for Asset Backed Securities (ABS) making it difficult for banks to source funds.

Inter-bank rates spiked to historic highs. The overnight call money rate jumped from 9 percent in Sept 2008 to over 13 percent in Sept 16, 2008, 19.8 percent in Oct 10, 2008 percent but eased later to 10 percent in Oct 20, 2008. The liquid assets to total assets ratio, liquid assets to total deposits ratio, and cash to deposits ratio was computed to indicate the liquidity. Credit deposit percentage indicates the percentage of credit disbursed out of total deposits. Investment to deposit percentage indicates the percentage of investments made out of total deposits.

RESULTS AND DISCUSSION

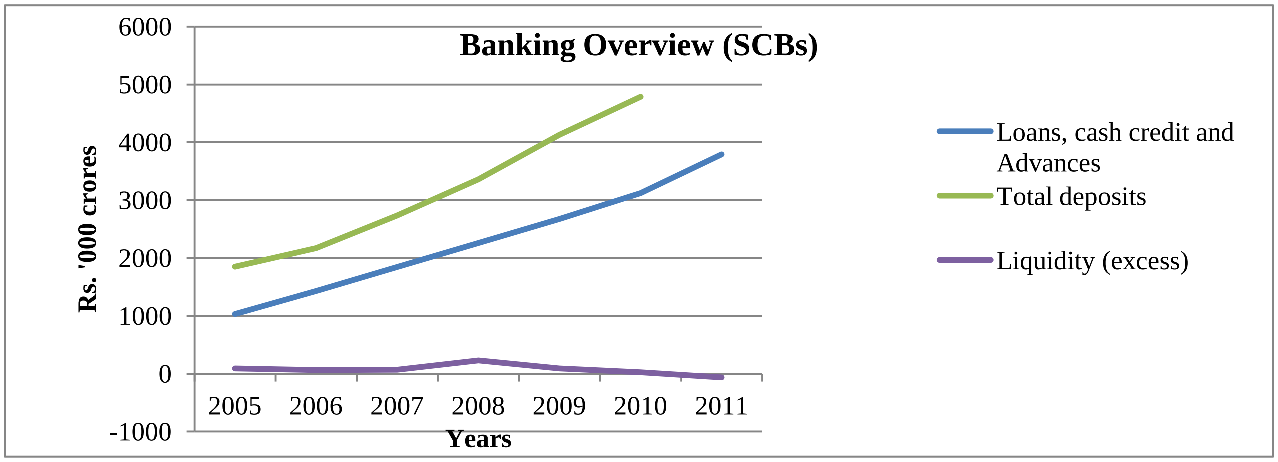
An analysis of Scheduled Commercial Banks (SCBs) was done for the year ending March 2005 to the year ending 2011. This period of seven years can be looked at as 3 years pre-crisis (2005-2007) and 3 years post crisis (2008-2011). The liabilities of Scheduled Commercial Banks (SCBs) have been increasing throughout consistently although the average liabilities of SCBs was 2592.67 crores in the pre crisis years but increased to 5200.25 crores in the post crisis years (Figure-1). The borrowing of SCBs from RBI grew at a robust rate pre-crisis (2006-2007) but fell by 3.6 percent in 2007-2008, rose by 19 percent in 2008-2009 but fell by 10 percent again in 2009-10. On an average, SCBs borrowed less by 176.3 percent pre-crisis but more by 298.4 percent post crisis.

The cash deposit ratio improved from 7 percent in the pre-crisis years to 7.2 percent in the post crisis years. It was highest in the year 2007-08 (8.6 percent). The improved cash deposit ratio was due to the general acceptability of the fact that the cash is the best liquid asset. Savings deposits with Indian SCBs, has shown an increasing trend during 2004-11 although the growth rate declined in the year of crisis. The average excess liquidity of SCBs, as given in the data, reduced by 11.3 percent in the pre-crisis years but even more by 69.4 percent in the post crisis years (Figure-1). The investment by SCBs in SLR and non-SLR securities fell in 2005-06 but grew consistently after 2006. The average investment growth rate of investment in SLR and non-SLR securities was 2.1 percent in the pre-crisis years but increased to 13.7 percent in the post crisis years.

The SCBs food credit fell for brief period in the crisis year of 2007-08 but grew in the post crisis years. The SCBs non food credit showed a declining trend in the years under study but rose in the last year of the period under study i.e. 2010-2011. Thus the food credit growth rate raised post crisis but the non food credit growth rate fell post crisis. Combined average of food and non food credit rose by 20 percent in the pre-crisis years and by 14.5 percent in the post crisis years
Loans, cash credits and overdrafts given by SCBs have shown a consistent growth during the period 2005-2011. The growth rate of loans, cash credit and overdrafts was 33.7 percent during 2004-07 whereas it increased by 79 percent during 2008-11 (Figure-1).The average total deposits

increased by 21.6 percent in the pre crisis years and by 20.9 percent in the post crisis years. On the other hand, the total advances increased by 34.5 percent in the pre crisis years and by 24.2 percent in the post crisis years. This shows that FIs and banks grew more cautious in their lending activities. The credit deposit ratio increased in the pre-crisis years but fell in the post crisis years till 2009-2010 though increased to 75.7 in 2010-11.

Figure-1: Trend of Profitability of Top Ten Ranking Scheduled Commercial Banks Based on Data Sets



Profitability

The profit after tax (PAT) margin of banking companies stagnated during the crisis but grew from March 2010 onwards. The average profit margin of banks increased from 10.7 percent pre crisis to 11.1 percent post crisis. The net interest income showed an increasing trend during the period 2004-2011 although the growth drastically stagnated during 2007-08 but again reverted to the previous growth trajectory. On the basis of the above facts, it has been inferred that the SCB’s liability side of the balance sheet has increased rapidly than the asset side showing risk averseness of the investors in other market instruments (Figure-1). The credit to deposit ratio has fallen post crisis hence putting a pressure on liquidity of banks. The liquidity of banks has hence deteriorated post crisis.

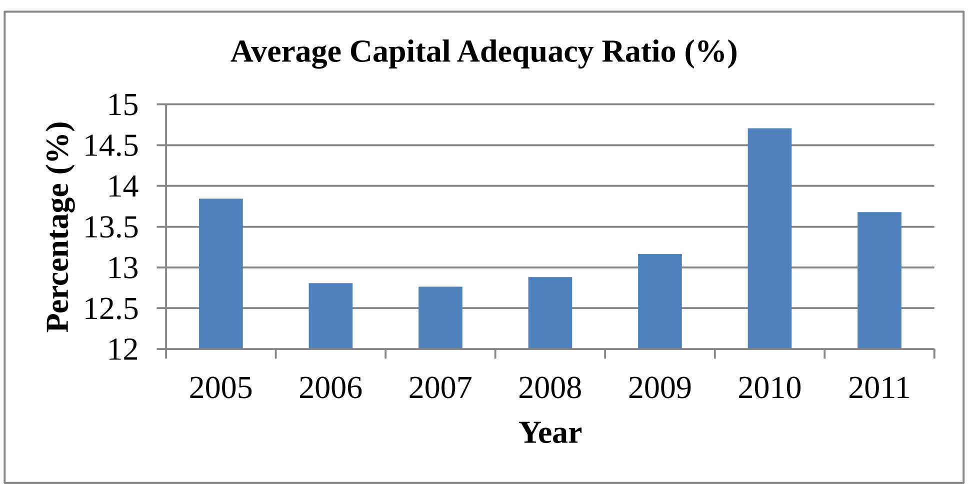
The saving deposits with banks reduced post crisis and the growth rate of total deposits also showed a declining trend. The cash deposit ratio of banks reduced from 8.61 in 2007-08 to 6.7

percent during 2008-09. With regard to profitability of banks, the international financial crisis does not seem to have impacted Indian banks. The PAT margin and Net Interest Income grew consistently during the period of study although briefly impacted adversely during the crisis period of 2007-08. The above analysis shows the resilience of Indian banks and effective steps taken by RBI post crisis, to alleviate the liquidity and profitability position of banks.

Financial Indicators of Sample Banks

Capital Adequacy Ratio- During the years under study (2005-11) as depicted in Graph-1, the capital adequacy ratio of the top ten ranked Indian banks showed a reducing trend during 2005-07 but started showing increasing trend, except a decline in 2011, by 2007 onwards. This is a healthy trend since it indicates the cushion that the banking industry had to combat a crisis. On an average, the capital adequacy as a percentage of Risk weighted assets, increased from 13.14 in the pre-crisis years to 13.61 in the post crisis years. The Tier I capital as a percentage of Risk weighted assets reduced from 9.58 percent in the pre-crisis years to 9.2 percent in the post crisis years. The Tier II capital as a percentage of risk weighted assets increased from 3.56 percent to 4.36 percent in the period. Among our sample of banks, AXIS Bank had the highest capital adequacy in 2008 (13.73 percent).

Graph-1: Capital Adequacy Ratio of Top Ten Ranking Scheduled Commercial Banks Based on Data Sets



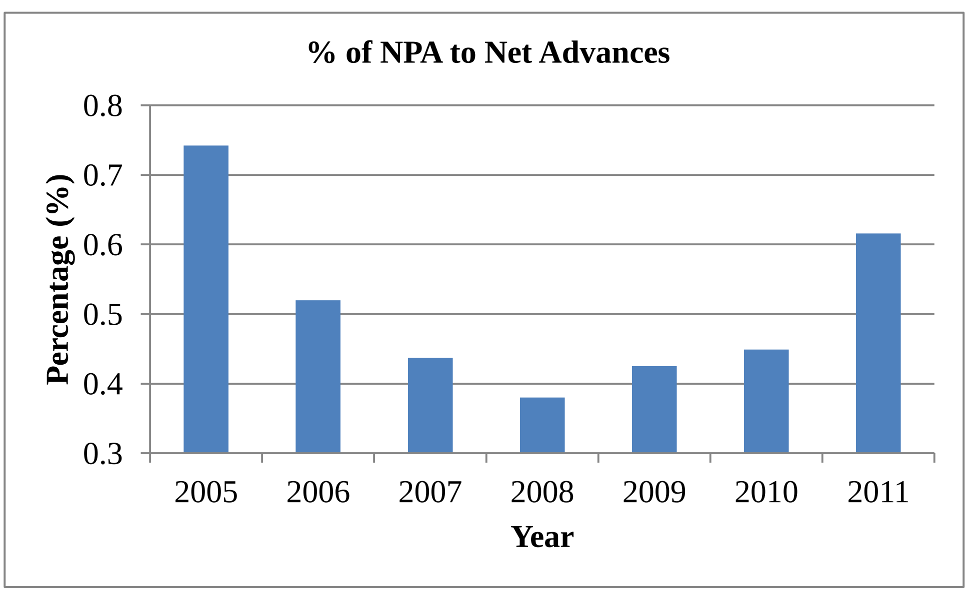
Asset Quality

As already discussed above, this indicator is used to analyze the level of credit risk taken by a bank. The specific ratios computed for the above purpose are:

a. Net Non-Performing Assets to Net advance
b. Total Investments to Total Assets

The first ratio is showing a declining trend in the pre-crisis years till 2008 but started increasing since 2008 (Graph-2), although the average ratio in the pre-crisis years is higher than the post crisis years. The trend indicates that the asset quality deteriorated during the crisis. Canara Bank had the poorest asset quality in the sample which improved post crisis whereas Axis Bank has shown a declining trend in NPAs as a percent of Net advance during the period under study. The second indicator i.e. total investments as a percentage of total assets has shown a consistent decline trend during 2005-2011. The average in the pre-crisis years is also higher than the average in the post crisis years. This indicates that the sample banks have reduced their risk-appetite in all forms of assets including investments.

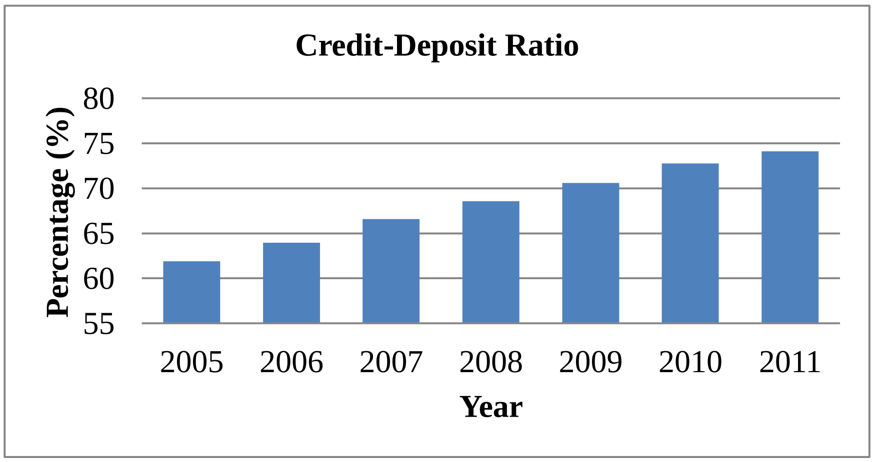
Graph-2: Asset Quality of Top Ten Ranking Scheduled Commercial Banks Based on Data Sets



Liquidity

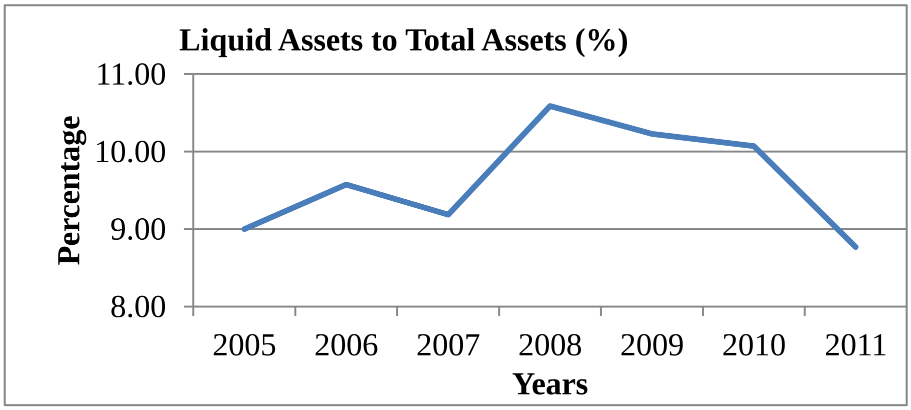
The credit deposit ratio has an inverse relation with liquidity of banks and also indicates the credit off take. This average ratio of our sample banks has shown a consistent increase in the period under study (Graph-3). The liquidity condition of these banks therefore, came under stress due to the crisis. Major movers were HDFC Bank and Corporation Bank, whose Credit Deposit ratio slipped during the pre-crisis years but started increasing after year 2008 due to poor credit demand in the post crisis years.

Graph-3: Liquidity (Credit-Deposit ratio) of Top Ten Ranking Scheduled Commercial Banks Based on Data Sets



Liquid Assets as a percentage of Total Assets was also computed to study the liquidity of sample banks. On an average, this showed an increasing trend till 2008 but randomized in the subsequent years (Graph-4). This reaffirms the fact the liquidity of these top ranking banks was impacted due to the crisis. Due to the declining liquidity post crisis, the investments of banks declined too. The average of total investments as a percentage of total assets has reduced from 33.4 in the pre-crisis years to 27.4 percent in the post crisis years.

Graph-4: Trend of Liquidity (Liquid Assets to Total Assets) of Top Ten Ranking Scheduled Commercial Banks Based on Data Sets

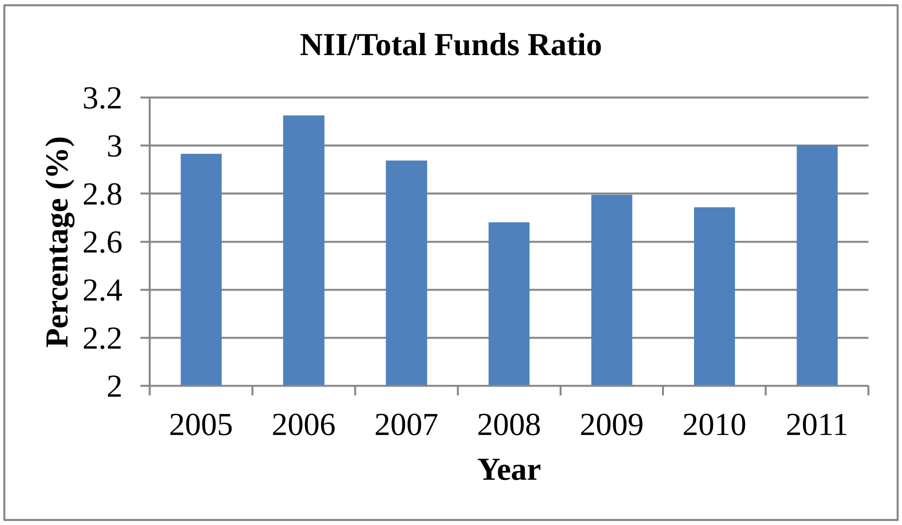


Profitability

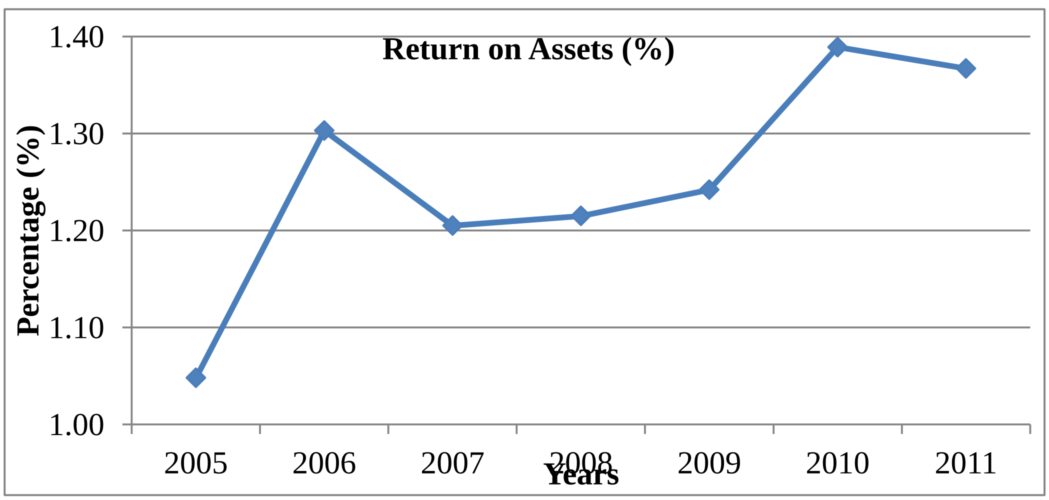
Net Interest Income as a percentage of Total Funds is an important indicator of profitability. As can be seen in (Graph-5), this indicator deteriorated during 2006-08, but increased soon after (2008-10) before slipping again in 2010. The average percentage in the pre-crisis years reduced from 3 percent in the pre-crisis years to 2.81 percent, on an average, in the post crisis years. This indicator, HDFC Bank as an exception, increased consistently in the period except 2010-2011. The interest income as a percent of total funds increased till 2009, but reduced in 2010 before rising again in 2011. Provisions & Contingencies as a percent of Total Funds increased till 2008 but reduced till 2009 before rising again.

The average Return on Assets (ROA) of the sample banks decreased from 2004-2007, increased during 2007-2010 before slipping again during 2010-11 (Graph-6). Five banks out of the sample banks, showed a reduction in ROA during the crisis. The average ROA in the pre-crisis period increased from 1.18 to 1.3 post crisis. Operating Expenses / Total Funds (percent) increased during 2004-06 but reduced after 2006. Interest Expended / Total Funds (percent) has shown an increasing trend till 2009 but started reducing post 2009. The Non Interest income as a percentage of total funds too increased in the crisis years of 2007-09.

Graph-5: Profitability (NII/Total Funds ratio) of Top Ten Ranking Scheduled Commercial Banks Based on Data Sets



Graph-6: Trend of Profitability (Return on Assets) of Top Ten Ranking Scheduled Commercial Banks Based on Data Sets



CONCLUSION

The capital adequacy ratio of banks, measured by the capital adequacy ratio improved marginally in the post crisis years. The Tier I capital as a percentage of Risk weighted assets reduced but the Tier II capital as a percentage of risk weighted assets increased in the period. The rise in capital adequacy seem to have been propelled by the improvement in Tier II capital comprising of revaluation reserves, general provisions/general loan-loss reserves, hybrid debt capital instruments and subordinated debt rather than the more stable Tier I capital. Among our sample of banks, AXIS Bank had the highest average capital adequacy i.e. in 2008 (13.73 percent).With regard to the asset quality of the top ranking 10 banks taken as a sample, the average ratio of NPA to net advance increased post crisis. The liquidity of these banks, as judged by the liquid assets to total assets, liquid assets to total deposits and investments to deposits ratio, fell post crisis, although the cash deposit ratio improved marginally in 2009 but fell in 2010. The above ratios declined post crisis reflecting a worsen liquidity position of these banks.

The average profitability of these banks improved during 2008-10 which portrays the relative strength of these banks during testing times. The credit deposit ratio increased because the credit demand had improved for these banks. Most of the profitability indicators measured showed a positive trend unlike the banking industry. The net interest income ratio to total funds, credit deposit ratio, Interest income to total funds, return on assets, return on net worth, non-interest income to total funds and net profit to total funds increased during the crisis years whereas the operating expenses to total income and operating expenses to total funds fell. The interest expended to interest income ratio however increased till 2009. The credit to deposit ratio too has been increasing over the sample period. Over the period under study, indicators such as ROA, and RONW increased consistently, whereas Net Interest Income to total funds and profit before provisions to total funds decreased from 2006 to 2008 but increased 2009 onwards.

When comparing the performance of the sample banks with the banking industry as a whole, both seem to have scored the same on liquidity which reduced during the crisis years. Both the sample banks and banking industry were adversely affected on asset quality parameter. The net NPA ratio increased during 2008-09. With regard to profitability, the sample does not conform to the banking industry. For the banking industry, profitability was adversely impacted during the crisis years whereas for the sample banks, profitability actually improved. To some extent, this was due to the fact that the credit deposit ratio improved for the sample banks whereas it reduced for the banking industry. The credit demand has not impacted these top ranking ten banks adversely and hence not affecting their profitability.

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