Dimensions of NPAs in Indian Scheduled Commercial Banks

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Santosh Kumar Das[*]
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[**Abstract**: *Growing Non-Performing Advances (NPAs), which reveal deterioration of asset quality, is a cause of concern as it can have adverse impact on the stability of the banking system and the economy as well. Given the limitation of unavailability of any systematic micro level loan data, the present study is an attempt to explore the different dimensions of the current phase of NPA problem and assess its impact on the performance of the Indian Scheduled Commercial Banks. While the source of the stress in the banking system seems to be coming from the dismal performance of the corporate loans, the worrying factor continues to be the accumulation of stressed assets by the Public Sector Banks (PSBs). The incidence of loan default is found to be relatively high in the Industrial sector vis-a-vis the Agriculture, Services, and the Retail sectors. The composition of NPA in terms of Priority Vs Non-Priority Sector shows that the current phase of NPA problem primarily originates from the Non-Priority sector loans. The accumulation of NPAs has adversely impacted the performance of the banking sector in terms of substantial decline in profitability. Between March 2015 and 2017, the decline in profitability, measured in terms of Return on Assets (RoA) and Return on Equity (RoE) has been much faster. Other performance indicators like operating profit, the ratio of operating profit to total assets also recorded a substantial decline. Although the profitability of both private and foreign banks continues to be higher than that of the PSBs, during last two years, there has been substantial decline in the profitability of the above two banks groups due to an increase in incidence of loan default. Substantial decline in the earnings of the banks have had an impact on the liquidity of the banks, which, in turn, has affected their lending capacity. If this scenario persists for a longer time, it may adversely impact the solvency position of the banks. The increase in NPAs can have a potentially adverse impact on the economy through a reduction in loan growth which is critical to investment.*]

Keywords: NPAs, Indian Banking Sector, Banking Sector Performance, PSBs.

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1. Introduction

A sound financial system plays a critical role in the growth and development of any economy. Given that India is a bank based or dominated financial system, a healthy banking sector is a necessary for greater financial intermediation as it plays a key role in the overall growth and development. The deterioration of the asset quality of the Indian banking sector in recent years is a cause of concern as it indicates growing stress in the banking system. As a result, substantial stress has built up in the banking system. As per the Reserve Bank of India (RBI), the Stressed Advances (SA) ratio in banking sector is 12.2 per cent and the Gross Non-Performing Advances (GNPA) as ratio to gross advances has risen to 10.2 per cent as of September 2017 (RBI, Financial Stability Report, December 2017). The problem is much deeper in case of the Public Sector Banks (PSBs). The ratio of Gross Non-Performing Advances (GNPA) to gross advances of the PSBs was as high as 13.5 per cent as of September 2017. On the other side, the financial health of the Private Sector Banks is found to be comparatively in a better shape; however, in recent years, there has been substantial growth of bad loans in the private banks. The growing incidence of bad loans has serious implications for the banking sector and economy.

The present paper attempts to understand various dimensions of the current phase of NPA phenomenon in the Indian SCBs and its impact on the performance of the banks. Accordingly, the major objectives of the study are, first; to explore the state of NPAs of the Indian SCBs. Second, to assess the impact of rising NPAs on banking performance in India. The paper spreads over four sections. The Introduction of the paper has been presented in Section 1. An overview of the SCBs has been presented in Section 2. Section 3 of the paper explores the state of asset quality of the Indian banking sector. It also discusses issues concerning definition and classification of the data on NPA. The impact of rising NPAs on banking performance has been discussed in Section 4. Finally, the Summary Conclusion has been presented in Section 5.

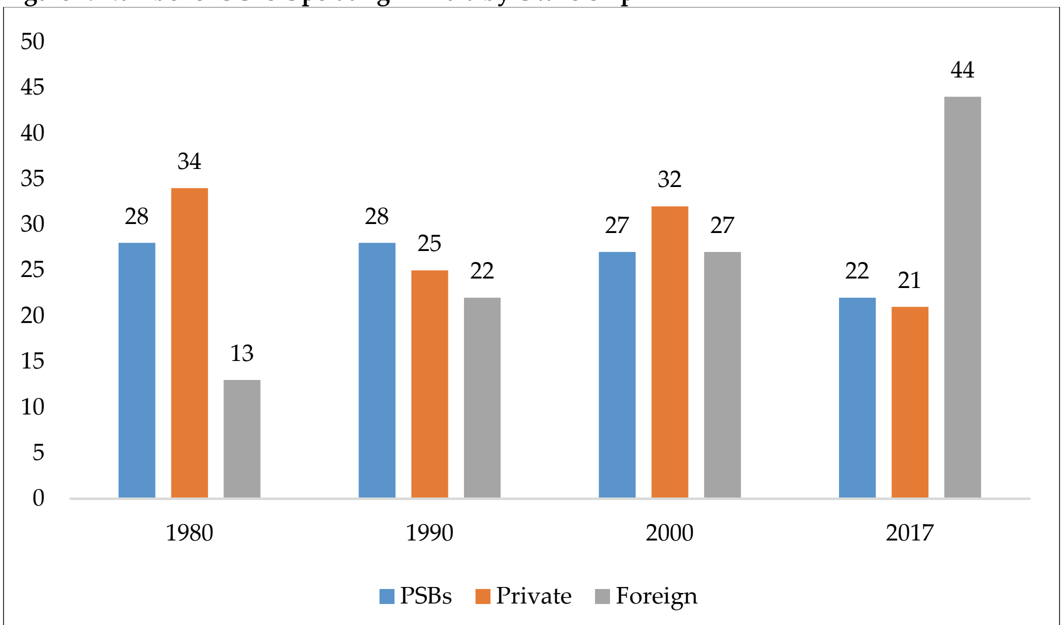
2. Scheduled Commercial Banks in India: An Overview

The Indian financial system is dominated by the SCBs, with a substantial share of PSBs in terms of number of branches or offices, volume of assets, deposits, and advances. However, in terms of the number of SCBs, there are more foreign banks operating in India in comparison to Public Sector and Private Banks (Figure 1). As of 2017, the total number of SCBs stood at 87, out of which 44 were Foreign Banks, 22 PSBs and 21 Private Banks. While the number of PSBs remained almost stagnant except for the merger of SBI Associate Banks with SBI, the number of Foreign Banks and Private Banks increased in the post liberalisation period.

However, the ownership structure of the PSBs have under gone significant changes during the post liberalisation period. Private shareholding in the PSBs has increased and simultaneously there has been a decline in the shareholding of the Government and RBI. As of March 2017, private shareholding in two PSBs was more than 40 per cent and in seven PSBs it was more than 30 per cent (Table 1). There is only one PSB which has 100 per cent shareholding by the Government or RBI. Private shareholding constituted more than 20 per cent holding in eight public sector banks, while in four banks private shareholding constituted more than 10 per cent.

With the growing presence of Private Banks, there has been a corresponding increase in the number of bank branches or offices. Foreign Banks have not been able to expand the way Private Banks have expanded their offices or branches (Table 2). Though it is still the PSBs which dominate the banking operation with their vast branch network, the Private Banks have also expanded substantially. As of March 2017, the total number of functioning offices of the SCBs stood at 1,21,753, out of which PSBs accounted for about 79 per cent (96,200) of the offices, followed by Private Banks (20.7 per cent and 25,252 offices) and Foreign banks (0.25 per cent and 301 offices). While there has been a decline in the branch share of PSBs from about 88 per cent in 2006 to 79 per cent in 2017, the Private Banks have been able to expand their operations substantially from about 12 per cent in 2006 to about 21 per cent in 2017. In terms of branch share, Foreign Banks seem to have failed to expand. Among the Indian SCBs, the SBI accounts for more than 21 per cent of the functioning offices in India, positioning it as the largest bank in terms of banking operation and reach.

Figure 1: Number of SCBs Operating in India by Ownership



Source: Reserve Bank of India

Table 1: Ownership Structure: Government and RBI Shareholding in PSBs, 2017

Shareholding (%)	*Number of Banks*	*Name of the Bank*
More than 90 & up to 100	1	Bharatiya Mahila Bank Ltd. (100%)
More than 80 & up to 90	4	United Bank of India (85.2%); Indian Bank (82.1%); Bank of Maharashtra (81.6%); Central Bank of India (81.3%)
More than 70 & up to 80	8	Indian Overseas Bank (79.6%); Punjab and Sind Bank (79.6%); UCO Bank (76.7%); IDBI Bank Ltd. (74%); Bank of India (73.7%); Syndicate Bank (72.9%); Corporation Bank (70.8%); Vijay Bank (70.3%)
More than 60 & up to 70	7	Dena Bank (68.6%); Canara Bank (66.3%); Allahabad Bank (65.9%); Punjab National Bank (65%); Union Bank of India (63.4%); Andhra Bank (61.3%); State Bank of India (61.2%)
More than 50 & up to 60	2	Bank of Baroda (59.2%); Oriental Bank of Commerce (58.4%)

Source: RBI: Report on Trend and Progress of Banking in India, 2016-17.

Table 2: Bank Group-wise Number of Functioning Offices of Commercial Banks

Year (End March)	*Public Sector Banks*				*Private Banks*	*Foreign Banks*	*All Banks*
	SBI	*Nationalised Banks*	*Other Public Sector Banks*	*All PSBs*			
Bank Group-wise Offices in Numbers							
2006	14446	35632	182	50260	6853	265	57378
2007	14840	36957	443	52240	7465	279	59984
2008	16033	38742	512	55287	8397	286	63970
2009	17134	40460	530	58124	9339	302	67765
2010	18616	42914	730	62260	10568	317	73145
2011	19655	45670	843	66168	12144	325	78637
2012	20662	49880	1004	71546	14067	330	85943
2013	21858	53678	1113	76649	16159	339	93147

Year (End March)	Public Sector Banks				Private Banks	Foreign Banks	All Banks
	SBI	Nationalised Banks	Other Public Sector Banks	All PSBs			
2014	23552	59608	1447	84607	18652	322	103581
2015	24485	64045	1821	90351	20565	329	111245
2016	25190	66330	2145	93665	23380	332	117377
2017	25649	68347	2204	96200	25252	301	121753
Bank Group-wise Offices (percentage share)							
2006	25.18	62.10	0.32	87.59	11.94	0.46	100
2007	24.74	61.61	0.74	87.09	12.44	0.47	100
2008	25.06	60.56	0.80	86.43	13.13	0.45	100
2009	25.28	59.71	0.78	85.77	13.78	0.45	100
2010	25.45	58.67	1.00	85.12	14.45	0.43	100
2011	24.99	58.08	1.07	84.14	15.44	0.41	100
2012	24.04	58.04	1.17	83.25	16.37	0.38	100
2013	23.47	57.63	1.19	82.29	17.35	0.36	100
2014	22.74	57.55	1.40	81.68	18.01	0.31	100
2015	22.01	57.57	1.64	81.22	18.49	0.30	100
2016	21.46	56.51	1.83	79.80	19.92	0.28	100
2017	21.07	56.14	1.81	79.01	20.74	0.25	100

Source: Calculation based on RBI data.

A very similar story emerges from the analysis of asset distribution among different bank groups (Table 3). In terms of asset share, PSBs continue their dominance over Private and Foreign Banks, though the later groups have been able to expand their asset base over time. The asset share of PSBs declined from 75.3 per cent in 2005 to 68.8 per cent in 2017. On the other side, the asset share of the Private Banks increased from 18.1 per cent in 2005 to 25.5 per cent in 2017. However, Foreign Banks recorded a decline in their asset share from 8.5 per cent in 2009 to 5.7 per cent in 2017. The SBI continues to function as the largest bank with an asset share of about 23.5 per cent in 2017.

Table 3: Bank Group-wise Asset Share of Indian Scheduled Commercial Banks

Year (End March)	Public Sector Banks			Private Banks	Foreign Banks	All Banks
	SBI	Nationalised Banks	PSBs			
Asset in Rs. Crore						
2005	627117.1	1146864.1	1773981.2	427891.7	153636.3	2355509.3
2006	691846.9	1323027.2	2014874.1	571631.2	199358.0	2785863.3
2007	805795.2	1634370.8	2440165.9	745403.8	274392.1	3459961.8
2008	1010958.6	2010965.0	3021923.6	940143.8	364098.6	4326166.0
2009	1280055.4	2485701.7	3765757.1	1027755.9	445129.2	5238642.2

Year (End March)	Public Sector Banks			Private Banks	Foreign Banks	All Banks
	SBI	Nationalised Banks	PSBs			
2010	1412253.3	3028573.8	4440827.1	1150736.2	435361.9	6026925.2
2011	1597684.2	3696321.9	5294006.1	1398216.8	491174.9	7183397.8
2012	1771280.1	4268339.7	6039619.9	1693091.5	588179.0	8320890.3
2013	2065668.9	4896592.4	6962261.2	1989797.1	637893.7	9589952.1
2014	2318496.8	5649813.0	7968309.8	2258810.1	748808.7	10975928.5
2015	2606657.6	6072175.1	8678832.7	2603261.8	754897.6	12036992.1
2016	2862514.1	6199209.1	9061723.2	3083240.5	814622.9	12959586.5
2017	3323191.1	6412427.2	9735618.2	3601512.3	809527.2	14146657.7
Asset Share (in Per cent)						
2005	26.62	48.69	75.31	18.17	6.52	100
2006	24.83	47.49	72.32	20.52	7.16	100
2007	23.29	47.24	70.53	21.54	7.93	100
2008	23.37	46.48	69.85	21.73	8.42	100
2009	24.43	47.45	71.88	19.62	8.50	100
2010	23.43	50.25	73.68	19.09	7.22	100
2011	22.24	51.46	73.70	19.46	6.84	100
2012	21.29	51.30	72.58	20.35	7.07	100
2013	21.54	51.06	72.60	20.75	6.65	100
2014	21.12	51.47	72.60	20.58	6.82	100
2015	21.66	50.45	72.10	21.63	6.27	100
2016	22.09	47.83	69.92	23.79	6.29	100
2017	23.49	45.33	68.82	25.46	5.72	100

Source: Calculation based on RBI data.

The distribution of deposits among different bank groups follows a similar narrative as of the assets. Public Sector Banks are the destination for about three-fourths (73%) of the total deposits made in SCBs. While in recent years, the deposit share of PSBs declined from 78.2 per cent in 2005 to 72.8 per cent in 2017, the deposit share of Private Banks has increased from 17.1 per cent in 2005 to 23.1 per cent in 2017 (Table 4). The deposit share of Foreign banks also recorded a decline from 5.8 per cent in 2008 to 4.2 per cent in 2017. The SBI remained as the largest bank in terms of bank deposit as well. However, it is to be noted that PSBs were able to mobilise greater volume of bank deposit vis-à-vis their asset share, which is not true for the Private and Foreign Banks.

The distribution of disbursement of credit among different bank groups shows that PSBs lend more than two-third (68.5%) of the total credit disbursed by the SCBs. While the credit share of PSBs has declined from 76.2 per cent in 2005 to 68.5 per cent in 2017, Private Banks have gained substantially during the same period (Table 5). The credit share of Private Banks went up from 17.2 per cent in 2005 to 27.4 per cent in 2017. While Private Banks have gained, Foreign Banks have lost their credit share from 6.7 per cent in 2005 to 4.1 per cent in 2017.

Table 4: Bank Group-wise Deposit Share of Indian Scheduled Commercial Banks

Year (End March)	*Public Sector Banks*			*Private Banks*	*Foreign Banks*	*All Banks*
	SBI	*Nationalised Banks*	*PSBs*			
Asset in Rs. Crore						
2005	505649.4	930891.1	1436540.5	314629.7	86389.2	1837559.4
2006	542409.1	1080072.0	1622481.1	428455.6	113745.0	2164681.7
2007	633475.6	1360724.0	1994199.6	551987.1	150749.9	2696936.5
2008	773874.6	1679993.0	2453867.7	675032.9	191161.1	3320061.6
2009	1007041.5	2105705.6	3112747.1	736377.6	214076.4	4063201.1
2010	1108085.6	2583933.8	3692019.4	822800.7	232099.5	4746919.6
2011	1245862.4	3126586.2	4372448.7	1002758.8	240666.8	5615874.3
2012	1405024.1	3596989.3	5002013.4	1174587.4	288144.5	6464745.3
2013	1618444.9	4127252.3	5745697.2	1395835.5	288144.5	7429677.2
2014	1828363.1	4760657.4	6589020.5	1591693.7	352458.8	8533173.0
2015	2039756.8	5154435.6	7194192.4	1834469.7	405175.9	9433838.0
2016	2240542.1	5245635.9	7486178.0	2147673.3	458800.0	10092651.3
2017	2584616.8	5494657.8	8079274.6	2564839.0	465522.7	11109636.3
Deposit Share (in Per cent)						
2005	27.52	50.66	78.18	17.12	4.70	100
2006	25.06	49.90	74.95	19.79	5.25	100
2007	23.49	50.45	73.94	20.47	5.59	100
2008	23.31	50.60	73.91	20.33	5.76	100
2009	24.78	51.82	76.61	18.12	5.27	100
2010	23.34	54.43	77.78	17.33	4.89	100
2011	22.18	55.67	77.86	17.86	4.29	100
2012	21.73	55.64	77.37	18.17	4.46	100
2013	21.78	55.55	77.33	18.79	3.88	100
2014	21.43	55.79	77.22	18.65	4.13	100
2015	21.62	54.64	76.26	19.45	4.29	100
2016	22.20	51.97	74.17	21.28	4.55	100
2017	23.26	49.46	72.72	23.09	4.19	100

Source: Calculation based on RBI data.

Table 5: Credit Disbursement: Bank Group-Wise Share (%)

Year (End March)	*PSBs*	*Private Banks*	*Foreign Banks*	*All Scheduled Commercial Banks*
2005	76.16	17.16	6.68	100
2006	73.14	20.48	6.38	100
2007	72.77	20.88	6.35	100
2008	72.53	20.97	6.50	100
2009	75.16	19.26	5.59	100
2010	77.11	18.17	4.72	100
2011	76.76	18.25	4.97	100
2012	76.37	18.75	5.05	100
2013	76.15	19.36	4.49	100
2014	75.86	19.78	4.36	100
2015	74.29	21.26	4.45	100
2016	71.24	24.15	4.61	100
2017	68.53	27.37	4.10	100

Source: Calculation based on RBI data.

Individual bank-wise credit data shows that the SBI continues to operate as the largest lender in the country with more than 23 per cent credit share in 2017 (Table 6). Though its credit share has fallen from 25.5 per cent in 2005 to 23 per cent in 2017, it is still the dominant bank in the country by any parameter. Among PSBs, in terms of credit share, the Punjab National Bank (PNB) has been the second largest lender with a credit share of about 5.2 per cent, followed by Bank of Baroda, Bank of India and Canara Bank with a credit share of 4.73 per cent, 4.52 per cent and 4.22 per cent respectively in 2017. The other leading PSBs in terms of lending include Union Bank of India, Syndicate Bank, IDBI Bank Limited, Indian Overseas Bank and Central Bank of India with credit shares of 3.53 per cent, 2.46 per cent, 2.35 per cent, 1.73 per cent and 1.72 per cent respectively, in 2017.

The leading Private Banks in terms of credit share are HDFC Bank, ICICI Bank and Asix Bank with a credit share of 6.84 per cent, 5.72 per cent and 4.6 per cent respectively in 2017 (Table 7). Other leading private banks include IndusInd Bank and Kotak Mahindra Bank. In terms of credit share, the HDFC Bank is the second largest bank in India, followed by the ICICI Bank. While the credit share of HDFC bank increased from 2.25 per cent in 2005 to 6.8 per cent in 2017, it declined substantially for ICICI bank from 9.85 per cent in 2007 to 5.7 per cent in 2017. The other leading Private Bank that recorded an increase in its credit share is Axis Bank. Axis Bank has gained substantial credit share in recent years, from 1.36 per cent in 2005 to 4.6 per cent in 2017.

Table 6: Credit Disbursement: Leading Public Sector Banks (% Share in Total Advances)

Year (End March)	*SBI*	*Punjab National Bank*	*Bank of Baroda*	*Bank of India*	*Canara Bank*	*Union Bank of India*	*Syndicate Bank*	*IDBI Bank Limited*	*Indian Overseas Bank*	*Central Bank of India*
2005	25.45	5.44	3.95	5.00	5.29	3.57	2.41	3.62	2.28	2.52
2006	24.43	4.93	3.96	4.3	5.14	3.52	2.43	3.63	2.31	2.53
2007	24.29	4.88	4.21	4.31	4.92	3.16	2.63	3.24	2.38	2.66
2008	23.95	4.82	4.29	4.58	4.29	3.03	2.6	3.33	2.43	2.96
2009	24.62	5.14	4.77	4.76	4.58	3.23	2.72	3.42	2.5	2.85
2010	21.8	5.31	3.77	3.81	4.61	3.34	2.33	3.91	2.06	2.99
2011	22.5	6.08	4.28	4.12	5.05	3.81	2.43	3.89	2.57	3.27
2012	22.52	5.94	4.42	3.83	1.23	3.7	2.39	3.81	2.74	3.24
2013	23.69	5.26	5.56	4.89	4.07	3.54	2.5	3.34	2.74	2.94
2014	23.4	5.23	5.87	5.47	4.41	3.41	2.56	2.96	2.63	2.67
2015	22.74	5.19	5.78	5.45	4.43	3.48	2.72	2.85	2.37	2.58
2016	23.35	5.3	4.97	4.67	4.12	3.4	2.53	2.77	2.11	2.33
2017	23.04	5.17	4.73	4.52	4.22	3.53	2.46	2.35	1.73	1.72

Source: Calculation based on RBI data.

Table 7: Credit Disbursement: Leading Private Banks (% Share in Total Advances)

Year (End March)	*HDFC Bank*	*ICICI Bank*	*AXIS Bank*	*Kotak Mahindra Bank*	*Indusind Bank*
2005	2.25	8.07	1.36	0.35	0.79
2006	2.28	9.52	1.45	0.41	0.60
2007	2.35	9.85	1.84	0.55	0.55
2008	2.55	9.17	2.39	0.63	0.51
2009	3.30	7.36	2.70	0.56	0.52
2010	3.53	4.01	2.62	0.60	0.58
2011	3.09	4.22	3.09	0.74	0.66
2012	4.11	4.14	3.14	0.85	0.76
2013	4.03	4.98	3.32	0.82	0.75
2014	4.44	5.05	3.38	0.78	0.81
2015	4.87	5.28	3.76	0.88	0.91
2016	5.72	5.51	4.19	1.47	1.09
2017	6.84	5.72	4.60	1.68	1.39

Source: Calculation based on RBI data.

Unlike Private Banks, most of the leading Foreign Banks are exhibiting a declining credit share (Table 8). The credit share of Citi Bank declined substantially from 1.65 per cent in 2007 to 0.68 per cent in 2017. Similarly, HSBC Bank and Standard Chartered Bank did record declining credit shares from 1.2 per cent in 2005 to 0.57 per cent in 2017 and 1.5 per cent in 2006 to 0.85 per cent in 2017 respectively. It is interesting to note that in nearly all indicators, Foreign Banks seem be to have lost much of their operations in recent years, whereas Private Banks have ramped up their banking operations.

Table 8: Credit Disbursement: Leading Foreign Banks (% Share in Total Advances)

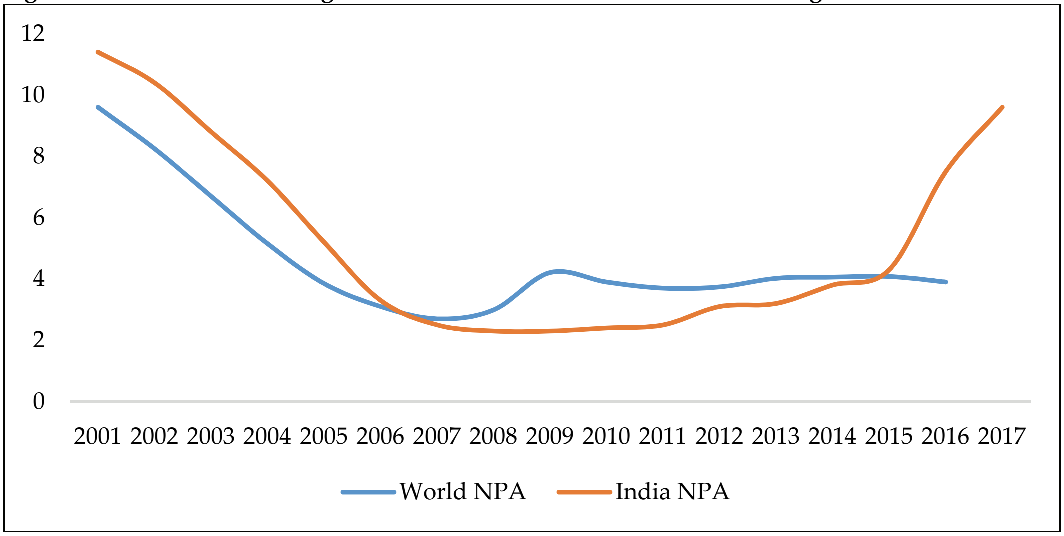
Year	*Standard Chartered Bank*	*Citi Bank*	*HSBC Bank*	*DBS Bank*	*Barclays Bank*	*American Express*
2005	-	1.60	1.12	0.05	0.00	0.13
2006	1.31	1.60	1.10	0.06	0.00	0.13
2007	1.51	1.65	1.16	0.06	0.01	0.08
2008	1.34	1.55	1.21	0.09	0.31	-
2009	1.25	1.35	0.95	0.09	0.37	-
2010	1.19	1.05	0.69	0.11	0.24	-
2011	1.25	1.02	0.70	0.19	0.22	-
2012	1.26	1.02	0.77	0.28	0.20	-
2013	1.08	0.88	0.61	0.24	0.15	-
2014	1.07	0.83	0.59	0.23	0.12	0.03
2015	0.99	0.81	0.62	0.22	0.18	0.03
2016	0.94	0.76	0.68	0.23	0.21	0.04
2017	0.85	0.68	0.57	0.27	0.14	0.04

Source: Calculation based on RBI data.

3. Asset Quality of Indian Scheduled Commercial Banks

In recent years, there has been growing incidence of bad or defaulted loans in the Indian banking sector. Bad loans or defaulted loans in the banking system went up substantially beginning 2013-14. The ratio of NPAs to total bank advances started showing an upward trend beginning 2009-10, though till 2013-14, the rate of NPA was even lower than the World average (Figure 2). Between 2009-10 and 2013-14, NPA as percentage of gross advances averaged 3 per cent, which was lower than the World average (Figure 2). Since 2013-14, while the World average NPA level got stabilized at around 4 per cent of the total gross bank loans, in India it started increasing at an alarming rate. Between 2014-15 and 2016-17, the rate of NPA went up from 4.3 per cent to 9.6 per cent, at an average rate of more than 7 per cent (Table 9). In terms of value, the volume of NPA has gone up substantially from Rs. 59,400 crore in 2004-05 to Rs. 7,90,268 crore in 2016-17. However, the worrying factor continues to be the accumulation of stressed assets by PSBs.

Figure 2: Bank Non-Performing Loans to Total Gross Loans (%): World Average and India (%)



Source: IMF: Global Financial Stability Report, various issues.

Table 9: Advances and NPAs of SCBs in India (Rs. in Billion)

Year	*Gross Advances*				*Gross Non-Performing Advances*				*Gross NPAs as % of Gross Advances*			
	PSBs	*Private Banks*	*Foreign Banks*	*All SCBs*	*PSBs*	*Private Banks*	*Foreign Banks*	*All SCBs*	*PSBs*	*Private Banks*	*Foreign Banks*	*All SCBs*
2004-05	8778.25	1978.32	770.26	11526.82	483.99	87.82	21.92	593.73	5.5	4.4	2.8	5.2
2005-06	11347.24	3176.9	989.65	15513.78	413.58	78.11	19.28	510.97	3.6	2.5	1.9	3.3
2006-07	14644.93	4201.45	1278.72	20125.1	389.68	92.56	22.63	504.86	2.7	2.2	1.8	2.5
2007-08	18190.74	5258.45	1629.66	25078.85	404.52	129.97	28.59	563.09	2.2	2.5	1.8	2.3
2008-09	22834.73	5850.65	1697.16	30382.54	449.57	169.26	64.44	683.28	2.0	2.9	3.8	2.3
2009-10	27334.58	6440.7	1674.37	35449.65	599.26	176.39	71.33	846.98	2.2	2.7	4.3	2.4
2010-11	30798.04	7323.1	1993.21	40120.79	746.00	181.00	50.00	979.00	2.4	2.5	2.5	2.5
2011-12	35503.89	8716.41	2347.1	46488.08	1178.39	187.68	62.97	1429.03	3.3	2.1	2.7	3.1
2012-13	45601.69	11591.4	2689.67	59882.79	1656.06	210.71	79.97	1940.74	3.6	1.8	3.0	3.2
2013-14	52159.2	13602.5	2995.75	68757.48	2280.74	241.84	115.79	2641.95	4.4	1.8	3.9	3.8
2014-15	56167.2	16073.4	3366.1	75606.7	2784.68	336.9	107.58	3229.16	5.0	2.1	3.2	4.3
2015-16	58183.5	19726.6	3763.37	81673.4	5399.56	558.53	157.98	6116.07	9.3	2.8	4.2	7.5
2016-17	55572.31	22195.63	3323.35	81091.3	6847.32	919.15	136.21	7902.68	11.7	4.1	4.0	9.3

Source: Reserve Bank of India

The NPA is substantially high in case of PSBs. The ratio of gross NPA to gross advances of PSBs has risen to 11.7 per cent in 2016-17. On the other side, the financial health of Private Sector Banks is found to be in a better shape in comparison to PSBs and Foreign Banks (Table 9). However, between 2007-08 and 2010-11, the GNPA rate of PSBs was much lower than that of Private and Foreign Banks. On the other side, contrary to the GNPA ratio of PSBs, Private and Foreign Banks recorded a decline in GNPA rate till recent years. Between 2008-09 and 2016-17, while the GNPA rate of PSBs went up from 2 per cent to 11.7 per cent; it declined from 2.9 per cent to 2.8 per cent for Private Sector Banks. And the trend is more or less similar for the Foreign Banks.

A disaggregated analysis of loan assets of SCBs shows that the ratio of standard advances[1] to gross advances deteriorated substantially between 2015 and 2017 (Table 10). Correspondingly, the share of Sub-standard Assets and Doubtful Advances increased substantially during the same period. There is also an increase in the share of loss advances in 2015-16 and 2016-17. The aggregation of Sub-standard Advances, Doubtful Advances and Loss Advances is the GNPA. The ratio of standard advances to total advances for all SCBs declined from 97.75 per cent (peak level) in 2010-11 to 90.68 per cent in 2016-17. Similarly, the ratio of Sub-standard Advances and Doubtful Advances went up from 0.95 per cent in 2010-11 to 2.75 per cent in 2015-16 and 0.88 per cent in 2008-09 to 6.49 per cent in 2016-17 respectively.

Table 10: Classification of Loan Assets of All Scheduled Commercial Banks (%)

Year (End March)	*Standard Advances*	*Sub-standard Advances*	*Doubtful Advances*	*Loss Advances*	*GNPA*
2005	95.06	1.17	3.15	0.62	4.94
2006	96.70	0.94	1.91	0.44	3.30
2007	97.49	0.99	1.21	0.31	2.51
2008	97.75	1.06	0.97	0.22	2.25
2009	97.72	1.21	0.88	0.2	2.28
2010	97.61	1.20	0.94	0.24	2.39
2011	97.75	0.95	1.06	0.24	2.25
2012	97.25	1.35	1.20	0.21	2.75
2013	96.77	1.52	1.50	0.21	3.23
2014	96.18	1.58	2.00	0.25	3.82
2015	95.73	1.57	2.46	0.24	4.27
2016	92.52	2.75	4.41	0.32	7.48
2017	90.68	2.46	6.49	0.37	9.32

Source: Calculated from RBI data.

[1] For definitions of asset classification, see Box 2.

While there has been deterioration in asset quality of the commercial banks in general, in terms of rise in Sub-standard, Doubtful and Loss Advances and decline in standard advances, the rate of deterioration is much faster and substantial in case of PSBs (Table 11). The recent figures depict a worrying picture of the state of affairs of PSBs. Between March 2015 and 2017 while the share of standard advances declined sharply from 95 per cent to 88.3 per cent, the share of doubtful advances shot-up substantially from 2.9 per cent to 8.36 per cent during the same period. The substantial increase in the share of doubtful advances is a definitely a cause of concern.

Table 11: Classification of Loan Assets of Public Sector Banks (%)

Year (End March)	*Standard Advances*	*Sub-standard Advances*	*Doubtful Advances*	*Loss Advances*	*GNPA*
2005	94.62	1.24	3.47	0.66	5.38
2006	96.35	0.99	2.17	0.49	3.65
2007	97.35	0.97	1.35	0.33	2.65
2008	97.78	0.95	1.06	0.22	2.22
2009	98.03	0.89	0.9	0.18	1.97
2010	97.81	1.05	0.93	0.21	2.19
2011	97.77	1.05	0.99	0.19	2.23
2012	97.03	1.58	1.24	0.15	2.97
2013	96.39	1.79	1.67	0.15	3.61
2014	95.64	1.84	2.33	0.19	4.36
2015	95.04	1.88	2.9	0.18	4.96
2016	90.73	3.44	5.55	0.28	9.27
2017	88.33	2.95	8.36	0.36	11.67

Source: Calculated from RBI data.

The loan asset classification of Private Banks exhibits a pattern similar to that of the PSBs. However, while there has been decline in the share of Standard Advances and increase in the Doubtful and Sub-standard Advances of Private Banks, the rate of decline and increase is not as sharp as that of PSBs (Table 12). There is a substantial gap between PSBs and Private Banks in terms of volume of doubtful and Sub-standard Advances and the overall NPA figures. The share of Standard Advances of Private Banks declined from 98.2 per cent in 2014 to about 96 per cent, the share of Sub-standard Advances increased from 0.52 per cent in 2012 to 1.37 per cent and the share of doubtful advances from 0.84 per cent in 2014 to 2.3 per cent in 2017. The increase in Sub-standard, Doubtful and Loss Advances has resulted in a substantial increase in the NPA rate in the Private Banks from 1.78 per cent in 2014 to 4.06 per cent in 2017.

Foreign Banks seem to be the doing better on indicators of classification of loan assets. Among the bank groups, Foreign Banks are performing comparatively better in terms of higher share of standard advances. Though it has declined from 98.1 per cent in 2008 to 96 per cent in 2017, yet it is highest among the bank groups (Table 13). A similar pattern can be seen in case of share in Sub-standard Advances and Doubtful Advances. Among bank groups, Foreign Banks as a group recorded the lowest share in Sub-standard and Doubtful Advances. However, the share of loss advances of Foreign Banks is found to be higher than that of Private and Public Sector Banks. As per the recent figure, a relatively low share of substandard and doubtful advances has resulted in a lower rate of NPA, which is less than 4 per cent in 2017.

Table 12: Classification of Loan Assets of Private Banks (%)

Year (End March)	*Standard Advances*	*Sub-standard Advances*	*Doubtful Advances*	*Loss Advances*	*GNPA*
2005	96.12	0.98	2.50	0.40	3.88
2006	97.55	0.76	1.39	0.30	2.45
2007	97.80	1.04	0.94	0.22	2.20
2008	97.53	1.39	0.85	0.24	2.47
2009	97.10	1.81	0.86	0.23	2.90
2010	97.27	1.37	1.02	0.34	2.73
2011	97.76	0.56	1.33	0.35	2.24
2012	98.12	0.52	1.06	0.30	1.88
2013	98.21	0.56	0.96	0.27	1.79
2014	98.22	0.63	0.84	0.30	1.78
2015	97.91	0.67	1.10	0.33	2.09
2016	97.17	0.94	1.57	0.31	2.83
2017	95.95	1.37	2.29	0.40	4.06

Source: Calculated from RBI data.

Table 13: Classification of Loan Assets of Foreign Banks (%)

Year (End March)	*Standard Advances*	*Sub-standard Advances*	*Doubtful Advances*	*Loss Advances*	*GNPA*
2005	96.99	0.93	1.34	0.74	3.01
2006	97.92	0.96	0.68	0.44	2.08
2007	98.11	1.07	0.47	0.35	1.89
2008	98.11	1.20	0.47	0.22	1.89
2009	95.70	3.46	0.57	0.26	4.30
2010	95.74	2.94	0.86	0.45	4.26
2011	97.46	0.94	1.06	0.55	2.54
2012	97.32	0.89	0.95	0.84	2.68
2013	97.04	1.07	1.02	0.87	2.96
2014	96.14	1.44	1.43	0.98	3.86
2015	96.80	0.69	1.62	0.89	3.20
2016	95.83	1.64	1.59	0.94	4.17
2017	96.04	1.17	2.38	0.42	3.96

Source: Calculated from RBI data.

While the GNPA ratio of PSBs as a group is found to be substantially high vis-à-vis Private and Foreign Banks, there are variations in GNPA ratio among the banks within the Public Sector (Table 14). In case of PSBs, it is partly due to the relatively large exposure in loans to the Corporate Sector. Average GNPA ratio of PSBs has been calculated for three different time periods: 2005 to 2017, 2009 to 2017, and 2015 to 2017. During the first time period, between March 2005 and 2017, the annual average GNPA ratio was 4.55 per cent for the Nationalised Banks and 4.29 per cent for SBI. Those banks that exhibited higher GNPA ratio include Indian Overseas Bank (IOB) 6.35 per cent, Central Bank of India 6.34 per cent and United Bank of India (UBI) 6.32 per cent. While the GNPA ratio picked up during the period between March 2009 and 2017, it became substantial between March 2015 and 2017. With RBI's Asset Quality Review (AQR), the NPA figures of PSBs spiked up substantially. Between March 2015 and 2017, while the GNPA ratio of Nationalised Banks averaged substantially high at 11.1 per cent, the average GNPA ratio for SBI stood at 7.75 per cent.

During the last two years, most of the PSBs recorded higher GNPA ratio, which is worrisome (Table 14). The GNPA ratio of the Indian Overseas Bank is approaching 20 per cent, which is substantially high by any standard. Out of 22 PSBs, 14 banks recorded a GNPA rate above 10 per cent during March 2015 and 2017. These are UCO Bank (16.6%), IDBI Bank Limited (16.12%), Central Bank of India (14.88%), United Bank of India (14.4%), Bank of India (13.14%), Bank of Maharashtra (13.13%), Dena Bank (13.12%), Punjab National Bank (12.7%), Allahabad Bank (11.83%), Oriental Bank of Commerce (11.65%), Corporation Bank (10.84%), Andhra Bank (10.32%) and Bank of Baroda (10.23%). The Indian Bank recorded the lowest NPA (5.56%) during the same time period.

Table 14: Bank Wise GNPA Ratio of PSBs: Annual Average* (%)

Name of the Bank	*2005-17*	*2009-17*	*2015-17*
SBI	**4.29**	**4.66**	**7.75**
Indian Overseas Bank	6.35	7.76	19.89
UCO Bank	5.82	6.80	16.60
IDBI Bank Limited	4.67	5.94	16.12
Central Bank of India	6.34	6.51	14.88
United Bank of India	6.32	7.22	14.40
Bank of India	4.75	5.38	13.14
Bank of Maharashtra	5.06	5.25	13.13
Dena Bank	5.18	4.96	13.12
Punjab National Bank	5.08	5.53	12.71
Allahabad Bank	4.64	5.11	11.83
Oriental Bank of Commerce	4.97	4.90	11.65
Corporation Bank	3.50	4.00	10.84

Name of the Bank	*2005-17*	*2009-17*	*2015-17*
Andhra Bank	3.62	4.46	10.32
Bank of Baroda	3.96	3.99	10.23
Union Bank of India	4.28	4.63	9.93
Canara Bank	3.72	4.39	9.52
Punjab and Sind Bank	3.52	3.66	8.46
Syndicate Bank	3.67	3.65	7.60
Vijay Bank	3.11	3.38	6.62
Indian Bank	2.87	3.01	5.56
Nationalised Banks	**4.55**	**5.02**	**11.13**

* Year End March
Source: Calculation based on RBI data.

The GNPA ratio of Private Banks as a group does not seem to be worrisome except for the fact that there has been substantial increase in its GNPA ratio between 2015 and 2017 (Table 15). The average GNPA ratio of Private Banks is much lower than that of PSBs. Between March 2005 and 2017, the GNPA ratio of Private Banks averaged at 2.64 per cent, and interestingly declined to 2.53 per cent during 2009 and 2017. Between March 2015 and 2017, the average GNPA ratio increased to 3.43 per cent. Major Private Banks with substantial GNPA ratio during the above period (2015-2017) are ICICI Bank (7.28%) and Axis Bank (3.46%).

Table 15: Bank Wise GNPA Ratio of Private Banks: Annual Average (%)

Name of Bank	*2005-17*	*2009-17*	*2015-17*
ICICI Bank	4.31	5.13	7.28
AXIS Bank	1.64	1.74	3.46
Kotak Mahindra Bank	2.20	2.43	2.47
HDFC Bank	1.25	1.16	0.99
IndusInd Bank	1.70	1.07	0.90
All Private Banks	**2.64**	**2.53**	**3.43**

Source: Calculation based on RBI data.

While the average GNPA ratio of Foreign Banks as a group does not seem to be worrisome, though it has spiked up during last two years (2015-17), there are few individual banks with substantial NPA (Table 16). These are Standard Chartered Bank and DBS Bank. Between March 2015 and 2017, the average GNPA ratio of Standard Chartered Bank stood at 12.3 per cent, followed by DBS Bank at 6.29 per cent.

Table 16: Bank Wise GNPA Ratio of Foreign Banks: Annual Average (%)

Name of Bank	*2005-17*	*2009-17*	*2015-17*
Standard Chartered Bank	5.87	6.68	12.31
DBS Bank	4.39	4.86	6.29
HSBC	2.53	2.66	1.71
American Express	1.25	1.19	1.48
Citi Bank	2.17	2.34	1.46
Barclays Banks	5.88	5.80	0.93
All Foreign Banks	**3.07**	**3.51**	**4.08**

Source: Calculation based on RBI data.

The composition of NPA of PSBs in terms of Priority Vs Non-Priority Sector exhibits that while the NPA in Priority Sector is on a decline, the share of Non-Priority sector has spiked up in recent years (Table 17). Priority Sector NPA of PSBs declined from 61.5 per cent in 2008 to 23.5 per cent in 2017. On the other side, the share of Non-Priority Sector NPA went up from 37.1 per cent in 2008 to 74.2 per cent in 2017. Similarly, the Priority Sector NPA of domestic Private Banks is substantially lower than that of the Non-Priority Sector NPA (Figure 3). The Priority Sector NPA declined from 26 per cent in 2013 to 18 per cent in 2017. On the other side, the Non-Priority sector NPA increased from 74 per cent in 2013 to 82 per cent in 2017.

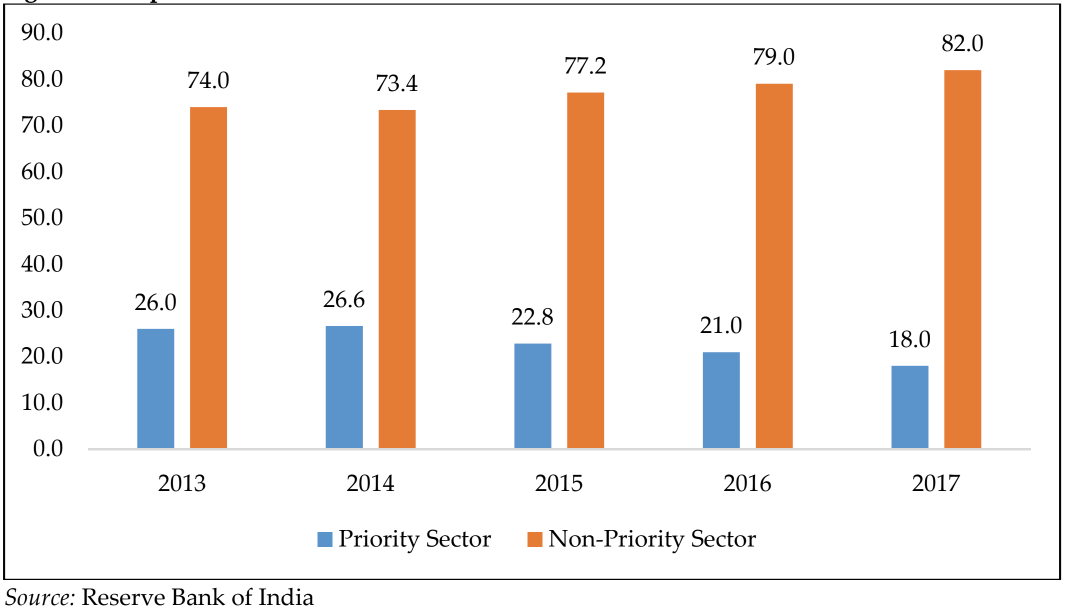
Table 17: Composition of NPAs of Public Sector Banks

Year (End March)	*Priority Sector*	*Non-Priority Sector*	*Public Sector*	*Total*
NPA in Rs. Billions				
2005	215.4	254.9	5.9	476.2
2006	222.4	182.8	8.5	413.7
2007	225.2	156.0	7.3	388.5
2008	248.7	150.1	5.7	404.6
2009	242.0	205.3	3.0	450.3
2010	305.0	291.1	3.1	599.2
2011	401.9	342.4	2.4	746.6
2012	557.8	588.3	26.6	1172.6
2013	672.8	960.3	11.5	1644.6
2014	799.0	1472.3	1.3	2272.6
2015	966.1	1816.0	2.6	2784.7
2016	1258.1	4106.7	34.8	5399.6
2017	1609.4	5083.2	154.7	6847.3

Year (End March)	*Priority Sector*	*Non-Priority Sector*	*Public Sector*	*Total*
NPA Distribution (in per cent)				
2005	45.2	53.5	1.2	100
2006	53.8	44.2	2.1	100
2007	58.0	40.2	1.9	100
2008	61.5	37.1	1.4	100
2009	53.8	45.6	0.7	100
2010	50.9	48.6	0.5	100
2011	53.8	45.9	0.3	100
2012	47.6	50.2	2.3	100
2013	40.9	58.4	0.7	100
2014	35.2	64.8	0.1	100
2015	34.7	65.2	0.1	100
2016	23.3	76.1	0.6	100
2017	23.5	74.2	2.3	100

Source: Calculation based on RBI data.

Figure 3: Composition of NPA of Domestic Private Banks (%)



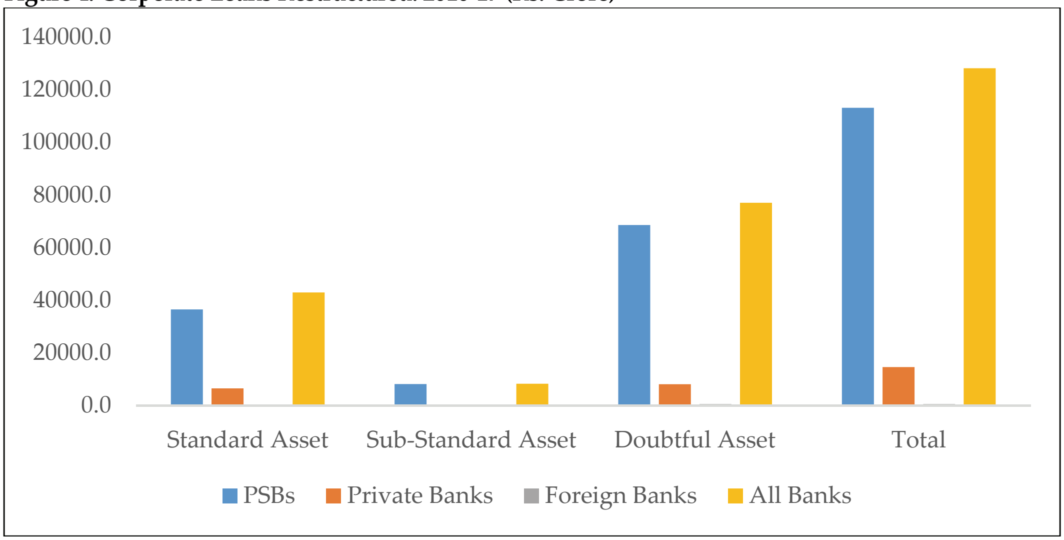
Source: Reserve Bank of India

3.1 Where does Stress come from?

The source of stress in the banking system seems to be coming primarily from the large corporate sector. During 2016-17, more than Rs. 1,28,167 crore corporate loans were subject to restructuring, out of which Rs. 77,039 crores were classified as Doubtful Assets and more than Rs. 81,883 crores as Sub-standard Assets (Figure 4). On the other side, loans (excluding corporate loans) that were subject to restructure during 2016-17, the shares of Sub-standard and Doubtful Assets are found to be low (Figure 5). However, in both cases, it is largely the PSBs who constituted the largest share of loans, subject to restructuring. During the financial year 2016-17, the volume of corporate loans disbursed by PSBs that went through restructuring stood at about Rs.1,13,104 crores; out of these, more than Rs.8107 crores were in the form of Sub-standard Assets and Rs.68,540 crores in the form of Doubtful Assets.

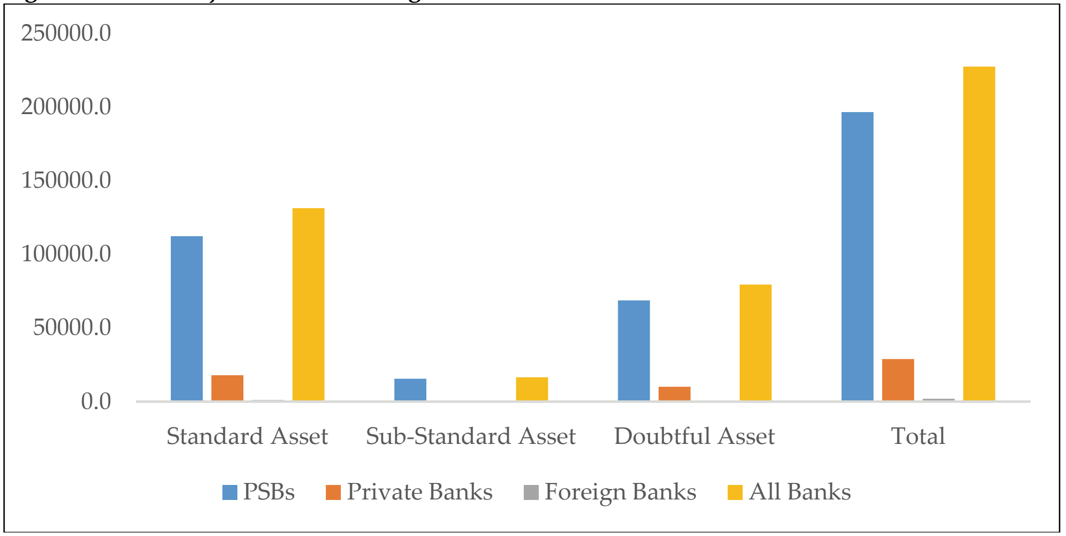
Broad sector-wise data shows that incidence of loan default is relatively higher in the industrial sector (Figure 6). As of September 2017, the industrial sector stressed advance as percentage of total advances to the industrial sector stood at 23.9 per cent and the GNPA as percentage of total advances to the industrial sector was more than 19 per cent. Loan performance seems to be relatively better in case of the agriculture sector, services sector, and the retail sector. As of September, 2017, the GNPA ratio in agriculture sector stood at 6.4 per cent followed by 5.7 per cent for services sector and 2.1 per cent for the retail sector. While at the broad sectoral level, industrial sector is found to be the source of stress for banking sector in terms of loan default, a sub-sector wise analysis can help in identifying the exact source of stress at the micro level.

Figure 4: Corporate Loans Restructured: 2016-17 (Rs. Crore)



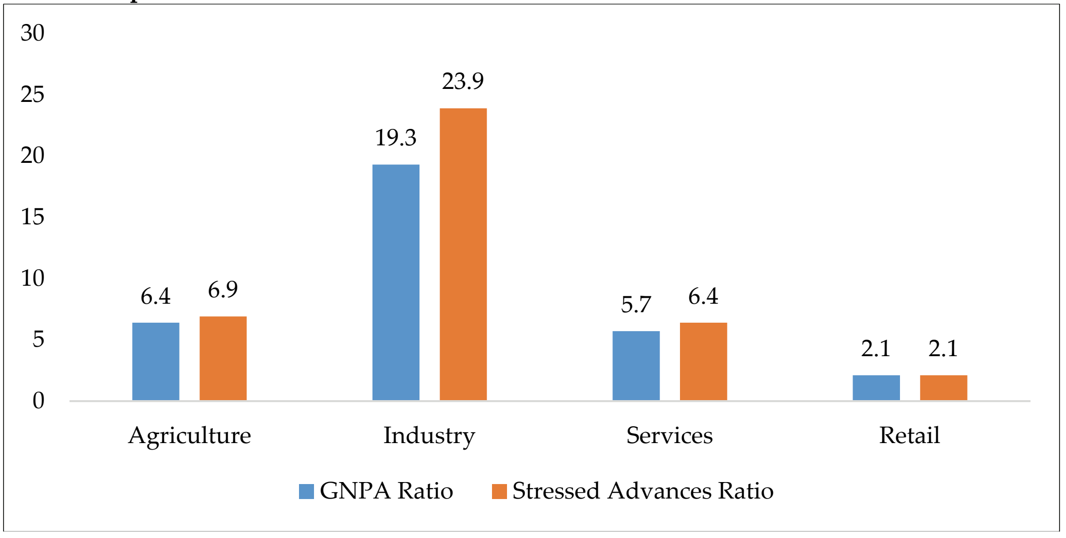
Source: Reserve Bank of India

Figure 5: Loans Subject to Restructuring: 2016-17 (Rs. Crore)



Source: Reserve Bank of India

Figure 6: Stressed Advances in Broad Sectors: September 2017 (per cent to total advances of the respective sector)



Source: RBI: Financial Stability Report, December 2017.

At sub-sector level, iron and steel, and power industries are found to have high leverage as well as interest cost burden. The other highly leveraged sectors include telecommunications and transport. The source of increase in GNPA ratio is found in the following industries: cement, construction, electrical machinery, power, iron and steel, jewellery, mining, automobile, papers, pharmaceutical, real estate, telecommunications and transport sector. Between 2015 and September 2017, the above sectors contributed towards increase in borrowings.

Sub-sector wise analysis shows that sectors with higher credit share demonstrate higher stress (Table 18). In 2017, substantial volume of credit went to Infrastructure (34%), Basic Metal and their products (14.7%), Textiles (7.3%), Chemical and their products (6.5%), Food Processing (5.6%), and Engineering (5.6%). The stressed advances ratio is high in the above sectors. The sub-sectors which recorded higher stressed ratio in 2017 included Basic Metal and their products (45.8%), Cement and their products (34.6%), Textiles (27.5%), Vehicle Parts and Transport Equipment (25.6%), Construction (24.5%), Food Processing (21.4%), Engineering (19.4%), and Infrastructure (18.3%).

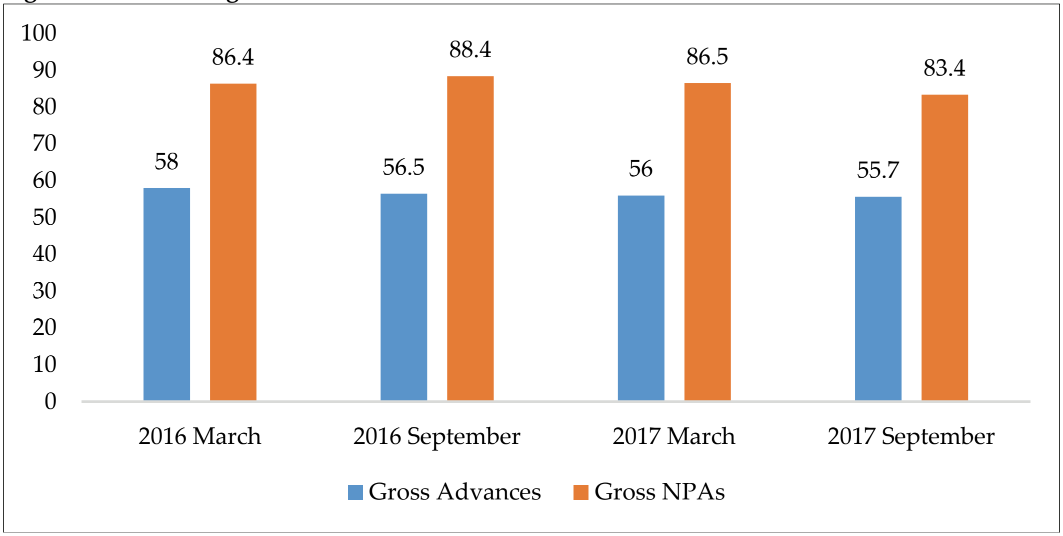
Table 18: Sub-sector wise Credit Share and Stressed Assets Ratio

	Credit to Industry (% Share)		*Stressed Advance Ratio (%)*	
Sub Sectors	*2016*	*2017*	*2016*	*2017*
Mining & Quarrying	1.3	1.2	16.3	21.1
Food processing	5.5	5.6	17.7	21.4
Textile	6.9	7.3	21.3	27.5
Paper and their products	1.2	1.2	16.0	22.8
Chemical and their Products	5.3	6.5	11.8	8.9
Rubber, Plastic and their product	1.2	1.4	10.8	8.6
Cement and their products	1.7	1.9	19.0	34.6
Basic Metal and their Products	13.6	14.7	34.4	45.8
Engineering	5.3	5.5	16.5	19.4
Vehicles Parts and Transport Equipments	2.4	3.0	13.8	25.6
Gems and Jewellery	2.5	2.7	13.2	13.0
Construction	2.9	3.5	27.1	24.5
Infrastructure	32.8	34	16.7	18.3

Source: RBI: Financial Stability Report, various issues.

Another dimension of the NPA phenomenon is the overwhelming share of large loans (borrowers) in the loan portfolio of the SCBs in India (Figure 7). As per recent data, large loans (borrowers) constituted more than 50 per cent of the total loans disbursed by SCBs. And interestingly, large borrowers are found to be the source of high NPA in the banking sector. Therefore, evidently it can be concluded that it is mainly the non-performance of large corporate borrowers which has been driving the NPA figure upward.

Figure 7: Share of Large Borrowers in SCBs' Loan Portfolio (%)



Source: RBI: Financial Stability Report, December 2017.

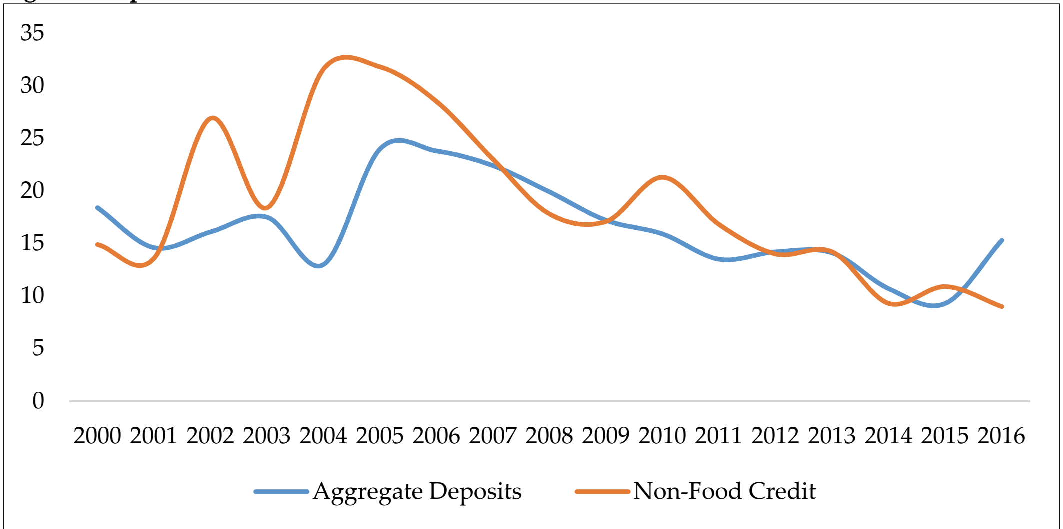
4. NPA and Banking Performance

The deterioration in asset quality as reflected in rising NPAs can adversely impact the performance of the banking sector by reducing the profitability and squeezing the liquidity, which in turn is likely to impact the solvency position of banks. In the backdrop of rising NPA, this chapter attempts to examine the performance of banks using the following five indicators. These are, RoA, RoE, Ratio of Interest Income to Total Assets, Net Interest Margin, and Ratio of Operating Profits to Total Assets.

The performance of Indian SCBs in recent years has been not been impressive with increasing incidence of bad or defaulted loans (Table 19). Stagnated credit growth, coupled with an increase in stressed assets has impacted the profitability of the Banking Sector as a whole. On the profitability indicators, the performance of SCBs as a whole has been worsening. Both the indicators of profitability, RoA and RoE, exhibit worrisome figures.

The RoA of SCBs declined substantially from 1.72 per cent in 2005 to 0.35 per cent in 2017. Similarly, there has been a substantial decline in the RoE of SCBs, from 2 6.9 per cent in 2005 to 4.16 per cent in 2017. Between March 2015 and 2017, the decline in RoA and RoE has been substantial. Similarly, the indicator for operating profit, the ratio of operating profit to total assets also recorded substantial decline from 4.2 per cent in 2005 to 2.1 per cent in 2017. The decline in profitability of banks can further be substantiated with the declining interest earnings of the banks. The indicators of interest earning, ratio of interest income to total assets and the net interest margin also indicate that the interest income of banks has declined substantially and at a faster rate. The ratio of interest income to total assets declined from 12.8 per cent in 2005 to 7.4 per cent in 2017. Similarly, the net interest margin also declined from 5.48 per cent in 2005 to 2.4 per cent in 2017.

Figure 9: Deposit and Credit Growth (%)



Source: Calculation based on RBI data.

Table 19: Performance of Indian Scheduled Commercial Banks (%)

Year (End March)	*Return on Assets*	*Return on Equity*	*Ratio of Interest Income to Total Assets*	*Ratio of Net Interest Income to Total Assets (Net Interest Margin)*	*Ratio of Operating Profit to Total Asset*
2005	1.72	26.89	12.81	5.48	4.19
2006	1.01	14.77	7.21	3.04	2.12
2007	1.05	15.51	7.42	2.86	2.11
2008	1.12	15.98	7.92	2.58	2.15
2009	1.13	15.44	8.12	2.62	2.32
2010	1.05	14.31	7.37	2.54	2.17
2011	1.10	14.96	7.44	2.91	2.26
2012	1.08	14.60	8.45	2.90	2.24
2013	1.04	13.84	8.53	2.79	2.13
2014	0.81	10.69	8.32	2.70	2.04
2015	0.81	10.42	8.18	2.64	2.00
2016	0.31	3.59	7.92	2.60	1.96
2017	0.35	4.16	7.42	2.40	2.11

Source: Reserve Bank of India

The performance of PSBs has worsened in recent years due to growing NPAs. On major performance indicators, PSBs are not doing so well (Table 20). On profitability indicators, PSBs recorded negative results in the last two consecutive financial years. The RoA of the PSBs declined from 1.1 per cent in 2005 to (-)0.1 per cent in 2017. The RoE also declined substantially from 19.5 per cent in 2005 to (-)2.05 per cent in 2017. Similarly, the ratio of interest income to total asset and net interest margin also suggests deterioration in the performance of PSBs. The ratio of interest income to total assets declined from 8.6 per cent in 2005 to 7.2 per cent in 2017. Similarly, the net interest margin ratio declined from 3.65 per cent in 2005 to 2.12 per cent in 2017. The ratio of operating profit to total assets also recorded a decline from 2.65 per cent in 2005 to 1.68 per cent in 2017.

Table 20: Performance of Public Sector Banks (%)

Year (End March)	*Return on Assets*	*Return on Equity*	*Ratio of Interest Income to Total Assets*	*Ratio of Net Interest Income to Total Assets (Net Interest Margin)*	*Ratio of Operating Profit to Total Asset*
2005	1.10	19.53	8.60	3.65	2.65
2006	0.89	14.65	7.17	2.92	1.86
2007	0.94	15.97	7.49	2.80	1.92
2008	1.01	17.09	7.83	2.28	1.80
2009	1.03	18.05	8.18	2.32	1.92
2010	0.97	17.47	7.46	2.29	1.87
2011	0.96	16.90	7.52	2.77	2.05
2012	0.88	15.33	8.55	2.76	2.05
2013	0.80	13.24	8.54	2.57	1.87
2014	0.50	8.48	8.31	2.45	1.71
2015	0.46	7.76	8.12	2.35	1.70
2016	-0.20	-3.47	7.78	2.23	1.54
2017	-0.10	-2.05	7.20	2.12	1.68

Source: Reserve Bank of India

On the contrary, Private Banks have performed better on all performance indicators (Table 21). The profitability indicators, both the RoA and RoE, suggest that except for the last two financial years, Private Banks have performed better. Moreover, the recent decline is not substantial, relative to the performance of PSBs and total SCBs as a whole. The RoA increased from 0.45 per cent in 2005 to 1.3 per cent in 2017. Similarly, RoE also increased from 7.2 per cent in 2005 to 11.9 per cent in 2017. Other performance indicators like ratio of interest income to total asset and net interest margin also suggest that Private Banks have been able to maintain their performance. The interest income to total asset ratio increased from 3.34 per cent in 2005 to 8.27 per cent in 2017. The net interest margin ratio also increased impressively from 1.27 per cent in 2005 to 3.38 per cent in 2017. Operating profit as ratio of total assets also suggests impressive performance of the Private Banks as group. It increased from 0.98 per cent in 2005 to 3.02 per cent in 2017.

Table 21: Performance of Private Banks (%)

Year (End March)	*Return on Assets*	*Return on Equity*	*Ratio of Interest Income to Total Assets*	*Ratio of Net Interest Income to Total Assets (Net Interest Margin)*	*Ratio of Operating Profit to Total Asset*
2005	0.45	7.22	3.34	1.27	0.98
2006	1.07	13.34	7.05	2.74	1.95
2007	1.02	13.71	7.53	2.54	2.08
2008	1.13	13.43	8.42	2.67	2.28
2009	1.13	11.38	8.65	2.86	2.46
2010	1.28	11.94	7.60	2.90	2.68
2011	1.43	13.70	7.59	3.10	2.58
2012	1.53	15.25	8.71	3.09	2.51
2013	1.63	16.46	9.04	3.22	2.64
2014	1.65	16.22	8.90	3.31	2.79
2015	1.68	15.74	8.81	3.37	2.86
2016	1.50	13.81	8.71	3.45	2.96
2017	1.30	11.87	8.27	3.38	3.02

Source: Reserve Bank of India

Similarly, Foreign banks operating in India exhibited better performance on indicators of income and profitability. While the overall performance of Foreign Banks is relatively weak in comparison to that of Private Banks, their financial performance has been quite impressive vis-à-vis the PSBs (Table 22). Both the indicators of profitability, RoA and RoE, are showing impressive performance. The RoA increased from 0.68 per cent in 2005 to 1.62 per cent in 2017. Similarly, RoE increased from 7.97 per cent to 9.1 per cent in 2017. The ratio of interest income to total assets recorded an increase from 3.15 per cent in 2005 to 6.3 per cent in 2017. The net interest margin also increased from 1.8 per cent in 2005 to 3.4 per cent in 2017. The ratio of operating profit to total assets also increased between March 2005 and 2017, from 1.6 per cent to 3.3 per cent respectively.

Deterioration in the asset quality of SCBs has impacted the interest earnings and thus profitability of the banking sector as a whole. However, it is largely the PSBs whose profitability has sharply declined in recent years. Profitability, as reflected in RoA and RoE, exhibited a declining trend beginning 2009-10. The RoA for the Private and Foreign Banks exhibited an increasing trend till 2014-15. However, between 2015 and 2017, the share in profitability in terms of RoA has also declined. Even though, the profitability of the Private Sector Banks and Foreign Banks continues be higher than the PSBs, their profitability declined due to increase in the incidence of loan defaults during the last two years. This has had an impact on the liquidity of banks, thereby impacting the lending capacity of the banks. If this scenario persists for a longer time, it may as well adversely impact the solvency position of the banks.

Table 22: Performance of Foreign Banks (%)

Year	*Return on Assets*	*Return on Equity*	*Ratio of Interest Income to Total Assets*	*Ratio of Net Interest Income to Total Assets (Net Interest Margin)*	*Ratio of Operating Profit to Total Asset*
2005	0.68	7.97	3.15	1.76	1.57
2006	2.08	14.18	6.96	4.05	3.77
2007	2.28	15.98	7.57	4.36	4.06
2008	2.09	16.05	7.65	4.33	4.40
2009	1.99	13.75	7.49	4.33	4.97
2010	1.26	7.34	5.99	3.96	3.70
2011	1.75	10.28	6.15	3.86	3.52
2012	1.76	10.79	6.67	3.89	3.44
2013	1.92	11.53	6.89	3.83	3.33
2014	1.54	9.03	6.60	3.54	3.28
2015	1.84	10.24	6.71	3.54	3.36
2016	1.45	8.00	6.67	3.60	3.13
2017	1.62	9.12	6.33	3.41	3.27

Source: Reserve Bank of India.

5. Summary Conclusion

The present study is an attempt to understand various dimensions of the current phase of NPA phenomenon in the Indian SCBs. The Indian financial sector which is primarily bank based is facing serious challenges on account of the growing NPA problem. As a result, substantial stress has built up in the banking system. The problem is much deeper in case of the Public Sector Banks (PSBs). However, in recent years, there has been substantial growth of bad loans in the private banks too. The growing incidence of bad loans has serious implications for the banking sector. The source of the stress in the banking system primarily seems to be the large corporate industries. As per recent data, large loans (borrowers) constituted more than 50 per cent of the total loans disbursed by the SCBs. And, the large borrowers are found to be the source of high NPA in the banking sector. Therefore, it can be concluded that it is largely the non-performance of the large borrowers which has been responsible for deterioration in asset quality.

The incidence of loan default is seen to be relatively high in the Industrial sector. The loan performance was seen to be relatively better in case of the Agriculture, Services, and the Retail sectors. The composition of NPA of PSBs in terms of Priority Vs Non-Priority Sector shows that the current phase of NPA problem primarily originates from the Non-Priority sector loans. Similarly, the Non-Priority sector NPA of the domestic private banks is substantially higher than the Priority sector NPA. While at a broad sector level the Industrial sector is found to be the source of stress for the banking sector in terms of loan default, sub sector wise analysis shows that iron and steel, and power industries are having high leverage as well as interest cost burden. The other highly leveraged sectors include telecommunications and transport. The source of increase in GNPA ratio is found in the following industries: cement, construction, electrical machinery, power, iron and steel, jewellery, mining, automobile, papers, pharmaceutical, real estate, telecommunications and transport sector. Between 2015 and September 2017, borrowings of these sectors have also increased substantially.

The accumulation of NPAs has adversely impacted the performance of the banking system. The impact of the accumulation of stressed assets is evident from the fact that the profitability of the banking sector has gone down substantially. Profitability measured in terms of Return on Assets (RoA) and Return on Equity (RoE) has declined in recent years. Between March 2015 and 2017, the decline has been much faster. On the indicator of operating profit, the ratio of operating profit to total assets also recorded a substantial decline. Although the profitability of both private and foreign banks continues to be higher than that of the PSBs, it declined during last two years due to an increase in incidence of loan default. This has had an impact on the liquidity of the banks, which, in turn, has affected their lending capacity. If this scenario persists for a longer time, it may adversely impact the solvency position of the banks. The increase in NPAs can have a potentially adverse impact on the economy through a reduction in loan growth which is critical to investment. Given the current macroeconomic outlook of the Indian economy, which is not so bullish, especially with respect to investment, reduction in loan growth due to acceleration of NPA is likely to hit the economy further.

Annexure

Box 1: Non-Performing Advances (NPA): Definition

An 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' for a period of more than 90 days, 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,
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, and
viii. 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.

Source: Reserve Bank of India: Master Circular – Prudential Norms on Income Recognition, Asset Classification and Provisioning Pertaining to Advances [DBR.No.BP.BC.2/21.04.048/2015-16, dated July 1, 2015] & Master Circular – [DBOD No. BP.BC/ 20 /21.04.048 /2001-2002, dated September 1, 2001]

Box 2: Asset Classification: Categories of NPA

Sub-standard Asset: With effect from March 31, 2005, a Sub-standard asset would be one which has remained a non-performing asset for a period less than or equal to 12 months. Such an asset will have well-defined credit weaknesses that jeopardises the liquidation of the debt and is characterised by the distinct possibility that banks will sustain some loss, if deficiencies are not corrected.

Doubtful Asset: With effect from March 31, 2005, an asset would be classified as doubtful if it has remained in the substandard category for a period of 12 months. A loan classified as doubtful has all the weaknesses inherent in assets that are classified as substandard, 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.

Loss Asset: 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.

* As per the recent RBI circular, "in case of restructuring, the accounts classified as 'standard' shall be immediately downgraded as non-performing assets (NPAs), i.e., 'sub-standard' to begin with. The non-performing assets, upon restructuring, would continue to have the same asset classification as prior to restructuring. In both cases, the asset classification shall continue to be governed by the ageing criteria as per extant asset classification norms" (RBI, February 12, 2018 Circular RBI/2017-18/131, DBR.No.BP.BC.101/21.04.048/2017-18).

** RBI has eased its Non-performing advances recognition criteria for banks and NBFC for their exposure to Micro, Small and Medium Enterprises (MSMEs). Accordingly, for GST registered MSMEs with aggregate exposure of funds not exceeding 25 crore on January 31, 2018 and borrower account should be standard on August 31, 2017, certain exposures shall continue to be classified as standard asset even if the dues are paid within 180 days from their respective original due dates, instead of the present 90days and 120 days delinquency norms for banks and NBFCs respectively. It would also apply to loans overdue as on September 1, 2017 and for payment from the borrower due between September 1, 2017 and January 31, 2018. A provision of 5% will have to be made by the banks and NBFCs against the exposures 1 (RBI Notification 2018, "Relief for MSME Borrowers registered under Goods and Services Tax (GST)" RBI/2017-18/129 DBR.No.BP.BC.100/21.04.048/2017-18, February 7).

Source: Reserve Bank of India: Master Circular – Prudential Norms on Income Recognition, Asset Classification and Provisioning Pertaining to Advances [DBR.No.BP.BC.2/21.04.048/2015-16, dated July 1, 2015]

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