

CHAPTER -5

Chapter 5

ASSET QUALITY OF BANKS-AN ASSESSMENT

5.1 Introduction

Banking sector is regarded as the corner stone of any economy. The performance of financial system in any country by and large depends upon the functioning of sound banking sector. To accomplish banking stability the banks are required to maintain quality assets that aid in achieving profitability (Swamy, 2013), failing which can create mess in the entire economy, crisis of 2008 is one among such events. Banking industry being one of the crucially important sectors in any economy should be vigilant enough so as to tackle any sort of trouble. As banks are having access to almost all strata of society by accumulating deposit and purveying credit, it is immensely important for the banking sector to remain stable against all odds.

RBI has always been prudent enough in managing the banking sector quite efficiently over the years, even then a sharp deterioration of quality of assets has made the sector vulnerable to risk. This is reflected by mounting Non Performing Asset (NPA) of Indian banking sector. NPA being an important criterion for assessing the financial health of banking sector, replicates the asset quality, credit risk and efficiency in the allocation of resources to productive sectors. Post financial sector reform, there have been plethora of measures adopted to contain the menace of NPA of banks, thereby improving the asset quality of the banking

sector. The commercial banks have envisaged the greatest renovation in their operation with the introduction of new concepts like income recognition, prudential norms, capital adequacy ratio (Pati, 1999). Despite these, the banking sector's asset quality has further worsened, with gross non-performing asset (GNPA) ratio of 4.45 per cent as on March 2015, as compared to 4.1 per cent in March 2014. Also, Stressed Assets Ratio, which is GNPA plus restructured standard advances for the system, stood at 10.9 per cent, as at the end of March, 2015 as compared to 10 per cent in March, 2014 indicating stress in the system. Thus NPAs have been the most vexing problem faced by commercial banks. The NPAs of commercial banks has direct impact on the profitability, productivity, liquidity and equity of banks and finally influence the outlook of the banks towards credit delivery and credit expansion (Ahmed, 2007). Hence, soaring level of NPAs in banks and financial institutions are a cause of concern to the public as bank credit is the catalyst to the economic growth and any bottleneck in the smooth flow of credit is bound to create adverse effect on economic development due to mounting NPAs (Sinha, 2006).

In this chapter, an effort has been made to study the status of asset quality of the banks during the period under study. Also, it is attempted to find difference in asset quality in two time lag, that is, before and after 2008 in the light of Objective 2 of the study which is mentioned below-

Objective2:-

- To study asset quality of Indian banking sector over time.

5.2 Conceptualising Asset Quality

Assets are the vital element of banking fraternity. If the quality of asset of a bank deteriorates there is every possibility of having tremendous negative impact upon the economy in general and the bank in particular. An efficient financial intermediation requires a stable banking system to channel surplus funds into savings for investments to promote rapid economic growth (King and Levine, 1993; Brown et al., 2009). Asset quality is the key to understanding the financial health and soundness of the banking system. In India, as in most other countries, NPAs are only an indicator of loan performance. The degree to which it measures actual performance of banks depends on the quality of accounting, auditing, regulation and supervision and the amount of 'ever greening' of weak loans, through restructuring (Swamy, 2015). Asset quality has surfaced as an important concern for the Indian banking sector in the recent years. In the period immediately following the global financial crisis, when asset quality of banks in most advanced and emerging economies took a beating, the asset quality of Indian banks was largely maintained, partly on account of the policy of loan restructuring. However, between March 2009 and March 2012, the gross NPAs ratio has shown an increasing trend *albeit* a fall in 2010-11(RBI, 2012). Hence maintenance of asset quality is given paramount importance so as to have a sound banking system.

Various researches also stresses on managing asset quality as an important criteria in a sound banking system. Nagle (1991) indicated that the problems of asset quality may become the future time bomb for banks. William Streeter (2000) also found that based on the questionnaires completed by the board members of the American Bankers Association, the management of asset quality is considered one

of banks major management problems in 2001. Yin (1999) referred that the deterioration of asset quality from the ignorance of loan quality by banks is one of the main causes behind the Asian Financial Crisis. The intense competition has forced banks to work harder for more market share and sales, thus allowing their loan quality to slowly deteriorate (Wang, 1999).

5.3 Prudential Norms for Asset Classification, Income Recognition and Provisioning of Indian Banks

In order to have a clear understanding of asset quality, it is aptly necessary to know the concept of Non-Performing Assets in detail, along with the established guidelines set forth by RBI.

5.3.1 Definitions

a.i) Defining NPA

After the introduction of Narasimham Committee recommendations 1991, all advances and loans have started to be classified into two categories i.e., performing assets and non-performing assets. An asset, including a leased asset, becomes non-performing asset when it ceases to generate income for the bank. During the initial years of 1990's, NPA is considered as 'When a borrower fails to repay the instalment of principal and interest within the first quarter, it becomes non-performing in the next quarter (GOI, 1991)'.

Thus, according to RBI master circular (2015), an NPA is a loan or advance where-

- Interest and/or instalment of principal remain 'overdue' for a period of more than 90 days in respect of a term loan,

- The account remains 'out of order' if the outstanding balance remains continuously in excess of the sanctioned limit/drawing power for 90 days, in respect of an Overdraft/Cash Credit (OD/CC),
- The bill remains 'overdue' for a period of more than 90 days in the case of bills purchased and discounted,
- The instalment of principal or interest thereon remains overdue for two crop seasons for short duration crops,
- The instalment of principal or interest thereon remains overdue for one crop season for long duration crops,
- The amount of liquidity facility remains outstanding for more than 90 days, in respect of a securitisation transaction undertaken in terms of guidelines on securitisation dated February 1, 2006.
- In respect of derivative transactions, the overdue receivables representing positive mark-to-market value of a derivative contract, if these remain unpaid for a period of 90 days from the specified due date for payment.

In case of interest payments, banks should, classify an account as NPA only if the interest due and charged during any quarter is not serviced fully within 90 days from the end of the quarter.

a. ii) GNPA and NNPA

Gross Non Performing Assets, popularly known as GNPA reflects total non-performing assets. GNPA Ratio measures the level of nonperforming loans (NPA) that arise out of gross advances. This ratio is calculated by dividing gross NPA by gross advances.

Net Non Performing Assets, known as NNPA is calculated by deducting net provisions on non-performing assets and interest in suspense account from Gross NPAs. NNPA Ratio is another important measure to examine asset quality of banks. This ratio calculated by dividing Net NPA by Net Advances is also considered essential in determining asset quality.

5.3.2 Income Recognition

i) Income Recognition Policy

The income recognition policy of the financial institutions must be objective oriented. Also, the income recognition should be done on the basis of the recovery records. According to RBI (July, 2015), in international level, income from non-performing assets (NPA) is not recognised on accrual basis but is booked as income only when it is actually received and hence, the banks should not charge and take to income account interest on any NPA. This principle is equally applicable to Government guaranteed accounts as well.

ii) Reversal of income

The total interest accrued which previously got credited to income accounts as well, has to be reversed if the actual amount is not realised in case any advance, including bills purchased and discounted. This too is applicable for Government guaranteed accounts. As per RBI (July, 2015), fees, commission and similar income that have accrued in NPA accounts should cease to accrue in the current period and the same has to be reversed with respect to past periods, if not collected.

iii) Leased Assets

As per RBI (July, 2015) in case of leased assets:

The finance charge component of finance income [as defined in 'AS 19 - Leases' issued by the Council of the Institute of Chartered Accountants of India (ICAI)] on the leased asset which has accrued and was credited to income account before the asset became non performing, and remaining unrealised, should be reversed or provided for in the current accounting period.

iv) Appropriation of recovery in NPAs

According to RBI (July, 2015):

Interest realised on NPAs may be taken to income account provided the credits in the accounts towards interest are not out of fresh/ additional credit facilities sanctioned to the borrower concerned. In the absence of a clear agreement between the bank and the borrower for the purpose of appropriation of recoveries in NPAs (i.e. towards principal or interest due), banks should adopt an accounting principle and exercise the right of appropriation of recoveries in a uniform and consistent manner.

5.3.3 Asset Classification

In India, a comprehensive and uniform asset classification system was introduced by the RBI in 1985-1986 with the objective of appropriate credit monitoring. The Health Code classification of 1985 classified the assets into eight categories (satisfactory, irregular, sick (viable), sick (non-viable/sticky), advances recalled, suit filed accounts, decreed debts and bad and doubtful debts) depending on the quality of credit subsequently an income recognition norm was introduced in 1989 which prohibited the banks to recognize income in respect of categories six to eight (later category five was also included) on the accrual basis.

This Health Code system got replaced by a new classification system in 1992-1993 following the recommendation of the Narasimham Committee on Financial System (1991). The Health Code System has been continuously upgraded during the past one decade. As per the present System (1992), assets have been classified into four categories – Standard, Substandard, Doubtful and Loss. The last three categories are considered non-performing. The total assets falling under the categories 1-3 constitute the Gross Non-Performing Assets of the bank (Sinha and Chatterjee, 2008).

5.3.3.1 Categories of NPAs

Banks are required to classify Non Performing assets further into the following three categories based on the period for which the asset has remained non performing and the realisability of the dues:

- Substandard Assets- With effect from March 31, 2005, an asset is defined as substandard which has remained NPA for a period less than or equal to 12 months. Such an asset will have well defined credit weaknesses that jeopardise the liquidation of the debt and are characterised by the distinct possibility that the banks will sustain some loss, if deficiencies are not corrected (RBI, 2015).
- Doubtful Assets- Further, an asset would be classified as doubtful with effect from March 31, 2005, if it has remained in the sub-standard category for a period of 12 months. Thus a loan classified as doubtful has all the weaknesses inherent in assets that were classified as sub-standard, with the added characteristic that the weaknesses make collection or liquidation in full, on the basis of currently known facts, conditions and values – highly questionable and improbable (RBI, 2015).

- Loss Assets- According to RBI master circular (July, 2015) :

A loss asset is one where loss has been identified by the bank or internal or external auditors or the RBI inspection but the amount has not been written off wholly. In other words, such an asset is considered uncollectible and of such little value that its continuance as a bankable asset is not warranted although there may be some salvage or recovery value.

5.3.4 Provisioning Norms Specified by RBI with respect to the Categories of NPA

In conformity with the prudential norms, provisions should be made on the non-performing assets on the basis of classification of assets into prescribed categories as detailed in the foregoing Box. Taking into account the time lag between an account becoming doubtful of recovery, its recognition as such, the realisation of the security and the erosion over time in the value of security charged to the bank, the banks should make provision against substandard assets, doubtful assets and loss assets as below:

Box 5.1- Provisioning Norms Specified by RBI with respect to the Categories of NPA

Assets Category	Remained outstanding for the Period	Provision Required
Substandard	It remained NPA for ≤ 12 months	15-25%
Doubtful	Up to one year	25%
Doubtful	One to three years	40%
	More than three years	100%
Loss		100%

Source- Compiled by researcher from RBI (2015)

In case of Substandard assets, a general provision of 15 percent on total outstanding should be made without making any allowance for ECGC guarantee cover and securities available. The 'unsecured exposures' which are identified as 'substandard' would attract additional provision of 10 per cent, i.e., a total of 25 per cent on the outstanding balance. However, in view of certain safeguards such as escrow accounts available in respect of infrastructure lending, infrastructure loan accounts which are classified as sub-standard will attract a provisioning of 20 per cent instead of the aforesaid prescription of 25 per cent.

Standard assets-

The provisioning requirements for all types of standard assets are as below. Banks should make general provision for standard assets at the following rates for the funded outstanding on global loan portfolio basis:

- i. Farm Credit to agricultural activities and Small and Micro Enterprises (SMEs) sectors at 0.25 per cent;
- ii. advances to Commercial Real Estate (CRE) Sector at 1.00 per cent;
- iii. advances to Commercial Real Estate – Residential Housing Sector (CRE - RH) at 0.75 per cent
- iv. housing loans extended at teaser rates
- v. all other loans and advances not included in (i) (ii) and (iii) above at 0.40 per cent.

Also, the provisions towards Standard Assets need not be netted from gross advances but shown separately as 'Contingent Provisions against Standard Assets' under 'Other Liabilities and Provisions Others' in Schedule 5 of the balance sheet.

It is clarified that the Medium Enterprises will attract 0.40% standard asset provisioning.

5.3.5 Provisioning Coverage Ratio

Provisioning Coverage Ratio (PCR) is essentially the ratio of provisioning to gross non-performing assets and indicates the extent of funds a bank has kept aside to cover loan losses.

As a matter of exercising cushion against macroeconomic tumult, banks should build up provisioning and capital buffers in good times i.e. when the profits are good, which can be used for absorbing losses in a downturn. This will enhance the soundness of individual banks, as also the stability of the financial sector. It was, therefore, decided that banks should augment their provisioning cushions consisting of specific provisions against NPAs as well as floating provisions, and ensure that their total provisioning coverage ratio, including floating provisions, is not less than 70 per cent. Accordingly, banks were advised to achieve this norm not later than end-September 2010.

5.4 Status of Asset Quality of Banks

Asset quality has surfaced as an important concern for the Indian banking sector in the recent years. In the period immediately following the global financial crisis, when asset quality of banks in most advanced and emerging economies took a beating, the asset quality of Indian banks was largely maintained, partly on account of the policy of loan restructuring. However, between March 2009 and March 2014, the Gross NPAs ratio has shown an increasing trend *albeit* a fall in 2010-

11(RBI, 2015). Following table highlights the position of India in terms of Asset quality vis-a-vis other developed economies of the world.

Table 5.1- Asset Quality of Major Economies

Country	GNPA to Gross Advances
Germany	3.0
Japan	2.4
UK	4.0
USA	3.9
India	3.6
Russia	6.0
China	1.0
South Africa	4.0
Brazil	3.5

Source- IMF Financial soundness indicator, 2012-13

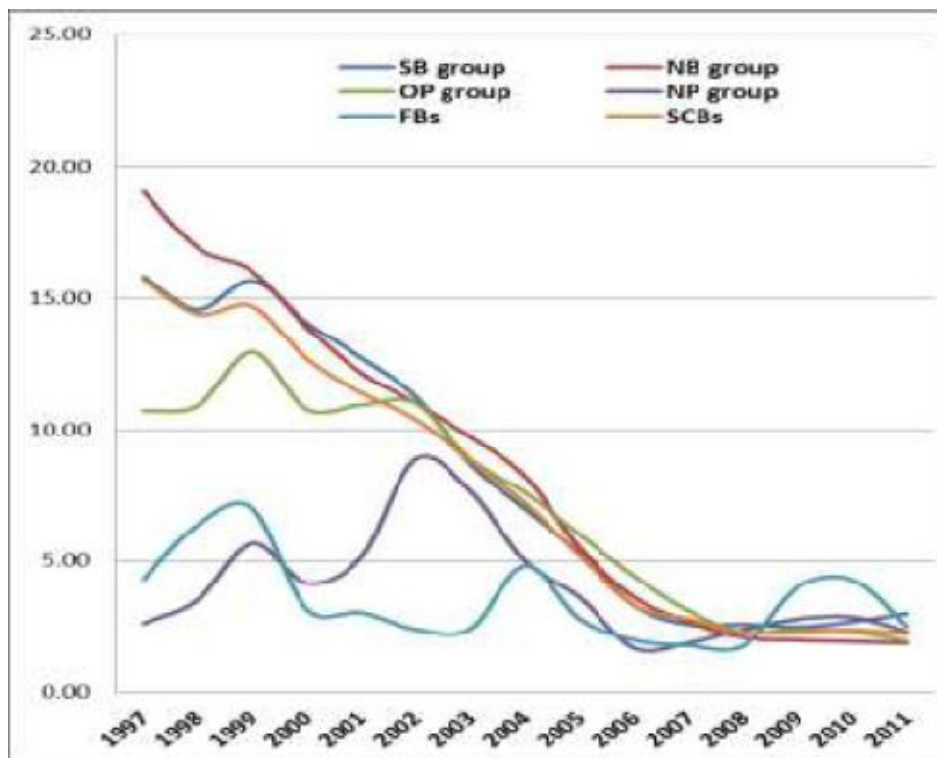
This suggests GNPA Ratio (Gross Non Performing Assets to Gross Advances) of Indian Economy is lagging behind its other counter parts of G-7 Nations, barring a few, indicating scope of improvement in asset quality of Indian banks.

5.4.1 Asset Quality of Indian Banks

The non-performing assets of banks can be termed as a brought forward legacy accumulated over the past decades. This can be observed from the following chart depicting GNPA ratio as high as 17.8 percent for Public sector banks in the year 1996-97, whereas the GNPA ratio for all Scheduled Commercial Banks stood as 15.2 percent in the same year. After the Financial sector reform of 1991, RBI has

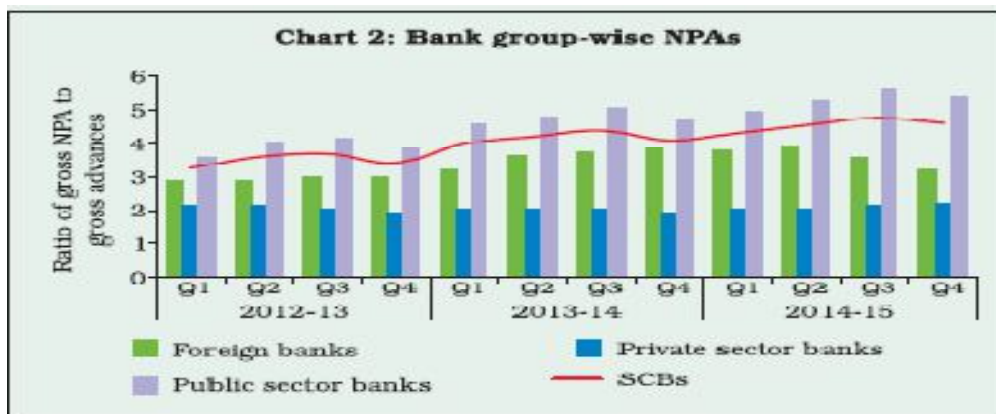
started to tame the unbridled growth of non- performing assets, by announcing and implementing various policy initiatives and regulations in line with International standards and practices. The result of such measures started coming slowly, as witnessed by the gradual deceleration of the non- performing assets- both GNPA Ratio and NNPA Ratio have steadily declined across all bank groups till 2006-07. The year 2008-09, with a slight increase in both the ratios, marked the beginning of increasing trend of non- performing assets.

Chart1- Bank Group Wise GNPA Ratio over the years 1997-2011



Source- Swamy,2013

Chart 2- Bank Group Wise GNPA Ratio over the years 2012- 2015



Source- Financial Stability Report, RBI, 2014-15

The momentum of increase in non- performing assets continued, as reflected by the above chart. This can be observed in chart2 above, which depicts during the period of 2012-13 to 2014-15, the quality of assets have continued to be in the red trajectory, as GNPA Ratio of all bank groups is constantly increasing over the three years.

Table 5.2- GNPA AS PERCENT OF GROSS ADVANCES (GNPA RATIO)

As on March	Scheduled Commercial Banks	Public Sector Banks	Private Sector Banks	Foreign Banks
2003	8.8	9.4	8.3	2.4
2004	7.2	7.8	6.3	2.1
2005	5.2	5.5	4.8	1.4
2006	3.3	3.6	3.1	1.0
2007	2.5	2.7	2.5	0.8
2008	2.3	2.2	2.4	0.8
2009	2.3	2.0	2.8	1.5
2010	2.4	2.2	2.6	1.6
2011	2.5	2.4	2.3	1.0
2012	3.1	3.3	2.0	1.1
2013	3.2	3.6	1.9	1.3
2014	3.8	4.4	1.8	1.5
CV	54.56	57.76	59.66	35.92
CAGR	-7%	-7%	-13%	-4%

Source- Author's own computation based on Trend and Progress report of RBI,

2006-13, DBIE Database

This reveals that the gross nonperforming assets have again witnessed a surge since the year 2010 and these toxic assets are increasing regularly over the following years. The increase is mostly observed in case of Public sector banks with the highest Coefficient of variation, followed by private sector banks and foreign banks. However, the compounded growth rate shows negative growth of GNPA over the years under study, which is highest that is -7% in case of public sector banks, indicating improvement of asset quality of this bank group over the years in spite of the recent increase. Also the negative increase in both private sector and foreign banks justifies the initiatives adopted by RBI to curb NPA, and further suggests availability of some room for more improvement.

Table 5.3- NET NPA AS PERCENT OF NET ADVANCES (NNPA RATIO)

As on March	Scheduled Commercial Banks	Public Sector banks	Private Sector banks	Foreign Banks
2003	4.4	4.5	5.0	1.8
2004	2.9	3.0	2.8	1.5
2005	2.0	2.1	1.9	0.9
2006	1.2	1.3	1.0	0.8
2007	1.0	1.1	1.0	0.7
2008	1.0	1.0	1.09	0.8
2009	1.05	0.94	1.29	1.9
2010	1.12	1.1	1.01	1.82
2011	0.97	1.09	0.6	0.67
2012	1.4	1.7	0.5	0.6
2013	1.7	2.0	0.5	1.0
2014	2.1	2.6	0.65	1.1
CV	56.55434	54.7476	86.0391	41.2642
CAGR	-7%	-5%	-17%	-4%

Source- Author's own computation based on Trend and Progress report of RBI, 2006-13, DBIE Database

In case of NNPA ratio, in spite of witnessing decrease, we can observe a sluggish trend across all bank groups since the year 2010, but the intensity of increase is mostly observed in case of Public sector banks and hence the compounded growth rate of increase (shows negative growth rate) of Public sector banks is lower than that of private sector banks. This indicates the rate of decrease of net nonperforming assets is higher in case of Private sector banks compared to other bank groups.

5.5 Bank wise Analysis of Asset Quality of Indian Banks

Asset quality of bank loans refers to the timely manner in which borrowers are meeting their contractual obligations. As asset quality is an important indicator of financial soundness of banking sector (RBI, 2015), it is extremely important to measure the quality of assets with respect to time. To meet the stated objective, the status of quality of assets of Indian Banking sector is attempted to be measured during the period 2003-2013. Also, an effort is undertaken to compare the position of asset quality in two time lag, i.e., before 2008 and after 2008. The analysis is administered on the identified 14 banks- SBI, Bank of Baroda, Corporation Bank, Canara Bank, Oriental Bank of Commerce, Bank of India, Allahabad Bank, Indian Overseas Bank, Punjab National Bank, Syndicate Bank, Union Bank, Axis Bank, ICICI Bank and HDFC Bank, which have been chosen using the five specified parameters.

For analysing asset quality of various banks, Asset Quality Indicator (Chisti (2012), Aspal & Malhotra (2013), Alhassan et al.(2014), Ibrahim & Thangavelu

(2014) has been used after the descriptive analysis of the set of variables are undertaken. As Dutta Purkayastha & Ghosh (2016) substantiated that GNPA ratio can effectively compute asset quality of banks, hence GNPA ratio is treated as the indicator of asset quality. Also CAGR of the individual banks and the sectors were estimated.

5.5.1 State Bank of India

State bank of India is the largest state run bank and financial conglomerate of India. In addition to the banking services, the Bank through its subsidiaries, provides a wide range of financial services, which include life insurance, merchant banking, mutual funds, credit card, factoring, security trading, pension fund management and primary dealership in the money market. The Bank operates in four business segments, namely Treasury, Corporate/ Wholesale Banking, Retail Banking and Other Banking Business. The bank has 156 overseas offices spread over 32 countries. State Bank of India was incorporated in the year 1955. The Government of India nationalized the Imperial Bank of India in the year 1955, with the Reserve Bank of India taking a 60% stake, and name was changed to State Bank of India. In the year 2001, the SBI Life Insurance Company was started by the Bank. They are the only Bank that have been permitted 74% stake in the insurance business. As of March 2014, the Bank had 16059 branches and 43,515 Group ATMs.

Table 5.4 - Position of Asset Quality of SBI

As on March	GROSS NPA (RS.CR.)	GNPA Ratio	Net NPA (RS.CR.)	NNPA Ratio
2003	13506.07	9.804167	6183	4.5
2004	12667.21	8.020595	5441.73	3.48
2005	12455.73	6.154794	5348.89	2.65
2006	9628.14	3.677657	4911.41	1.88
2007	9998.22	2.963871	5257.72	1.56
2008	12837.34	3.080211	7424.33	1.78
2009	15714	2.896573	9677.42	1.79
2010	19534.89	3.091384	10870.17	1.72
2011	25326.29	3.346853	12346.90	1.63
2012	39676.46	4.573239	15818.85	1.82
2013	51189.39	4.895618	21956.48	2.1
2014	61605.35	5.10	31096.07	2.57
Mean	23678.258	4.80041	11361.1	2.29
SD	16801.08764	2.11429	7735.182	0.853268
CV	70.95576034	44.04392	68.08491	37.26062
CAGR	0.147934798	-0.05768	0.158173	-0.04965

Source- Researcher's own computation Based on RBI-DBIE Database

Thus, State bank of India has been grappling with a huge volume of stressed assets as reflected by GNPA Ratio, NNPA Ratio, GNPA and NNPA in absolute terms; GNPA ratio being 9.80 in 2003, NNPA ratio 4.5 etc. Although, as the decade progresses (since the year 2004), it is observed that there has been some continuous improvement in terms of the aforesaid parameters of asset quality; which continued till 2008. In 2008, GNPA ratio stood out to be 3.08% and NNPA ratio also came out to be 1.78%. Since 2009, again the GNPA, NNPA in absolute terms and NNPA ratio (GNPA ratio started increasing from the year 2010) witnessed surge, e.g., in 2014, GNPA ratio and NNPA ratio increased up to 5.10% and 2.57% respectively indicating accumulation of more and more toxic assets in the book of the bank in recent years. However, the Compounded growth rate of both the GNPA and NNPA ratios indicate negative growth rate over the years, although the growth rate is found to be positive in case of GNPA and NNPA in absolute terms.

5.5.2 Bank of Baroda

Bank of Baroda is one of the leading commercial banks in India. The Bank's solutions include personal banking, business banking, corporate banking, and international business. This also includes non-resident Indian (NRI) services, foreign currency credits, ECB, offshore banking, export finance, import finance, correspondent banking, trade finance and international treasury. The Bank offers services, such as domestic operations and Forex operations. They also offer rural banking services, which include deposits, priority sector advances, remittance, collection services, pension and lockers. They also offer fee based services such as cash management and remittance services. The Bank is having their head office located at Baroda and their corporate office is located at Mumbai. Bank of Baroda was incorporated on July 20, 1908 as a private bank with the name The Bank of Baroda Ltd. The Bank was established with a paid up capital of Rs 1 million and was founded by Maharaja Sayajirao III of Baroda. In the year 1910, the Bank opened their first branch in the city of Ahmedabad. In the year 1919, they opened their first branch in Mumbai City. In the year 1953, the Bank opened first international branch at Mombasa, Kenya.

Table 5.5- Position of Asset Quality of Bank of Baroda

As on March	GROSS NPA (RS.CR.)	GNPA Ratio	Net NPA (RS.CR.)	NNPA Ratio
2003	4167.9	11.79102	1298.35	3.72
2004	3979.86	11.17911	1042.01	2.99
2005	3321.81	7.653873	619.64	1.45
2006	2390.14	3.989432	518.04	0.87
2007	2092.14	2.501935	501.67	0.6
2008	1981.38	1.85694	493.55	0.47
2009	1842.92	1.286493	449.04	0.31
2010	2400.69	1.371546	602.32	0.34
2011	3152.5	1.378586	790.88	0.35
2012	4464.75	1.55362	1543.64	0.54
2013	7982.58	2.432336	4192.03	1.28
2014	11875.9	2.991367	6034.76	1.52
Mean	4137.71417	4.16552	1507.16	1.20333
SD	2837.298316	3.682187	1688.808	1.057405
CV	68.57163645	88.39679	112.0523	87.873
CAGR	0.099868693	-0.11723	0.149902	-0.07814

Source- Researcher's own computation Based on RBI-DBIE Database

From the above table it is evident that the parameters like GNPA, NNPA (In Absolute Terms), GNPA, NNPA Ratio have decreased during the period from 2003 to 2009. Thus both GNPA and NNPA ratio decreased from 11.79% to 1.29% and 3.72% to 0.31% in the year 2009. The year 2010 witnessed surge in the aforesaid parameters, which continued over the following years to reach up to 2.43% and 1.28% respectively in the year 2014. Also CAGR is found to be negative in case of both GNPA and NNPA Ratios.

5.5.3 Oriental Bank of Commerce

Oriental Bank of Commerce (OBC) which was established in Lahore of undivided India (now in Pakistan) on 19th February of the year 1943, made a humble beginning under its Founding Father, Late Rai Bahadur Lala Sohan Lal. OBC is a public sector bank engaging in monetary intermediation of commercial banks, saving banks and discount houses. In 1947, the Bank had to face the holocaust of partition. Branches in the newly formed Pakistan had closed down and the Registered Office had shifted from Lahore to Amritsar. In the year 1951, the registered office was relocated to Delhi. It was nationalized in April of the year 1980. In the year 1998, the bank had joined hands with Citibank to launch OBC cobranded credit card. OBC had set up special branch and asset recovery branch, one each at Delhi and Mumbai in the year 1999. The Bank had opened specialised branch for women entrepreneurs in the year 2002 and also in the same year OBC made tie up with Corporation Bank to share each other's ATM network. During the year 2003, the Bank and Small Industries Development Bank of India (SIDBI) had agreed to work on projects in the field of small-scale, infrastructure and service areas.

Table 5.6- Position of Asset Quality of Oriental Bank of Commerce

As on March	GROSS NPA (RS.CR.)	GNPA Ratio	Net NPA (RS.CR.)	NNPA Ratio
2003	1146.25	7.311555	225.28	1.4
2004	1210.91	6.15276	0	0
2005	2512.82	9.932409	327.14	1.29
2006	2116.31	6.302811	162.98	0.49
2007	1454.05	3.294292	215.66	0.49
2008	1280.1	2.345974	538.4	0.99
2009	1058.12	1.544692	442.43	0.65
2010	1468.75	1.759207	723.82	0.87
2011	1920.54	2.002477	938.15	0.98
2012	3580.49	3.197503	2459.03	2.21
2013	4183.96	3.24451	2902.66	2.27
2014	5617.86	4.039306	3904.42	2.82
Mean	2295.846667	4.260625	1069.998	1.205
SD	1382.217366	2.496197	1228.092	0.805673
CV	60.20512545	58.58759	114.7752	66.8608
CAGR	0.155456975	-0.05251	0.296049	0.06573

Source- Researcher's own computation Based on RBI-DBIE Database

Above table reveals that the parameters like GNPA, NNPA in absolute terms and GNPA, NNPA ratios (reduced from 7.3% to 1.55% and from 1.4% to 0.65% during 2003-2009 period) have reduced over the years. From the year 2010, all of these parameters have increased (thus, GNPA, NNPA ratios have increased from 1.76% to 3.24% and from 0.87% to 2.27% respectively during 2010-2014 period). Although CAGR of GNPA ratio showed negative growth rate of -5% during 2003 to 2014 period, NNPA ratio showed positive growth rate of 6% along with showing positive CAGR in absolute terms as well.

5.5.4 Corporation Bank

Corporation Bank came into being as Canara Banking Corporation (Udipi) Limited, on 12th March, 1906, in the temple town of Udipi, by the pioneering efforts of a group of visionaries. The Bank started functioning with just Rs.5000/- as its capital and at the end of the first day, the resources stood at 38 Rupees-13 Annas-2 Pies. The Founder President was Khan Bahadur Haji Abdullah Haji Kasim Saheb Bahadur. The initial growth was consciously cautious and need based. The first branch of the Bank was opened at Kundapur in 1923, followed by the second in Mangalore in 1926. In 1937 the Bank was included in the second schedule of Reserve Bank of India Act, 1934. In 1939, the Bank's name changed from Canara Banking Corporation (Udipi) Ltd., to "Canara Banking Corporation Ltd.," and strongly put forth its vision with the motto-"Sarve Janah Sukhino Bhavantu" which means "Prosperity to All"

The second change in the name of the Bank occurred in 1972, from 'Canara Banking Corporation Ltd.' to 'Corporation Bank Limited.' and finally 'Corporation Bank' following its nationalization on 15th April, 1980. As on 31st December 2016, the Total Business of the Bank was Rs.3,58,396 crore. The Total Deposit stood at Rs.2,23,384 crore and the Total Advances were at Rs.1,35,012 crore. The Net worth rose to Rs.12,554 crore. Presently, the Bank has a network of 2501 fully automated CBS branches, 3150 ATMs and 4724 Branchless Banking Units across the country. The Bank has Representative Offices at Dubai and at Hong Kong.

Table 5.7- Position of Asset Quality of Corporation Bank

As on March	GROSS NPA (RS.CR.)	GNPA Ratio	Net NPA (RS.CR.)	NNPA Ratio
2003	657.34	5.46455	198.39	1.65
2004	722.01	5.198161	249.89	1.8
2005	647.25	3.489899	206.87	1.12
2006	625.57	2.610628	153.79	0.64
2007	624.57	2.0854	141.93	0.47
2008	584.42	1.491416	126.93	0.32
2009	559.22	1.152742	138.3	0.29
2010	650.94	1.029927	197.25	0.31
2011	790.23	0.909875	397.74	0.46
2012	1274.21	1.268262	869.38	0.87
2013	2048.23	1.72531	1410.88	1.19
2014	4736.79	3.455334	3180.56	2.32
Mean	1160.065	2.490125	605.9925	0.953333
SD	1108.125221	1.461912	826.3162	0.619607
CV	1153.373298	1.521606	860.0572	0.644907
CAGR	0.196663896	-0.04081	0.286898	0.031466

Source- Researcher's own computation Based on RBI-DBIE Database

From the above table it is evident that the parameters like GNPA, NNPA (In Absolute Terms), GNPA, NNPA Ratio have decreased during the period from 2003 to 2009. Thus both GNPA and NNPA ratio decreased from 5.47% to 1.15% and 1.65% to 0.29% in the year 2009. The year 2010 witnessed a surge in the aforesaid parameters (except GNPA RATIO, which further got reduced upto 1.02%) which continued over the following years to reach up to 3.46% and 2.32% respectively in the year 2014. CAGR depicts negative growth of -4% in case of GNPA Ratio, whereas it is positive in case of all the other parameters like NNPA ratio, GNPA and NNPA in absolute terms.

5.5.5 Canara Bank

Canara Bank (Canbank) founded as 'Canara Bank Hindu Permanent Fund' in July of the year 1906 at a small port in Mangalore, Karnataka, by late Sri. Ammembal

Subba Rao Pai, a philanthropist, this small seed blossomed into a limited company as 'Canara Bank Ltd.' in 1910 and became Canara Bank in 1969 after nationalisation. The Bank has undergone various phases in its growth path over hundred years of its existence. The growth of Canara Bank was phenomenal, especially after nationalization in the year 1969, attaining the status of a national level player in terms of geographical reach and clientele segments. Eighties was characterized by business diversification for the Bank. The Bank has expanded its domestic presence, with 2678 branches spread across all geographical segments. Apart from 111 specialized service branches, the Bank has 195 Extension Counters.

Table 5.8 - Position of Asset Quality of Canara Bank

As on March	GROSS NPA (RS.CR.)	GNPA Ratio	Net NPA (RS.CR.)	NNPA Ratio
2003	2474.78	6.114856	1453.88	3.59
2004	3126.84	6.455261	1378.31	2.89
2005	2370.55	3.923361	1125.28	1.88
2006	1792.61	2.256965	879.18	1.12
2007	1493.43	1.516085	926.97	0.94
2008	1272.62	1.186724	899.03	0.84
2009	2167.97	1.568499	1507.25	1.09
2010	2590.31	1.529699	1799.7	1.06
2011	3137.36	1.485012	2329.91	1.1
2012	4031.75	1.734162	3386.31	1.46
2013	6260.16	2.584956	5278.07	2.18
2014	7570.21	2.514456	5965.46	1.98
Mean	3190.715833	2.73917	2244.113	1.6775
SD	1835.347949	1.737718	1661.796	0.825441
CV	57.5215107	63.43959	74.05137	49.20659
CAGR	0.106987835	-0.07761	0.136941	-0.05266

Source- Researcher's own computation Based on RBI-DBIE Database

This table indicates that All GNPA, NNPA (in absolute terms), GNPA ratio (decreased from 6.11% to 1.19%), NNPA ratio (came down from 3.59% to 0.84%)

have witnessed downward tendency from 2003 to 2008. Again these parameters started increasing and reached up to 2.52% and 1.98% respectively during 2009 to 2014 period. Although, the compounded growth rate indicates negative growth rate of -7% and -5% respectively in case of GNPA Ratio and NNPA Ratio.

5.5.6 Union Bank

Union Bank of India is one of largest state-owned banks in India and is listed on the Forbes 2000. The Bank's business segments include Treasury Operations, Retail Banking Operations, Corporate Wholesale Banking and Other Banking Operations. They offer various types of deposits such as savings bank deposits, current deposits, current and savings account (CASA) deposits, and term deposits. The Bank's advances portfolio includes large corporate advances; micro, small and medium enterprises advances; agriculture advances, and retail advances. Their retail advances include home loan, vehicle loan, education and other retail loans. Union Bank of India was originally incorporated on November 11, 1919 in Mumbai with the name The Union Bank of India Ltd. In July 19, 1969, the Bank was nationalized and the name of the Bank was changed to 'Union Bank of India'. Pursuant to nationalization, the Bank sponsored four regional rural banks in 1972. In the year 1975, Belgaum Bank Ltd, a private sector bank was amalgamated with the Bank.

Table 5.9- Position of Asset Quality of Union Bank

As on March	GROSS NPA (RS.CR.)	GNPA Ratio	Net NPA (RS.CR.)	NNPA Ratio
2003	2387.61	9.357731	1253.43	4.91
2004	2346.84	8.114461	845.15	2.87
2005	2058.15	5.131894	1060.38	2.64
2006	2098.05	3.930408	833.95	1.56
2007	1872.62	3.001646	601.22	0.96
2008	1656.6	2.230603	127.57	0.17
2009	1923.35	1.992402	325.94	0.34
2010	2670.89	2.238514	965.33	0.81
2011	3622.82	2.39944	1803.44	1.19
2012	5449.86	3.063749	3025.03	1.7
2013	6313.83	3.034005	3353.37	1.61
2014	9563.74	4.174402	5340.25	2.33
Mean	3497.03	4.055771	1627.922	1.7575
SD	2315.4344	2.283007	1468.732	1.249394
CV	66.21145372	56.29033	90.22132	71.08928
CAGR	0.134456036	-0.07076	0.140837	-0.06552

Source- Researcher's own computation Based on RBI-DBIE Database

Above table reveals that the parameters like GNPA, NNPA in absolute terms and GNPA, NNPA ratios (reduced from 9.36% to 2.23% and from 4.91% to 0.17% during 2003-2008 period) have reduced over the years. From the year 2019, all of these parameters have increased, except GNPA Ratio which reduced further to 1.99% and increased from the year 2010, (thus, GNPA, NNPA ratios have increased from 1.99% to 3.03% and from 0.34% to 1.61% respectively during 2010-2014 period). Although CAGR of GNPA ratio, NNPA ratio showed negative growth rate of -7%&-6% during 2003 to 2014 period, inspite of CAGR of GNPA and NNPA showed positive growth in absolute terms.

5.5.7 Bank of India

Bank of India is a state-owned commercial bank with headquarters in Mumbai. The Bank provides a wide range of banking products and financial services to corporate and retail customers. The bank provides specialized services for

businesses (dealing in foreign exchange), NRIs, merchant banking, etc. They also have specialized branches that deal in asset recovery, hi-tech agricultural finance, lease finance and treasury, and small scale industries. The Bank offers products such as mutual funds, venture capital, depository services, bullion trading and credit cards. The Bank operates in three business segments, namely Treasury Operations, Wholesale Banking Operations and Retail Banking Operations. The Bank is having their presence at 29 locations in 18 countries across four continents. They are having 3101 branches in India spread over all states/ union territories including 141 specialized branches. Bank of India was incorporated on September 7, 1906 by a group of eminent businessmen from Mumbai. The Bank was started with one office in Mumbai, with a paid-up capital of 50 lakh. The Bank was the first in India promoted by Indian interests to serve all the communities of India.

Table 5.10- Position of Asset Quality of Bank of India

As on March	GROSS NPA (RS.CR.)	GNPA Ratio	Net NPA (RS.CR.)	NNPA Ratio
2003	3803.93	8.92	2286.14	5.37
2004	3734.02	8.14	2061.57	4.5
2005	3155.91	5.68	1554.28	2.8
2006	2479.18	3.80	969.5	1.49
2007	2100.49	2.47	812.03	0.95
2008	1930.92	1.70	591.98	0.52
2009	2470.88	1.73	628.21	0.44
2010	4882.65	2.90	2207.45	1.31
2011	4811.55	2.26	1944.99	0.91
2012	5893.97	2.37	3656.42	1.47
2013	8765.25	3.03	5947.31	2.06
2014	11868.6	3.20	7417.22	2
Mean	4658.1125	3.85	2506.425	1.985
SD	2854.994805	2.330908	2066.833	1.477032
CV	61.29080834	60.54307	82.4614	74.4097
CAGR	0.108981422	-0.08898	0.112928	-0.08588

Source- Researcher's own computation Based on RBI-DBIE Database

It is observed from the above table that all the parameters witnessed deceleration from 2003 to 2008 period, where, GNPA Ratio reduced from 8.92% to 1.70%, NNPA Ratio came down from 5.37% to 0.52%, along with the reduction of GNPA and NNPA in absolute terms as well. From 2009, again a constant surge can be observed in the aforesaid parameters, except in NNPA Ratio which maintained its negative trend in the year 2009 as well and from 2010 started increasing. CAGR suggests positive growth in terms of both GNPA and NNPA in absolute terms, where as, in case of GNPA Ratio and NNPA Ratio negative growth rate of -8% in each case is observed during 2003-2014 period.

5.5.8 Syndicate Bank

Syndicate Bank is one of the major public sector banks in India. The Bank provides a range of financial products and services to the retail customers, including housing loans, retail trade loans, vehicle loans, consumer loans, education loans, mortgage loans and investment loans. They also offer other services, such as Tele Banking, short messaging service banking and data warehousing. The Bank delivers their products and services through their extensive branch network, extension counters, ATMs, phone banking and the Internet. As of March 2008, the total branch network of the Bank was 2,169, comprising of 644 rural, 492 semi urban, 508 urban and 52 metro branches. The Bank has 21 specialised SME branches, 11 extension counters, 9 satellite offices and 1 SB sub office. The Bank also has an overseas bank in London. Syndicate Bank was established in the year 1925 in Udupi, Karnataka by Upendra Ananth Pai, T M A Pai and Varman Kuduva. The business of the Bank was commenced on November 10, 1925 with the name Canara Industrial and Banking Syndicate Ltd. In the year 1928, the Bank opened their first branch at Brahmavar in Dakshina Kannada. In the year 1946, they opened 29 branches in a single day in rural areas. In the year 1953, the Bank took over the assets and liabilities of two Local Banks, namely Maharashtra Apex Bank Ltd and Southern India Apex Bank Ltd. In the year 1957,

they opened their 100th branch at Ilkal in Karnataka. In the year 1962, the Bank entered into foreign exchange business by opening Foreign Exchange Department at Mumbai.

Table 5.11- Position of Asset Quality of Syndicate Bank

As on March	GROSS NPA (RS.CR.)	GNPA Ratio	Net NPA (RS.CR.)	NNPA Ratio
2003	1420.17	8.709841		4.29
2004	1589.92	7.700519		2.58
2005	1432.78	5.360355	425.89	1.59
2006	1506.36	4.130836	312.53	0.86
2007	1559.81	3.018767	391.01	0.76
2008	1768.65	2.761315	622.73	0.97
2009	1594.54	1.955716	631.77	0.77
2010	2006.82	2.219777	963.2	1.07
2011	2598.97	2.433905	1030.84	0.97
2012	3182.7	2.57458	1185.43	0.96
2013	2978.5	2.018378	1124.77	0.76
2014	4611.13	2.651409	2720.6	1.56
Mean	2187.529167	3.794617	940.877	1.428333
SD	939.5265658	2.185433	665.4907	0.999023
CV	42.94921321	57.59298	70.73089	69.94328
CAGR	0.113004712	-0.10248	0.183628	-0.08786

Source- Researcher's own computation Based on RBI-DBIE Database

This table indicates that, GNPA ratio (decreased from 8.71% to 1.96%), NNPA ratio (came down from 4.29% to 0.77%) have witnessed downward tendency from 2003 to 2009 (in 2008, NNPA Ratio increased slightly to reach 0.97% and reduced in next year again). Again these parameters started increasing and reached up to 2.65% and 1.56% respectively during 2009 to 2014 period. Although, the compounded growth rate indicates negative growth rate of -10% and -8% respectively in case of GNPA Ratio and NNPA Ratio.

5.5.9 Allahabad Bank

Allahabad bank, the oldest joint stock bank of the country, was founded in 1865 at Allahabad by a group of British pensioners. In 1920, the bank became a part of P & O Banking Corporation. In 1923, the bank shifted its headquarters and registered

office to Kolkata (then Calcutta) for operational convenience. P & O Banking Corporation ran this bank as a separate entity. In 1927, the bank became a part of the Chartered Bank group, when Chartered Bank acquired the controlling interest in the P & O Banking Corporation.

Allahabad Bank was nationalized on July 19, 1969. The logo of Allahabad Bank signifies its city of origin — Allahabad. The logo symbolizes the confluence of three rivers (Triveni Sangam) – Ganga, Yamuna, and the mythical Saraswathi — at Allahabad. Allahabad bank has adopted CBS (Core Banking Service) since 2006. Today the bank has operations even in Hong Kong where it opened its first overseas branch in 2007.

Table 5.12- Position of Asset Quality of Allahabad Bank

As on March	GROSS NPA (RS.CR.)	GNPA Ratio	Net NPA (RS.CR.)	NNPA Ratio
2003	1841.5	14.68	886.98	7.08
2004	1418.46	9.25	362.83	2.37
2005	1284.27	6.07	270.7	1.28
2006	1183.83	4.06	246.09	0.84
2007	1093.59	2.65	440.19	1.07
2008	1010.51	2.03	399.81	0.8
2009	1078.25	1.83	422.11	0.72
2010	1221.8	1.71	470.15	0.66
2011	1647.92	1.76	736.37	0.79
2012	2058.98	1.85	1091.7	0.98
2013	5136.99	3.97	4126.76	3.19
2014	8068.04	5.85	5721.81	4.15
Mean	2253.678333	4.6425	1264.625	1.994167
SD	2057.802713	3.760315	1686.146	1.872807
CV	91.30862567	80.99763	133.3317	93.91429
CAGR	0.143739021	-0.08024	0.184682	-0.0474

Source- Researcher's own computation Based on RBI-DBIE Database

It is observed from the above table that all the parameters witnessed deceleration from 2003 to 2010 period, where, GNPA Ratio reduced from 14.68% to 1.71%, NNPA Ratio came down from 7.08% to 0.66%, along with the reduction of GNPA and NNPA in absolute terms as well (except in the year 2007, when there has been

some increase in all the parameters barring GNPA in absolute terms studied above). From 2009, again a constant surge can be observed in the aforesaid parameters, except in NNPA Ratio which maintained its negative trend in the year 2009 as well and from 2010 started increasing. CAGR suggests positive growth in terms of both GNPA and NNPA in absolute terms, in case of GNPA Ratio and NNPA Ratio negative growth rate of -8% in each case is observed during 2003-2014 period.

5.5.10 Indian Overseas Bank

Indian Overseas Bank (IOB) was founded on February 10th 1937, by Shri. M. Ct. M. Chidambaram Chettyar. M.Ct., as he was popularly known, was pioneer in many fields – Banking, Insurance and Industry. IOB was founded with the twin objectives of specialising in foreign exchange business and overseas banking. Beginning with United India Life Insurance, he ventured into general insurance in the form of United India Fire and General Insurance Company Ltd., and then the successful bank — the Indian Overseas Bank. He also set up Travancore Rayons, India's first synthetic fibre unit, in Kerala.

The Indian Overseas Bank, though thought of by some as a 'Chettiar bank', adopted from its very inception an approach quite different to other banks. Indian Overseas Bank commenced operations simultaneously in Madras, Karaikudi, the chief town of Chettinad, and Rangoon on February 10, 1937.

It was the bank that put the country's name on the map of banking in the Far East, lending assistance and prestige to hundreds and thousands of Indians abroad. In 1969, 15 years after MCT's death, IOB became one of the youngest among the 14

banks nationalised. It is the first public sector bank to introduce anywhere banking at its 129 branches in the four metros.

Table 5.13- Position of Asset Quality of Indian Overseas Bank

As on March	GROSS NPA (RS.CR.)	GNPA Ratio	Net NPA (RS.CR.)	NNPA Ratio
2003	1896.48	10.86995	912.21	5.23
2004	1575.85	7.764774	577.52	2.85
2005	1388.15	5.507397	319.2	1.27
2006	1227.55	3.531888	224.33	0.65
2007	1120.21	2.380372	257.83	0.55
2008	996.95	1.65053	363.2	0.6
2009	1923.41	2.568476	999.14	1.33
2010	3611.08	4.571036	1994.97	2.52
2011	3089.59	2.762682	1328.42	1.19
2012	3920.07	2.785635	1907.44	1.35
2013	6607.96	4.120598	4027.21	2.5
2014	9020.48	5.128723	5658.12	3.2
Mean	3031.481667	4.470172	1547.466	1.936667
SD	2383.451636	2.516961	1617.467	1.323287
CV	78.62332344	56.30569	104.5236	68.32808
CAGR	0.152314521	-0.06601	0.180463	-0.04368

Source- Researcher's own computation Based on RBI-DBIE Database

From the table it is observed that during 2003 to 2007 period, all parameters decreased GNPA ratio came down from 10.87% to 2.38% (further reduced to 1.65% in 2008) and NNPA ratio decreased from 5.23% to 0.55%. During 2008 to 2014, there has been some ups and down in respect of the parameters studied, in 2014 all of these ratios increased to reach 5.13% and 3.2% respectively. CAGR suggests negative growth rate of -6% and -4% respectively.

5.5.11 Punjab National Bank

Punjab National Bank is a state-owned commercial bank located in New Delhi. The Bank is one of the Big Four Banks of India. They offer banking products, and also operate credit card and debit card business, bullion business, life and non-life

insurance business, and gold coins and asset management business. They are recognized as the Bank offering highest levels of customer satisfaction in Delhi and Chennai.

The Bank has the largest domestic network of 4997 offices, including 46 extension counters among Nationalized Banks. All their branches offer Core/ Centralized Banking Solution (CBS) along with a variety of financial products catering to different market segments. They have international presence in 9 countries, with a branch at Kabul, 2 branches in Hong Kong, representative offices at Almaty, Dubai, Shanghai and Oslo, a wholly owned subsidiary in UK (with 5 branches), and a joint venture with Everest Bank Ltd, Nepal. Punjab National Bank was nationalized in July 1969 along with 13 other banks. In the year 1986, they acquired Hindustan Commercial, which added Hindustan's 142 branches to the Bank's network.

Table 5. 14 - Position of Asset Quality of Punjab National Bank

As on March	GROSS NPA (RS.CR.)	GNPA Ratio	Net NPA (RS.CR.)	NNPA Ratio
2003	4980.06	12.37955	1526.91	3.86
2004	4670.13	9.889164	448.96	0.98
2005	3741.34	6.192964	119.44	0.2
2006	3138.29	4.20528	210.17	0.29
2007	3390.72	3.510189	725.62	0.76
2008	3319.3	2.77762	753.78	0.64
2009	2506.9	1.62046	263.85	0.17
2010	3214.41	1.722609	981.69	0.53
2011	4379.39	1.808868	2038.63	0.85
2012	8719.62	2.968131	4454.23	1.52
2013	13465.79	4.360741	7236.5	2.35
2014	18880.06	5.405591	9916.99	2.85
Mean	6200.500833	4.736764	2389.731	1.25
SD	4841.055183	3.21184	3040.005	1.125796
CV	78.07522833	67.80662	127.2112	90.06368
CAGR	0.128795696	-0.07256	0.185413	-0.0272

Source- Researcher's own computation Based on RBI-DBIE Database

The above table reveals that during 2003 to 2009, all the parameters under consideration reduced, GNPA, NNPA ratios reduced from 12.38% to 1.62% and 3.86% to 0.17% respectively. From 2010, all of these parameters increased to reach 5.41% and 2.85% respectively. CAGR suggests positive increase in absolute terms, but the ratios depict negative increase of -7% and -2% respectively.

5.5.12 HDFC Bank

HDFC Bank Ltd is a major Indian financial services company based in Mumbai. The Bank is a publicly held banking company engaged in providing a wide range of banking and financial services including commercial banking and treasury operations. The Bank at present has an enviable network of 1,725 branches spread in 780 cities across India. They also have one overseas branch in Bahrain and two representative offices in UAE and Kenya. The Bank has two subsidiary companies, namely HDFC Securities Ltd and HDB Financial Services Ltd. The Bank has three primary business segments, namely banking, wholesale banking and treasury. HDFC Bank Ltd was incorporated on August 30, 1994 by Housing Development Finance Corporation Ltd. In the year 1994, Housing Development Finance Corporation Ltd was amongst the first to receive an 'in principle' approval from the Reserve Bank of India to set up a bank in the private sector, as part of the RBI's liberalization of the Indian Banking Industry. HDFC Bank commenced operations as a Scheduled Commercial Bank in January 1995.

Table 5. 15- Position of Asset Quality of HDFC Bank

As on March	GROSS NPA (RS. CR.)	GNPA Ratio	Net NPA (RS. CR.)	NNPA Ratio
2003	265.45	2.258215	42.92	0.37
2004	335.61	1.891346	27.95	0.16
2005	439.17	1.717769	60.63	0.24
2006	508.89	1.451431	155.18	0.44
2007	657.76	1.401136	202.89	0.43
2008	906.97	1.429945	298.52	0.47
2009	1988.07	2.010527	627.62	0.63
2010	1816.76	1.443814	392.05	0.31
2011	1694.34	1.059077	296.41	0.19
2012	1999.39	1.023124	352.33	0.18
2013	2334.64	0.9739	468.95	0.2
2014	2989.28	0.98656	820.03	0.27
Mean	1328.0275	1.47057	312.1233	0.324167
SD	877.2125305	0.409078	231.5843	0.139311
CV	66.0537926	27.81761	74.19642	42.97521
CAGR	0.246230952	-0.07252	0.307585	-0.02824

Source- Researcher's own computation Based on RBI-DBIE Database

Above table indicates decrease in GNPA and NNPA ratios up to 1.40% from 2.25% during 2003 to 2007 and 0.37% to 0.25% during 2003 to 2005 period. In this case, the change in the upward and downward direction of the ratios are very meagre and hence CV (28% and 43% respectively) is also low, suggesting lower variability in performance. Thus HDFC bank is maintaining consistency in terms of its asset quality.

5.5.13 ICICI Bank

ICICI Bank Ltd is a major banking and financial services organization in India. The Bank is the second largest bank in India and the largest private sector bank in India by market capitalization. They are a publicly held banking company engaged in providing a wide range of banking and financial services including commercial banking and treasury operations. The Bank and their subsidiaries offers a wide range of banking and financial services including commercial banking, retail

banking, project and corporate finance, working capital finance, insurance, venture capital and private equity, investment banking, broking and treasury products and services. They offer through a variety of delivery channels and through their specialised subsidiaries in the areas of investment banking, life and non-life insurance, venture capital and asset management. ICICI Bank Ltd was incorporated in the year 1994 as a part of the ICICI group with the name ICICI Banking Corporation Ltd. The initial equity capital was 75.0% by ICICI and 25.0% by SCICI Ltd, a diversified finance and shipping finance lender of which ICICI owned 19.9% at December 1996. Pursuant to the merger of SCICI into ICICI, ICICI Bank became a wholly-owned subsidiary of ICICI. In September 10, 1999, the name of the Bank was changed from ICICI Banking Corporation Ltd to ICICI Bank Ltd.

Table 5. 16- Position of Asset Quality of ICICI Bank

As on March	GROSS NPA (RS.CR.)	GNPA Ratio	Net NPA (RS.CR.)	NNPA Ratio
2003	5027.38	9.435878	0	5.21
2004	3047.59	4.864654	0	2.21
2005	2770.43	3.030934	1505.27	1.65
2006	2222.59	1.520623	1052.68	0.72
2007	4126.06	2.106577	1992.04	1.02
2008	7579.54	3.359486	3490.55	1.55
2009	9649.31	4.419986	4553.94	2.09
2010	9480.65	5.231985	3841.11	2.12
2011	10034.26	4.637635	2407.36	1.11
2012	9475.33	3.734449	1860.84	0.73
2013	9607.75	3.31017	2230.56	0.77
2014	10505.84	3.101789	3297.96	0.97
Mean	6960.560833	4.062847	2186.026	1.679167
SD	3114.484307	1.931852	1377.926	1.191571
CV	44.74473223	47.54922	63.03339	70.96203
CAGR	0.06929862	-0.09619	0.073906	-0.14172

Source- Researcher's own computation Based on RBI-DBIE Database

From the above table it is reflected that there has been some ups and downs in terms of the parameters. GNPA, NNPA ratios as well as GNPA, NNPA in absolute

terms decreased from 9.44% to 1.52% and 5.21% to 0.72% during 2003-2006 period. Again it started to increase from 2007-2010, further to decrease during 2011-14 period. Although, CAGR shows negative trend -9% and -14% respectively, higher CV (47% and 70%) indicate scope for improvement in terms of asset quality of the bank.

5.5.14 AXIS Bank

Axis Bank- a private bank- began its operations in 1994, after the Government of India allowed new private banks to be established. The Bank was promoted jointly by the Administrator of the specified undertaking of the Unit Trust of India (UTI- I), Life Insurance Corporation of India (LIC) and General Insurance Corporation of India (GIC) and other four PSU insurance companies, i.e. National Insurance Company Ltd., The New India Assurance Company Ltd., The Oriental Insurance Company Ltd. and United India Insurance Company Ltd.

Table 5.17 - Position of Asset Quality of AXIS Bank

As on March	GROSS NPA (RS.CR.)	GMPA Ratio	Net NPA (RS.CR.)	NNPA Ratio
2003	228.93	3.188476	162.02	2.39
2004	274.72	2.934118	112.21	1.29
2005	311.1	1.993858	216.85	1.39
2006	377.95	1.693762	219.83	0.98
2007	418.67	1.135331	266.33	0.72
2008	494.61	0.829032	248.29	0.42
2009	897.77	1.100792	327.13	0.4
2010	1318	1.263167	419	0.4
2011	1599.42	1.123126	410.35	0.29
2012	1806.3	1.064034	472.64	0.27
2013	2393.42	1.215144	704.13	0.36
2014	3146.41	1.367607	1024.62	0.44
Mean	1105.608333	1.575704	381.95	0.779167
SD	917.9383512	0.727422	247.6787	0.610907
CV	83.02563607	46.16492	64.84583	78.40521
CAGR	0.269009234	-0.07407	0.182545	-0.14259

Source- Researcher's own computation Based on RBI-DBIE Database

This table reveals that during 2003-2008 there has been some decrease in GNPA and NNPA ratios of the bank, (reduced from 3.18% to 0.82% and 2.39% to 0.42% respectively), started increasing from 2009 to 2014 period (from 1.10% to 1.36% and 0.4% to 0.44% respectively). Higher CV (46% and 78%) suggests higher variation in the GNPA and NNPA ratios in spite of having -7% and -14% compounded annual growth rate.

5.6 Summary of Asset Quality of Indian Banking Sector

The following table summarises the Asset Quality of Indian Banking Sector in terms of Gross Non-Performing Assets.

Table 5.18 - GNPA Ratio of all banks

Sl No	Name of the Banks	GNPA Ratio														CV	CAGR(%)	Rank
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014					
1	SBI	9.80	8.02	6.15	3.68	2.96	3.08	2.90	3.09	3.35	4.57	4.90	5.09	44.04	-5.77%	12		
2	BANK OF BARODA	11.79	11.18	7.65	3.99	2.50	1.86	1.29	1.37	1.38	1.55	2.43	2.99	88.40	-11.72%	1		
3	ORIENTAL BANK OF COMMERCE	7.31	6.15	9.93	6.30	3.29	2.35	1.54	1.76	2.00	3.20	3.24	4.04	58.59	-5.25%	13		
4	CORPORATION BANK	5.46	5.20	3.49	2.61	2.09	1.49	1.15	1.03	0.91	1.27	1.73	3.46	61.11	-4.08%	14		
5	CANARA BANK	6.11	6.46	3.92	2.26	1.52	1.19	1.57	1.53	1.49	1.73	2.58	2.52	63.44	-7.76%	6		
6	UNION BANK	9.36	8.11	5.13	3.93	3.00	2.23	1.99	2.24	2.40	3.06	3.03	4.17	56.29	-7.08%	10		
7	BANK OF INDIA	8.92	8.14	5.68	3.80	2.47	1.70	1.73	2.90	2.26	2.37	3.03	3.20	60.54	-8.90%	4		
8	SYNDICATE BANK	8.71	7.70	5.36	4.13	3.02	2.76	1.96	2.22	2.43	2.57	2.02	2.65	57.59	-10.25%	2		
9	ALLAHABAD BANK	14.68	9.25	6.07	4.06	2.65	2.03	1.83	1.71	1.76	1.85	3.97	5.85	81.00	-8.02%	5		
10	INDIAN OVERSEAS BANK	10.87	7.76	5.51	3.53	2.38	1.65	2.57	4.57	2.76	2.79	4.12	5.13	56.31	-6.60%	11		
11	PUNJAB NATIONAL BANK	12.38	9.89	6.19	4.21	3.51	2.78	1.62	1.72	1.81	2.97	4.36	5.41	67.81	-7.26%	8		
12	AXIS BANK	3.19	2.93	1.99	1.69	1.14	0.83	1.10	1.26	1.12	1.06	1.22	1.37	46.16	-7.41%	7		
13	HDFC BANK	2.26	1.89	1.72	1.45	1.40	1.43	2.01	1.44	1.06	1.02	0.97	0.99	27.82	-7.25%	9		
14	ICICI BANK	9.44	4.86	3.03	1.52	2.11	3.36	4.42	5.23	4.64	3.73	3.31	3.10	47.55	-9.62%	3		

Source- Researcher's own computation Based on RBI-DBIE Database

The above table shows that, Bank of Baroda is the better performer in terms of the improvement of Asset quality of banks, measured in terms of Gross Non-Performing assets. The CAGR of GNPA Ratio of the Bank of Baroda is found to be the lowest (-11.72%), followed by Syndicate bank (-10.25) and ICICI bank (-9.62%).

The following table represents the summated picture of Asset Quality of Indian Banking Sector in terms of Net Non-Performing Assets.

Table 5.19 - NNPA Ratio of all banks

Sl. No.	Name of The Banks	NNPA Ratio														Rank
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	CV	CAGR	
1	SBI	4.5	3.48	2.65	1.88	1.56	1.78	1.79	1.72	1.63	1.82	2.1	2.57	37.26	-4.96%	8
2	BANK OF BARODA	3.72	2.99	1.45	0.87	0.6	0.47	0.31	0.34	0.35	0.54	1.28	1.52	87.87	-7.81%	5
3	ORIENTAL BANK OF COMMERCE	1.4	0	1.29	0.49	0.49	0.99	0.65	0.87	0.98	2.21	2.27	2.82	66.86	6.57%	14
4	CORPORATION BANK	1.65	1.8	1.12	0.64	0.47	0.32	0.29	0.31	0.46	0.87	1.19	2.32	67.65	3.15%	13
5	CANARA BANK	3.59	2.89	1.88	1.12	0.94	0.84	1.09	1.06	1.1	1.46	2.18	1.98	49.21	-5.27%	7
6	UNION BANK	4.91	2.87	2.64	1.56	0.96	0.17	0.34	0.81	1.19	1.7	1.61	2.33	71.09	-6.55%	6
7	BANK OF INDIA	5.37	4.5	2.8	1.49	0.95	0.52	0.44	1.31	0.91	1.47	2.06	2	74.41	-8.59%	4
8	SYNDICATE BANK	4.29	2.58	1.59	0.86	0.76	0.97	0.77	1.07	0.97	0.96	0.76	1.56	69.94	-8.79%	3
9	ALLAHABAD BANK	7.08	2.37	1.28	0.84	1.07	0.8	0.72	0.66	0.79	0.98	3.19	4.15	93.91	-4.74%	9
10	INDIAN OVERSEAS BANK	5.23	2.85	1.27	0.65	0.55	0.6	1.33	2.52	1.19	1.35	2.5	3.2	68.33	-4.37%	10
11	PUNJAB NATIONAL BANK	3.86	0.98	0.2	0.29	0.76	0.64	0.17	0.53	0.85	1.52	2.35	2.85	90.06	-2.72%	12
12	AXIS BANK	2.39	1.29	1.39	0.98	0.72	0.42	0.4	0.4	0.29	0.27	0.36	0.44	78.41	-14.26%	1
13	HDFC BANK	0.37	0.16	0.24	0.44	0.43	0.47	0.63	0.31	0.19	0.18	0.2	0.27	42.98	-2.82%	11
14	ICICI BANK	5.21	2.21	1.65	0.72	1.02	1.55	2.09	2.12	1.11	0.73	0.77	0.97	70.96	-14.17%	2

Source- Researcher's own computation Based on RBI-DBIE Database

From the above table it is evident that lowest growth in Net Non-Performing Assets can be observed from Axis bank (-14.26%), indicating improvement in asset quality over the years. Axis bank is followed by ICICI Bank (-14.17%) and Syndicate bank (-8.79%). In terms of improvement of asset quality using NNPA ratio, Oriental bank of Commerce has depicted worst performance (6.57%).

Further, Paired Sample t-test is undertaken to test the difference of mean of two time lag before 2008 and after 2008 in the light of Hypothesis 2 mentioned below-

- ▶ H_0 = There is no significant difference in asset quality of banks before and after 2008

Table 5.20 - Results of t-test

		Mean	N	Std. Deviation	t	d.f.	Std. Error Mean
Pair 1	GNPA ratio 2003-2008	4.75740	14	1.590482	6.518	13	.425074
	GNPA ratio 2009-2014	2.47435	14	.886217			.236851

As the calculated value of t (6.518) >table value of t (2.160), we reject the null hypothesis and accept the alternative hypothesis that there is significant difference in asset quality of banks. Further, $MSE(2009-14) < MSE(2003-08)$, so we can say that in spite of recession, asset quality of banks has improved during 2009-14 compared to the previous period.

5.7 Chapter Findings

- The study reveals that the gross nonperforming assets of Scheduled Commercial banks in India have witnessed downward tendency and have been gradually becoming low if we mull over the GNPA Ratio (15.7% in

1997 to 2.3% in 2009) since the year 1997. Further it is revealed that the gross nonperforming assets have again witnessed a surge since the year 2010 as depicted by GNPA ratio (2.4% in 2010 to 3.8% in 2014) and these toxic assets are increasing regularly over the following years.

- The fluctuation in asset quality is mostly observed in case of Private sector banks with the highest Coefficient of variation (57.12%), followed by Public sector banks (55.31%) and foreign banks (34.39%). However, the compounded growth rate shows negative growth of GNPA over the years under study, which is highest that is -7% in case of public sector banks, indicating improvement of asset quality of this bank group over the years in spite of the recent increase. Also the negative increase in both private sector and foreign banks justifies the initiatives adopted by RBI to curb NPA, and further suggests availability of some room for more improvement.
- In case of NNPA ratio, there has been significant decrease during the period 1997 to 2014, (from 8.1% in 1997 to 0.97% in 2011 in case of Scheduled Commercial banks, from 9.2% to 1.09% in case of Public Sector banks, from 5.4% to 0.6% in case of Private sector banks). Still we can observe a sluggish trend across all bank groups since the year 2010, but the intensity of increase is mostly observed in case of Public sector banks. But the compounded growth rate of increase (shows negative growth rate) of Public sector banks (-5%) is higher than that of private sector banks (-17%). This indicates the rate of decrease of net nonperforming assets is higher in case of Private sector banks compared to other bank groups.

- Since the year 2004, there has been some continuous improvement in terms of the aforesaid parameters of asset quality in State Bank of India and its associates which continued till 2008; e.g., GNPA Ratio decreased from 9.80% in 2003 to 2.90% in 2009, NNPA ratio 4.5% to 1.78% in 2008. Since 2009, again the GNPA, NNPA in absolute terms and NNPA ratio (GNPA ratio started increasing from the year 2010) witnessed surge indicating accumulation of more and more toxic assets in the book of the bank. CAGR (-5% and -4% respectively) indicates some improvement in asset quality over the span of 12 years.
- In case of Bank of Baroda, both GNPA and NNPA ratio decreased from 11.79% to 1.29% and 3.72% to 0.31% in the year 2009. The year 2010 witnessed surge in the aforesaid parameters, which continued over the following years to reach up to 2.43% and 1.28% respectively in the year 2014. Also CAGR is found to be negative i.e., -11%, -7% in case of both GNPA and NNPA Ratios.
- In case of Oriental Bank of Commerce, GNPA, NNPA in absolute terms and GNPA, NNPA ratios (reduced from 7.3% to 1.55% and from 1.4% to 0.65% during 2003-2009 period) have reduced over the years. From the year 2010, all of these parameters have increased (thus, GNPA, NNPA ratios have increased from 1.76% to 3.24% and from 0.87% to 2.27% respectively during 2010-2014 period). Although CAGR of GNPA ratio showed negative growth rate of -5% during 2003 to 2014 period, NNPA ratio showed positive growth rate of 6% along with showing positive CAGR in absolute terms as well.

- In case of Corporation bank, it is evident that the parameters like GNPA, NNPA (In Absolute Terms), GNPA, NNPA Ratio have decreased during the period from 2003 to 2009. Thus both GNPA and NNPA ratio decreased from 5.47% to 1.15% and 1.65% to 0.29% in the year 2009. The year 2010 witnessed a surge in the aforesaid parameters (except GNPA RATIO, which further got reduced upto 1.02%) which continued over the following years to reach up to 3.46% and 2.32% respectively in the year 2014. CAGR depicts negative growth of -4% in case of GNPA Ratio, whereas it is positive in case of all the other parameters like NNPA ratio, GNPA and NNPA in absolute terms.
- Figures from CANARA bank shows that All GNPA, NNPA (in absolute terms), GNPA ratio (decreased from 6.11% to 1.19%), NNPA ratio(came down from 3.59% to 0.84%) have witnessed downward tendency from 2003 to 2008. Again these parameters started increasing and reached up to 2.52% and 1.98% respectively during 2009 to 2014 period. Although, the compounded growth rate indicates negative growth rate of -7% and -5% respectively in case of GNPA Ratio and NNPA Ratio.
- In case of Union bank, the parameters like GNPA, NNPA in absolute terms and GNPA, NNPA ratios (reduced from 9.36% to 2.23% and from 4.91% to 0.17% during 2003-2008 period) have reduced over the years. From the year 2019, all of these parameters have increased, except GNPA Ratio which reduced further to 1.99% and increased from the year 2010, (thus, GNPA, NNPA ratios have increased from 1.99% to 3.03% and from 0.34% to 1.61% respectively during 2010-2014 period). Although CAGR of

GNPA ratio, NNPA ratio showed negative growth rate of -7%&-6% during 2003 to 2014 period, although CAGR of GNPA and NNPA showed positive growth in absolute terms.

- The results obtained from Bank of India reveals that all the parameters witnessed deceleration from 2003 to 2008 period, whereas, GNPA Ratio reduced from 8.92% to 1.70%, NNPA Ratio came down from 5.37% to 0.52%, along with the reduction of GNPA and NNPA in absolute terms as well. From 2009, again a constant surge can be observed in the aforesaid parameters, except in NNPA Ratio which maintained its negative trend in the year 2009 as well and from 2010 started increasing. CAGR suggests positive growth in terms of both GNPA and NNPA in absolute terms, in case of GNPA Ratio and NNPA Ratio negative growth rate of -8% in each case is observed during 2003-2014 period.
- In case of Syndicate bank it is observed that, GNPA ratio (decreased from 8.71% to 1.96%), NNPA ratio (came down from 4.29% to 0.77%) have witnessed downward tendency from 2003 to 2009 (in 2008, NNPA Ratio increased slightly to reach 0.97% and reduced in next year again). Again these parameters started increasing and reached up to 2.65% and 1.56% respectively during 2009 to 2014 period. Although, the compounded growth rate indicates negative growth rate of -10% and -8% respectively in case of GNPA Ratio and NNPA Ratio.
- Figures from Allahabad bank reveals that all the parameters witnessed deceleration from 2003 to 2010 period, whereas, GNPA Ratio reduced

from 14.68% to 1.71%, NNPA Ratio came down from 7.08% to 0.66%, along with the reduction of GNPA and NNPA in absolute terms as well (except in the year 2007, when there has been some increase in all the parameters barring GNPA in absolute terms studied above). From 2009, again a constant surge can be observed in the aforesaid parameters, except in NNPA Ratio which maintained its negative trend in the year 2009 as well and from 2010 these ratios showed increasing trend. CAGR suggests positive growth in terms of both GNPA and NNPA in absolute terms, in case of GNPA Ratio and NNPA Ratio negative growth rate of -8% in each case is observed during 2003-2014 period.

- From the results of Indian Overseas Bank, it is observed that during 2003 to 2007 period, all parameters decreased GNPA ratio came down from 10.87% to 2.38% (further reduced to 1.65% in 2008) and NNPA ratio decreased from 5.23% to 0.55%. During 2008 to 2014, there has been some ups and down in respect of the parameters studied, in 2014 all of these ratios increased to reach 5.13% and 3.2% respectively. CAGR suggests negative growth rate of -6% and -4% respectively.
- The results obtained from Punjab National Bank reveals that during 2003 to 2009, all the parameters under consideration have decreased, GNPA, NNPA ratios reduced from 12.38% to 1.62% and 3.86% to 0.17% respectively. From 2010, all of these parameters increased to reach 5.41% and 2.85% respectively. CAGR suggests positive increase in absolute terms, but the ratios depict negative increase of -7% and -2% respectively.

- In case of HDFC bank, the results indicate decrease in GNPA and NNPA ratios up to 1.40% from 2.25% during 2003 to 2007 and 0.37% to 0.25% during 2003 to 2005 period. In this case, the change in the upward and downward direction of the ratios are very meagre and hence CV(28% and 43% respectively) is also low, suggesting lower variability in performance. Thus HDFC bank is maintaining consistency in terms of its asset quality.
- The results obtained from ICICI Bank shows that there has been some ups and downs in terms of the parameters. GNPA, NNPA ratios as well as GNPA, NNPA in absolute terms decreased from 9.44% to 1.52% and 5.21% to 0.72% during 2003-2006 period. Again it started to increase from 2007-2010, further to decrease during 2011-14 period. Although, CAGR shows negative trend -9% and -14% respectively, higher CV (47% and 70%) indicate scope for improvement in terms of asset quality of the bank.
- Based on the study it is found that, Bank of Baroda is the better performer in terms of the improvement of Asset quality of banks, measured in terms of Gross Non-Performing assets. The CAGR of GNPA Ratio of the Bank of Baroda is found to be the lowest (-11.72%), followed by Syndicate bank (-10.25) and ICICI bank (-9.62%).
- It is also found that lowest growth in Net Non-Performing Assets can be observed from Axis bank (-14.26%), indicating improvement in asset quality over the years. Axis bank is followed by ICICI Bank (-14.17%) and Syndicate bank (-8.79%). In terms of improvement of asset quality using

NNPA ratio, Oriental bank of Commerce has depicted worst performance (6.57%).

- The study further reveals that in spite of recession, asset quality of banks has improved during 2009-14 compared to the previous period.