GE-International Journal of Management Research
Vol. 3, Issue 10, Oct 2015 IF- 4.316 ISSN: (2321-1709)
© Associated Asia Research Foundation (AARF)
Website: www.aarf.asia Email : editor@aarf.asia, editoraarf@gmail.com

IMPACT OF US CRISIS ON INDIAN BANKS

Saumya Aggarwal

Mcom, Delhi University, India.

ABSTRACT

The US crisis were a consequence of sub- prime mortgages, real estate bubble, complicated financial instruments and reckless, less prudent regulatory practices. The crisis caused a great financial turmoil in the entire world and caused bankruptcy of big financial institutions like Lehman Brothers and several others were bailed out. The crisis had some effect on Indian economy as well. It affected several sectors like exports, foreign inflow, stock market, current account deficit and caused unemployment. Though India was well guarded when compared with the rest of the western world in terms of its less exposure to sub- prime mortgages, but the paper intends to determine and prove empirically that Indian banks were not completely unaffected by US crisis by gauging its asset Quality in pre-crisis, crisis and post-crisis period.

Keywords- US crisis, Indian Banks, Sub-prime mortgages, Asset Quality, Lehman brothers

Introduction

The US crisis that occurred during the period of 2007-2009 was a consequence of sub- prime mortgages and bursting of the bubble in the real estate sector. The crisis period brought the financial turmoil in the entire world. The complexity in the financial instruments in the form of so called CDO (Collateralized Debt Obligations) made the situation even worse with the bankruptcy of prestigious institutions till then like Lehman Brothers and Merrill Synch.

India was not completely unaffected by the global crisis. Several sectors of Indian economy had to face the blow, like Indian exports and imports, foreign exchange rate, investments by foreign players in financial markets that plummeted the Sensex, large unemployment and Current account deficit.

The paper however, focuses on Indian banking sector which was also affected to some extent by the US crisis. Though the effect in contrast to US and rest of the western world was mild yet effective in the way it deteriorated the quality of assets. The bank's profitability and capital adequacy requirements were not much affected but the data studied in the paper indicates the significant difference in asset quality in pre- crisis and post-crisis period.

Literature Review

US Crisis

The US financial crisis is rooted in the subprime crisis which surfaced over a year ago in the United States of America. During the boom years, mortgage brokers attracted by the big commissions, encouraged buyers with poor credit to accept housing mortgages with little or no down payment and without credit checks. A combination of low interest rates and large inflow of foreign funds during the booming years helped the banks to create easy credit conditions for many years. Banks lent money on the assumption that housing prices would continue to rise. Also the real estate bubble encouraged the demand for houses as financial assets. Banks and financial institutions later repackaged these debts with other high-risk debts and sold them to world- wide investors creating financial instruments called CDOs or Collateralized Debt Obligations. In this way risk was passed on multifold through derivatives trade. Surplus inventory of houses and increase in interest rates led to a decline in housing prices in 2006-2007 resulting in an increased defaults and foreclosure activity that collapsed the housing market. Consequently, a large number of properties were up for sale affecting mortgage companies, investment firms and government sponsored enterprises which had invested heavily in sub- prime mortgages. (Prasad and Reddy)

Impact on Indian Economy

The Indian economy had performed well during the last two decades, resulting in high growth rate of real Gross Domestic Product (GDP), besides increase in domestic savings and increase in investment and productivity. Though the epicenter of the economic crisis was the US sub- prime mortgage market, its agitations are being felt in financial markets all over the world. Though in the beginning Indian officials denied the impact of global economic crisis affecting the Indian economy but later the government had to acknowledge the fact that global crisis will have some impact on the Indian economy. The US meltdown which shook the world had little impact on India, because of India's strong fundamental of the economy, well regulated banking system and less exposure of Indian financial sector with the global

financial market. Perhaps this has saved Indian economy from being swayed over instantly. Unlike in US where capitalism rules exist, in India, market is closely controlled by the government. The meltdown in the U.S. has not created any credit crunch in Indian economy but the credit crunch in U.S. led to panic in India. After a long spell of growth Indian economy experiencing a downturn, faltering of industrial growth, double digit inflation, widening of current account deficit etc. The global crisis affected the health of several sectors of Indian economy through distinct channels: financial markets, trade flows, export & import and exchange rates. (Walia)

Impact on Indian Banks

The Indian banking system also has not experienced any contagion, similar to its peers in the rest of Asia. The Indian banking system is not directly exposed to the sub-prime mortgage assets. It has very limited indirect exposure to the US mortgage market, or to the failed institutions or stressed assets. Indian banks, both in the public sector and in the private sector, are financially sound, well capitalized and well regulated. The average capital to risk-weighted assets ratio (CRAR) for the Indian banking system, as at end-March 2008, was 12.6 per cent, as against the regulatory minimum of nine per cent and the Basel norm of eight per cent. A detailed study undertaken by the RBI in September 2007 on the impact of the sub-prime episode on the Indian banks had revealed that none of the Indian banks or the foreign banks, with whom the discussions had been held, had any direct exposure to the sub-prime markets in the USA or other markets. However, a few Indian banks had invested in the collateralized debt obligations (CDOs)/ bonds which had a few underlying entities with sub-prime exposures. Thus, no direct impact on account of direct exposure to the sub-prime market was in evidence. Consequent upon filling of bankruptcy by Lehman Brothers, all banks were advised to report the details of their exposures to Lehman Brothers and related entities both in India and abroad. Out of 77 reporting banks, 14 reported exposures to Lehman Brothers and its related entities either in India or abroad. An analysis of the information reported by these banks revealed that majority of the exposures reported by the banks pertained to subsidiaries of Lehman Brothers Holdings Inc., which are not covered by the bankruptcy proceedings. Overall, these banks' exposure especially to Lehman Brothers Holdings Inc. which has filed for bankruptcy is not significant and banks are reported to have made adequate provisions. In the aftermath of the turmoil caused by bankruptcy, the Reserve Bank has announced a series of measures to facilitate orderly operation of financial markets

and to ensure financial stability which predominantly includes extension of additional liquidity support to banks. (Report, 2009)

"India suffered relatively less from the global financial crisis that followed the collapse of Lehman Bros, but local banks went for large-scale restructuring of loans, many of which later turned bad. While that created a big pool of bad assets, the sluggish economic growth has discouraged companies from investing in new projects. In the five years between 2003 and 2008, the net profit of listed banks grew at a compound annual growth rate, or CAGR, of 18.4%. In absolute term, the collective net profit of this set of banks was Rs.14,520 crore in 2003, and this rose toRs.33,826 crore at the end of March 2008. However, as a group, private banks' net profit grew at a CAGR of 28.1% in this period, compared with 16.1% for state-run banks. The contrast is starker in the six years that followed the Lehman crisis—between 2009 and 2015, the listed banks' net profit grew at a CAGR of 10.8% but the public sector banks' CAGR dropped to 1.73% even as private banks' net profit grew at a CAGR of 30%. This has happened because banks had to set aside money or provide for their growing bad loans. In the five years preceding the Lehman bankruptcy, gross non-performing assets (NPAs) of the listed banks actually dropped at a CAGR of 3.33%. The drop in gross NPAs of public sector banks was even sharper—a 5.42% CAGR decline to Rs.39,663 crore from Rs.52,419 crore. However, after the Lehman crisis, the listed banks' gross NPAs rose at a CAGR of close to 40% in six years till 2015, from Rs.59,571 crore to Rs.3.19 trillion. In the June 2015 quarter, it rose even further. During this period, public banks' gross NPAs rose at a staggering 45.6%—from Rs.44,200 crore to Rs.2.89 trillion while private banks' gross NPAs grew at one-third the pace—14.6%. The story of net NPAs, after provisioning, is similar. In the five years between 2003 and 2008, listed banks' bad assets actually declined. But in the six years between 2009 and 2015, the net NPAs of listed banks grew at 45.23%. As a group, private banks' net NPAs grew at 13.9% while public banks' net NPA growth was almost four times that—a CAGR of 51.3%. As far as business growth is concerned, the Lehman collapse affected all. In the five years before it, the deposit portfolio of the listed banks grew at a CAGR of about 20%. While 25 public banks' deposits grew at 17.6%, the 11 private banks' deposits grew at 32.8%, albeit on a smaller base. Post the Lehman bankruptcy, till March 2015, the listed banks' deposit growth dropped to 18.9%. While public banks' deposits grew at a marginally higher pace of 18.6%, private banks' deposit growth slipped to 20.6%.Indeed, the Lehman effect on Indian banks is hard to ignore, but after seven years, it's time the Indian banks got over it and made a fresh beginning." (Tamal Bandyopadhyay, Live mint)

Measures by RBI

Aftermath of the turmoil caused by bankruptcy, the Reserve Bank has announced a series of measures to facilitate orderly operation of financial markets and to ensure financial stability, which predominantly includes extension of additional liquidity support to banks. The RBI has been effectively able to manage domestic liquidity and monetary conditions consistent with its monetary policy. This has been enabled by the appropriate use of a range of instruments available for liquidity management with the Reserve Bank such as the Cash Reserve Ratio (CRR), which was reduced to 5% in July 2009 from 9% in August 2008 and Statutory Liquidity Ratio (SLR) stipulation and Open Market Operations (OMO) including the Market Stabilization Scheme (MSS) and Liquidity Adjustment Facility (LAF). Reduction in the repo rate (the rate at which RBI lends to the banks) from 9% as on October 2008 to 4.75% in July 2009 and the reverse repo-rate (RBI's borrowing rate) reduced to 3.25% in July 2009 from 6% as on October 2008 in order to improve the flow of credit to productive sectors at viable costs so as to sustain the growth. Further-more, money market liquidity is also impacted by our operation in the foreign exchange market, which in turn, reflects the evolving capital flows. The existing set of monetary instruments has thus, provided adequate flexibility to manage the evolving situation. So the financial sector has emerged without much damage thanks in part of our strong regulatory framework and in part on account of most of the nationalized banking sector. (Bhatt)

Methodology

The empirical study is conducted using data extracted from RBI official web site. Data on all Scheduled commercial banks Gross Non Performing Assets (GNPA) and Slippage ratio is being considered. Public Banks and Private Banks NPA's are also evaluated for the study.

For the study purpose, the data was categorized in 3 groups- Pre US Crisis, During Crisis and Post Crisis data.

Hypothesis

H_o- The means of all 3 groups (Pre, during and post crisis data) are equal.

H_1- The means of all 3 groups are not equal.

The Anova test is conducted to test the Hypothesis in case of All Banks GNPA's, Slippage Ratio and NPA's of Public and Private Banks under all 3 categories.

Objective

To determine the impact of US Crisis on Indian Banks by assessing the Bank Asset Quality before and after the crisis.

Results and Discussion

All Indian Bank's GNPA and Slippage Ratios in (%).

Pre Crisis			Crisis			Post Crisis		
Year	GNPA	Slippages	Year	GNPA	Slippages	Year	GNPA	Slippages
1994	19.1		2007	2.5	1.8	2010	2.4	2.2
1995	15.3		2008	2.3	1.8	2011	2.3	2.1
1996	13.9		2009	2.3	2.2	2012	2.8	2.5
1997	14.3					2013	3.2	2.7
1998	13.1							
1999	13.3							
2000	12.1							
2001	11.1	4.6						
2002	10.4	5.1						
2003	9.1	3.7						
2004	7.2	3.4						
2005	4.9	2.5						
2006	3.3	1.9						

Slippage Ratio: Fresh accretion to NPAs during the year to standard advances at the beginning of the year

Figure 1 All Indian Banks (Public, Private and Foreign) GNPA's in percentage

Source- "Two decades of credit management in banks: Looking back and moving ahead" (Speeches) - RBI website, date: 18th Nov 2013)

The data above shows that there were high GNPA during pre- crisis tenure. Till 2001 it was quite high to the extent of 11.1% and maximum in 1994 with 19.1%. It came down to 3.3% and reduced further during the crisis period. But after the crisis, the GNPA started ticking off and increased from 2.4% to 3.2% in 2013.

Slippage Ratio also declined from Pre crisis to crisis period from 4.6% to 2.2%. But after crisis, it increased again from 2.2% to 2.7%.

Public Sector Banks	NPA's	(Data in billions)			
Pre Crisis		Crisis		Post Crisis	
Year	NPA	Year	NPA	Year	NPA
2001	547.74	2007	386.01	2010	572.93
2002	565.07	2008	396	2011	710.8
2003	540.89	2009	440.32	2012	1124.89
2004	515.41			2013	1558.9
2005	465.97				
2006	413.79				

Figure 2 Indian Public Bank NPA in billions

Source-"Bank Group-Wise Classification of Loan Assets of Scheduled Commercial Banks" – RBI website

	pvt Banks NPA's		(Data in billions)		
Pre Crisis		Crisis		Post Crisis	
Year	NPA	Year	NPA	Year	NPA
2001	60.78	2007	92.42	2010	173.87
2002	116.67	2008	129.78	2011	179.75
2003	133.33	2009	168.9	2012	183.21
2004	103.43			2013	199.92
2005	86.91				
2006	77.74				

Figure 3 Indian Private Bank NPA's in billions

Source-"Bank Group-Wise Classification of Loan Assets of Scheduled Commercial Banks" – RBI website

NPA in public and private banks were reducing in the pre- crisis period from Rs. 547.74 billion to Rs. 413.79 billion in case of public banks and to about Rs. 77.74 billion in Private Banks. But it started increasing during the crisis as well as post crisis period. It hiked up to Rs 1558.9 billion in public and Rs. 199.92 billion in pvt by 2013.

Table 1 Anova Analyses Table for testing given hypothesis

S.no	Hypothesis	Average			Variance			Anova P value	Alpha	F Critical value	F Value
		Pre-Crisis	During Crisis	Post - Crisis	Pre – Crisis	During Crisis	Post – Crisis				
1	All Banks GNPA Means are equal for 3 groups	11.31538 (13 counts)	2.366667 (3 counts)	2.675 (4 counts)	18.99474	0.013333	0.169167	0.00037	.05	3.591531	13.03319
2	All Banks Slippage Ratios means are equal for 3 groups	3.533333 (6 counts)	1.933333 (3 counts)	2.375 (4 counts)	1.474667	0.053333	0.075833	0.052246	.10	2.924466	4.023179
3	Public Banks NPA means are equal for all 3 groups	508.145 (6 counts)	407.4433 (3 counts)	991.88 (4 counts)	3322.966	835.6064	197909.5	0.017575	0.05	4.102821	6.219887
4	Private Banks NPA means are equal for all 3 groups	96.47667 (6 counts)	130.3667 (3 counts)	184.187 (4 counts)	706.2247	1462.556	124.8698	0.00143	.05	4.102821	13.51733

Since p value is less than the Alpha in all the 4 hypothesis, thereby all the null H_o are rejected. Thereby accepting the alternate hypothesis that the means in all 3 groups i.e. pre, during and post crisis mean values are not equal in all the 4 cases (S.no 1-4 in table 1).

This indicates that there is sufficient evident to say that mean GNPA's of all scheduled commercial banks and their slippage ratios had been different across the three periods. The average values indicate that GNPA reduced from 11.3 to 2.3 moving on to pre -crisis to crisis period and hiked up again to 2.67 in Post crisis period. Slippages also declined first on an average from 3.5 to 1.9 but after crisis it rose up again to 2.37 %.

On analyzing the data for NPA's separately for public and private banks, the similar inferences are drawn. The Avg. NPA initially declined from Rs. 508.14 billion to Rs. 407.44 billion after a spurt to Rs. 991.88 billion in pro crisis tenure. Private Banks on the other side witnessed continuous hiking in NPA's from 96.47 to 184.187 billion in transition from Pre crisis to post crisis period. But the quantum of increase in Public bank NPA's is clearly more than Pvt. Banks.

Conclusion

The objective of the paper was to assess the extent to which Indian banks asset quality was affected after the US crisis. This is to bring in the limelight the effect of the US crisis on Indian banks. Though the impact was mild but major enough to be ignored. The Anova test confirms that the asset quality had been affected when compared in Pre Crisis and Post Crisis period. Overall Asset Quality assessed by NPA's and slippage ratios seems to have deteriorated after the US crisis. Thus the paper highlights Indian banks were not unaffected by the US crisis and its ripple effects can be seen till today.

References

Prasad, A., and Reddy, C.P., (2009). "Global Financial Crisis and its impact on India". *Department of Humanities and Social Sciences*, College of Engineering, Andhra University, Visakhapatnam ,Andhra Pradesh, India.

Bhatt, R.K., (2011). "Recent Global Recession and Indian Economy: An Analysis". *International Journal of Trade, Economics and Finance*, Vol. 2, No. 3, June 2011.

Walia, S., (2012). "Impact of Global Economic Crisis on Indian Economy: An Analysis". *International Journal of Latest Trends in Engineering and Technology (IJLTET).* Vol. 1 Issue 2 July 2012.

Reports, (2009), “Global Economic Crisis and Its Impact on India”. Research Unit (LARRDIS) Rajya Sabha Secretariat, New Delhi. June 2009.

Sinha, A. “Impact of the international banking crisis on the Indian financial system”. BIS Papers No 54.

Bandyopadhyay, T., (2015). “The Lehman effect on Indian Banks”. *Live mint*. 29 September.

Website-https://www.rbi.org.in/Scripts/Publications.aspx?publication=Annual

Website- https://www.rbi.org.in/Scripts/BS_ViewSpeeches.aspx