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Critical analysis of non-performing assets (NPA) in Indian banking sectors

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Abstract
The level of non-performing assets (NPAs) best indicates the soundness of the banking sector of a country. The purpose of this study is an effort to look into the contribution of the different banks individually to the NPA in the industry by looking into its growth pattern during the period 2010-2017. Further, the study is made to look into the effect of different groups of banks, namely, State Bank of India (SBI) and its associates, nationalised banks and private sector banks on the banking industry in this regard. The individual private sector banks, nationalised banks and SBI and its associates have been considered for the purpose of the study. The analysis is based on secondary data collected from the Reserve Bank of India website for the period 2010-2017.The geometric mean has been used as a statistical tool for arriving at the mean growth rate of gross NPAs. Further, refinement of the result is done by comparing the growth of gross NPAs of individual banks with that of the average growth rate. The assessment of private sector banks reveals that the growth rate of NPA is slow as compared to the nationalised banks, as well as the SBI and its associates. The nationalised banks and the associate banks of SBI failed to handle the issue of poor loans effectively due to which the growth in such loans has been phenomenally high.

Keywords: Classification of NPA, Nationalized banks, Non-performing assets, Private sector banks, SBI and its associates

Introduction
In the starting when the financial reforms were undertaken by the Government of India based on the Narasimham Committee report I and II, Reserve Bank of India introduced some prudential norms to address the credit monitoring policy, which were being pursued by the banks and other NBFCs. To strengthen the recovery of loans and dues by the banks and the other financial institutions, Government of India in the year 1993, promulgated the „recovery of debts due to banks and other financial institutions act‟ and the „securitisation and reconstruction of financial assets and enforcement of security interest act‟ in the year 2002.

Non-performing asset: Today non-performing assets are the subject of major concerns to the banking sector and the other non-banking financial institutions. A loan or lease that does not meet the stated principal amount and the interest amount payments is termed as non-performing assets. NPA can be classified into commercial loans which are overdue for more than 90 days, and consumer loans which are due for more than 180 days, and rise in NPA is due to the overdue of the commercial loans, there are a lot of pending cases which are being handled by the Indian banks and other financial institutions. (RBI Website, n.d)

Table 1: Types of loans and characters

Nature of Facility	Parameters
Term Loan	Interest and/or instalment of principalremain overdue beyond 90 days
Overdraft/Cash Credit	Remains 'out of order'as indicated above
Bill Purchased/discounted	Remains overdue beyond 90 days
Crop Loans (short duration crops)	Instalment of principal or interest thereon remains overdue for 2 crop seasons
Crop Loans (Long duration crops)	Instalment of principal or interest thereon remains overdue for 1 crop season
Securitization transactions	Amount of liquidity facility remains outstanding beyond 90 days
Derivative transactions	Overdue receivables representing positive mark-to-market value of a derivative contract which remains unpaid beyond 90 days from specified due date for payment
Securitisation transaction	Liquidity facility remains outstanding for more than 90 days,

Definitions of NPA by RBI

a) An asset, including a leased asset, becomes non-performing when it ceases to generate income for the bank.

b) A non-performing asset (NPA) is a loan or an advance where;

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

ii. The account remains „out of order" as indicated at paragraph 2.2 below, in respect of an Overdraft /Cash Credit (OD/CC),

iii. The bill remains overdue for a period of more than 90 days in the case of bills purchased and discounted,

iv. 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,

v. The instalment of principal or interest thereon remains overdue for one crop season for long duration crops,

vi. 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.

vii. 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.

c) 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.

d) 'Out of Order' statuses: An account should be treated as 'out of order' if the outstanding balance remains continuously in excess of the sanctioned limit/drawing power. In cases where the outstanding balance in the principal operating account is less than the sanctioned limit/drawing power, but there are no credits continuously for 90 days as on the date of Balance Sheet or credits are not enough to cover the interest debited during the same period, these accounts should be treated as 'out of order'.

e) 'Overdue': Any amount due to the bank under any credit facility is „overdue" if it is not paid on the due date fixed by the bank. (rbi.org.in)

Classification of non-performing assets

Which are as followings:-

1. **Standard:** Bank receives the principal and interest repayment, systematically from the borrower. Another important aspect is that the arrears of the principal as well as the interest does not surpass more than 90 days on the closing of the FY (Financial Year). An asset which is generating regular income to the bank called standard assets.
2. **Sub-Standard:** An asset which is overdue for a period of more than 90 days but less than 12 months are called Sub-Standard
3. **Doubtful:** A doubtful asset is one which has remained as a NPA for a period exceeding 12 months. 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.
4. **Loss:** Assets which are doubtful and considered as non-recoverable by bank, internal or external auditor or central bank inspectors called losses.

Table 2: Categories and Parameters of NPA

No.	Category	Parameters	Provision Requirement
1.	Substandard Asset	*Remained NPA for a period not less than or equal to one year. *In such cases, the current net worth of the borrower or guarantor or market value of the security charged is not enough to ensure recovery of the banks dues; *Likely to sustain some loss if deficiencies are not corrected.	*15% of the sum of the net investment in the lease and the unrealized portion of finance income net of finance charge component. *Additional 10% for unsecured lease exposure i.e. total 25%.
2.	Doubtful Asset	*Remained in substandard category beyond 1 year; *Recovery - highly questionable and improbable.	*100% of the finance not secured by the realizable value of the leased asset. *Additional provision on the unrealised portion of finance income net of finance charge component of the secured portion as under:- Period for which the advance remained in doubtful category and the provision (%) Up to one year is 25% provision, One to three years 40% provision, More than three years 100%.
3	Loss Asset	*Asset considered uncollectible and of little value but not written off wholly by the bank. *Continuance as bankable assets although it may have some salvage or recovery value.	To be written off or 100% of the sum of the net investment in the lease and the unrealised portion of finance income net of finance charge component.

Review of literature

Dutta. A (2014) [1]: This paper studied the growth of NPA in the public and private sector banks in India, and analysed sector wise non-performing assets of the commercial banks. For the purpose of the study data has been collected from secondary sources such as report on Trend and Progress of Banking in India, RBI, Report on Currency and Finance, RBI Economic Surveys of India.

Das, S. (2010) [2]: In this paper the author has tried to analyse the parameters which are actually the reasons of NPAs, and those are, market failure, wilful defaults, poor follow-up and supervision, non-cooperation from banks, poor Legal framework, lack of entrepreneurial skills, and diversion of funds.

Ahmad, Z., Jegadeeshwaran, M. (2013) [3]: The current paper is written on the NPA, and causes for NPA. Secondary data was collected for a period of five years and analysed by mean, CAGR, ANOVA and ranking banks. The banks were ranked as per their performance in managing the NPA‟s. The efficiency in managing the NPA by the nationalised banks was tested.

Joseph, A. L. (2014) [4]: This paper basically deals with the trends of NPA in banking industry, the internal, external and other factors that mainly contribute to NPA rising in the banking industry and also provides some suggestions for overcoming the burden of NPA.

Meher (2017) [5]: in the post-demonetisation period looks into the impact of the government's note Bandi decision on the NPA of Indian Banks. The researcher finds both positive sand negatives of the event on the banking industry.

Thomas and Vyas (2016) [6]: in a recent study on loan recovery strategy of Indian banks suggests two measures, preventive and corrective. The paper also discusses several corrective measures – legal, regulatory and non-legal that are to be taken to recover the non-performing loans.

Objective of the study

The following are the objectives of the study:

1. The objective of the study is to find out whether there is any difference in the NPA occurrence between the various banks during the period of the study.
2. To determine the mean growth rate for different groups of banks and individual banks; and
3. To make comments relating to the growth pattern of Gross NPAs.

Research design

This is a very important area of research as it lays the foundation for the proposed work. The correctness and robustness of the findings depend on the design that is laid. For the present study, the Components of the design are as follows:

1. **Sample:** the individual private sector banks, the nationalised banks and SBI and its associates have been considered.
2. **Data period:** the analysis is based on data for the period 2010-2017.
3. **Nature of the data and source:** The investigation is based on secondary data, which is collected from the RBI website.
4. **Variable of interest:** gross NPAs.
5. **Research methods:** in this article, the statistical tool that the researchers have used is the geometric mean for arriving at the mean growth rate and then the growth of individual banks has been compared with the average growth rate.

Table 3: Year on year growth rate in gross NPAs in private sector bank

Year	2010-2011 (%)	2011-2012 (%)	2012-2013 (%)	2013-2014 (%)	2014-2015 (%)	2015-2016 (%)	2016-2017 (%)	GM (%)
Axis Bank	21	13	33	31	31	48	250	49
Catholic Syrian Bank Ltd	29	−5	15	58	42	−6	34	22
City Union Bank Limited	20	10	40	69	15	52	33	33
DCB Limited	−17	−8	−11	−36	34	6	29	−3
Dhanlaxmi Bank	−13	55	265	28	15	−18	−31	22
Federal Bank	40	13	19	−30	−3	58	4	11
HDFC Bank	−7	18	17	28	15	28	34	18
ICICI Bank	6	−6	1	9	44	74	61	24
Indusind Bank	4	31	32	36	−9	38	36	22
Jammu and Kashmir Bank Ltd	12	0	25	22	253	58	37	44
Karnataka Bank Ltd	28	−2	−7	31	13	25	34	16
Karur Vysya Bank	−3	41	−11	−2	143	−25	190	30
Kotak Mahindra Bank Ltd	−21	2	23	40	17	129	26	25
Lakshmi Vilas Bank	−51	95	49	19	−17	−14	64	10
Nainital Bank	−8	45	117	−9	27	54	38	32
RBL	−22	54	−22	200	43	87	72	44
South Indian Bank	9	16	62	0	49	143	−26	27
Tamilnadu Mercantile Bank Ltd	23	26	21	100	−26	31	55	28
Yes Bank Ltd	34	4	12	85	79	139	170	65
Private Sector Banks	*6*	*3*	*13*	*16*	*37*	*59*	*72*	*27*

Source: Computed by the researchers

Analysis and findings

The details of the analysis are presented in the sub-section below.

1. Assessment of private sector banks. The position of the private sector banks with regard to the movement of gross NPAs during the study period is discussed below.

2. Assessment at the individual level. An examination of the gross NPA position of the banks in the private sector shows that the growth rate (calculated using Geometric Mean) is quite low in the initial years of the study period (the lowest being 3percent in the year 2011 2012), but it goes on increasing thereafter. The overall position of NPAs of the private sector goes up to a maximum of 72 per cent in the year 2016-2017. Majority of the private sector banks show a sharp rise in the NPA growth rates after the year 2015-2016.This sudden rise may have been the result of "asset quality review" conducted by the RBI in the year 2015. The inspection carried out by the RBI highlighted the under-reporting of NPAs in the private sector banks. Big lenders like Axis Bank, Yes Bank and ICICI Bank reveal high growth rate of NPAs during the latter years of the study period. Axis Bank experienced a significant rise in the gross NPAs of close to 250 per cent in 2016-2017 followed by Karur Vysya Bank (190percent) and Yes Bank (170percent) (Table3).

Table 4: Private sector banks

Growth more than average (27%)	(%)	Growth less than average (27%)	(%)
Yes Bank Ltd	65	South Indian Bank	27
Axis Bank	49	Kotak Mahindra Bank Ltd	25
Jammu and Kashmir Bank Ltd	44	ICICI Bank	24
RBL	44	Catholic Syrian Bank Ltd	22
City Union Bank Limited	33	Dhanlaxmi Bank	22
Nainital Bank	32	Indusind Bank	22
Karur Vysya Bank	30	HDFC Bank	18
Tamilnad Mercantile Bank Ltd	28	Karnataka Bank Ltd	16
		Federal Bank	11
		Lakshmi Vilas Bank	10
		DCB Limited	−3

Source: Computed by the researchers

3. Comparing performance against the mean

If we consider the growth rates of NPAs of each private sector bank with respect to the average growth rate of the banks in the private sector as a whole, we find that most of the banks have a growth rate less than the average growth rate (27 per cent). The performance of DCB is a commendable one as it shows an overall decline in the level of poor loans, which is an exception in the banking landscape. It points to a sound NPA management process in the bank. On the other hand, Yes Bank, which is among the big brands in the industry recorded the highest growth rate of 65 per cent followed by Axis Bank (49 per cent) (Table 4)

4. Performance assessment of SBI and its associates

Assessment at the individual level. Next, we analyse the position of SBI and the SBI Group as a whole (note that the SBI Associates do not separately exist now as they have been merged with SBI in 2017). An analysis of the gross NPA position shows that the initial spurt in NPA growth took place in 2011-2012 followed by 2015-2016. This observation is the same as what is seen in the case of the nationalised banks. Of the entire SBI Group the State Bank shows the minimum average growth of 28 per cent. The associate banks show a poor performance in terms of the overall rise in NPAs during the period. Calculations show that State Bank of Hyderabad shows a growth of 61 per cent, which is closely followed by State Bank of Patiala (51 per cent), State Bank of Bikaner and Jaipur (50percent), State Bank of Mysore (49percent) and State Bank of Travancore (45 per cent). It is evident from the computations that with the SBI giving more focus towards NPA management rather than business expansion, fruitful results are reflected in 2016-2017 with respect to the previous year, a rise of only 14 per cent. For the remaining associate banks, it seems that the top management has not taken the issue of NPAs very seriously, due to which in 2016-2017 the year on year growth rate exceeds 160 per cent for all the banks. This might be the possible reason apart from generating economies of scale behind mergers of the associate banks with the parent bank (Table5).

Table 5: Year on year growth rate in gross NPAs in state bank of India and its associates

Year	2010-2011 (%)	2011-2012 (%)	2012-2013 (%)	2013-2014 (%)	2014-2015 (%)	2015-2016 (%)	2016-2017 (%)	GM (%)
State Bank of Bikaner And Jaipur	37	98	28	29	8	22	196	50
State Bank of Hyderabad	77	74	59	83	−14	32	176	61
State Bank of India	30	57	29	20	−8	73	14	28
State Bank of Mysore	45	74	38	35	−24	70	173	49
State Bank of Patiala	37	37	30	53	16	55	164	51
State Bank of Travancore	30	78	18	76	−23	36	176	45
State Bank of India and its associates	*32*	*59*	*30*	*27*	*−8*	*66*	*46*	*34*

Source: Computed by the researchers

5. **Comparing performance against the mean.** The table below gives an idea about the growth position in NPAs of the individual banks against the average performance of the group (Table6).

Table 6: SBI and its associates

Growth more than average (34%)	(%)	Growth less than average (34%)	(%)
State Bank of Hyderabad	61	State Bank of India	28
State Bank of Patiala	51		
State Bank of Bikaner And Jaipur	50		
State Bank of Mysore	49		
State Bank of Travancore	45		

Source: Computed by the researchers

6. Performance assessment of nationalised banks.

Assessment at the individual level. As per the computation, the position of Gross NPAs with respect to the growth rate during the period 2010-2011 and 2016-2017 is extremely bad, which is the reason behind the growing worry of the apex bank. If we look into specific banks and look at the growth rate during the study period we find the banks, which show the maximum rate are Andhra Bank, Punjab and Sindh Bank and IDBI Bank, which show the mean growth rate (in terms of geometric mean) to be 67, 63 and 55 per cent, respectively. In fact, the overall position of the nationalised banks taken together shows that the growth rate has raised at a high pace after the financial crisis started showing its effect in 2010. Of the 20 nationalised banks, 40 per cent show a mean growth rate of at least 50 per cent. If we compare the growth rate of banks with respect to the average growth rate of the nationalised banking group taken together, it is evident that 50 per cent of the banks grow at a rate, which is more than the mean rate of 46 per cent. Some of the prominent names include Punjab National Bank, Andhra Bank, IDBI Bank (in which LIC has recently taken a stake of 51 per cent). For those banks in which the NPA rose by less than the average, the geometric mean lies in the range of 30 per cent (for Vijaya Bank) and 46 per cent (for Bank of Maharashtra). If we analyse the pattern of growth (year-on-year), we find that there has been aspurtin the NPA growth of nationalised banks during 2011-2012 and 2013-2014. The second shock interims of poor quality norm stook place in 2015-2016 when the overall nationalised banks grew 104percent over the previous year. After the RBI came up with the concept of prompt corrective action, and looked at the problem with more diligence, some positive results (though not satisfactory) is seen in 2016-2017. It is evident from the calculations that the growth of NPAs in 2016-2017 is 21 per cent, which is the least during the study period (Table7).

Table 7: Year on year growth rate in gross NPAs in nationalised banks

Year	2010-2011 (%)	2011-2012 (%)	2012-2013 (%)	2013-2014 (%)	2014-2015 (%)	2015-2016 (%)	2016-2017 (%)	GM (%)
Allahabad Bank	35	25	149	57	4	84	34	50
Andhra Bank	104	81	107	58	17	66	54	67
Bank of Baroda	31	42	79	49	37	149	5	51
Bank of India	−1	34	44	38	72	125	4	40
Bank of Maharashtra	−3	11	−12	151	124	62	66	46
Canara Bank	21	29	55	21	72	143	8	45
Central Bank of India	−3	204	16	36	3	91	20	41
Corporation Bank	21	61	61	131	50	105	17	59
Dena Bank	31	14	52	80	68	95	47	53
IDBI Bank Ltd	31	63	42	54	27	96	80	55
Indian Bank	45	150	93	28	24	56	12	53
Indian Overseas Bank	−14	27	69	37	65	101	17	38
Oriental Bank of Commerce	31	86	17	34	36	92	55	48
Punjab and Sind Bank	106	80	101	66	21	37	49	63
Punjab National Bank	36	99	54	40	36	117	−1	50
Syndicate Bank	30	22	−6	55	40	115	27	36
UCO Bank	89	30	74	−7	55	104	8	45
Union Bank of India	36	50	16	51	36	85	39	44
United Bank of India	−1	61	36	140	−8	45	16	35
Vijaya Bank	27	36	−11	30	23	147	6	30
Nationalised banks	*22*	*57*	*47*	*45*	*38*	*104*	*21*	*46*

Source: Computed by the researchers

7. Performance of banks against average. The table below shows the categorisation of the banks into two categories, which are "more than average" and "less than average" (Table8).

Table 8: Nationalised banks

Growth more than average (46%)	(%)	Growth less than average (46%)	(%)
Andhra Bank	67	Bank of Maharashtra	46
Punjab and Sind Bank	63	UCO Bank	45
Corporation Bank	59	Canara Bank	45
IDBI Bank Limited	55	Union Bank of India	44
Dena Bank	53	Central Bank of India	41
Indian Bank	53	Bank of India	40
Bank of Baroda	51	Indian Overseas Bank	38
Punjab National Bank	50	Syndicate Bank	36
Allahabad Bank	50	United Bank of India	35
Oriental Bank of Commerce	48	Vijaya Bank	30

Source: Computed by the researchers

Conclusion

The overall findings point to a worrisome situation for the banking sector as a whole. An analysis of the growth rate in the NPA level shows that the problem is evident not only with small-sized banks but also with big names in the banking space. Hence, the entire sector is gripped in the crisis. The poor asset for the banks is a problem because as per the guidelines, given by the RBI, banks are required to keep some amount as provision depending on their asset quality thereby leading to declining profitability of the banks. Only time will say how successful has the RBI been in controlling the NPA growth in the sector. It is necessary to pull the trigger hard as these poor loans are having a severe impact on the liquidity position of banks and even the banks have been asked to go slow with regard to lending, which is ultimately having an impact on the economic growth, which has been slow during the past few quarters.

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