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Two Phases of NPAs in India's Banks

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Santosh Kumar Das[*]

*[**Abstract**: India's banking sector has witnessed two phases of non-performing advances (NPAs) during the post liberalisation period: one during the mid-1990s and other which is ongoing. The present paper explores the trend and pattern of NPAs during the above two phases, with a focus on the ongoing NPA crisis. It attempts to provide a comparative analysis between the two phases in terms of individual banks vis-à-vis their NPA performance and the sources of loan failure. The paper also attempts to explain the differential NPA figures between the public sector banks (PSBs) and private banks by analysing their approach to credit. The paper suggests that in terms of magnitude, the current crisis is more severe, having adverse consequences as, largely, the loan default is happening within the industrial and infrastructure sector. Majority of the PSBs are found to be affected in both the phases of crisis. Overwhelmingly, the current NPA problem is due to the non-performance of the non-priority sector advances, which are large in size. On the other side, during the earlier NPA crisis, the priority sector was also equally hit. We found there is considerable difference between the PSBs and the private banks with respect to their credit approach or strategy, which explains the higher incidence of NPAs in PSBs. We found that while PSBs have undertaken term lending, private banks tend to refrain from lending to large projects.]*

Keywords: NPAs, India's Banks, PSBs, loan failure, credit approach.

1. Introduction

In the recent past, India's Banking sector has experienced two episodes of crisis with respect to the non-performance of their advances, one in the mid-1990s and the other which has been ongoing since 2014–15. While there seem to be few similarities between the two phases of the crisis, the current non-performing advances (NPA) crisis, however, is more severe in terms of the volume of failed loans or advances turning into NPAs, thereby affecting the financial health of the banks. The growing incidence of loan failures is the

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major source of stress for the banking system. As per the recent data, as on March 2021, the gross non-performing asset (GNPA)[1] ratio for the banking sector as a whole stood at 7.5 percent (RBI, 2021). The Reserve Bank of India (RBI) estimate (stress test) suggests that under base line scenario, the GNPA ratio is likely to increase to 9.8 percent by March 2022 owing to the prevailing macroeconomic scenario. The report (RBI, 2021) further suggests that any adverse shock to the economy is likely to add to the bad loan stock[2].

In terms of bank groups by ownership, it is largely the public sector banks (PSBs) that are severely affected vis-à-vis their private counterparts during both the periods. However, the current phase appears to be more severe for both the PSBs and the private banks due to the higher volume of accumulated NPAs, though NPA figures of private banks are smaller than their public sector counterparts. In terms of sources of NPAs, in the current phase, large industrial loans are the major driver of NPAs, which explains that the PSBs are badly affected due to the exposure to large industrial loans. In terms of sectors, the infrastructure sector is the largest source of loan defaults in the current crisis. It is mostly the non-priority sector which has contributed to the accumulation of NPAs in the current phase; whereas the priority sector was also a major source of loan default crisis during 1990s.

The present paper analyses the trends and patterns of NPAs in both the periods of crisis in India's banks, with emphasis on the current phase. Analysis will be carried out at the level of banks to see whether the same set of banks have been affected in both the phases of crisis. Similarly, sources of loan default have been analysed for the both the time periods. The paper also attempts to explain the differences in NPAs of PSBs and private banks by analysing their credit approach or model.

The paper spreads over seven sections. The introduction to the paper has been presented in section one. The two phases of NPA crisis in India's banks have been elaborated in sections two and three. The trend and dimensions of NPAs of the two periods or phases have been analysed in these sections. The distribution of NPAs in terms of priority sector vs non-priority sector, and industry- and sector-wise analysis has been discussed in section four. Section five provides a brief analysis of NPAs in terms of pattern and sources in the two time periods. The credit approach of PSBs and private banks have been analysed to shed light on why PSBs are more severely affected than their private counterparts in the current NPA crisis in section six. Finally, section seven provides the summary of the paper.

2. NPAs in India's Banks: Phase 1 (1996–2005)

During the 1990s, India's banks witnessed significant rise in the volume of bad or non-performing loans. The NPAs as a ratio of total bank advances peaked at 15.7 percent in 1996–

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[1] GNPA Ratio = The ratio of NPAs to total bank advances.

[2] The NPA problem in India's banks is likely to deteriorate further due to the outbreak of the pandemic. The outbreak of the current pandemic (COVID-19) is a huge shock to the economy which is likely to worsen the economic scenario, thereby becoming a major source of stress for the banking sector.

97 (Table 1). Bank group-wise data shows that PSBs were badly affected by the NPA crisis. While the average GNPA ratio for the banking sector as a whole stood at 15.7 percent in 1996–97, the GNPA ratio of PSBs rose to 17.8 percent. The private banks also recorded a steep rise in their GNPA ratio. Private banks recorded their peak GNPA ratio in 1998–99, with 10.8 percent of NPAs. The trend was almost similar in the case of foreign banks. Foreign banks recorded their highest GNPA ratio in 1999–2000 with 7 percent of NPAs. The noticeable feature that emerges from the bank group-wise NPA analysis is that different bank groups recorded their respective peak GNPA ratio in different years. And, both in volume and share, PSBs experienced greater trouble than banks in other categories – private and foreign.

Table 1: Bank Group-wise NPAs in Banks in India: 1996–2005

Year (end march)	*All SCBs*		*Public Sector Banks*		*Private Banks*		*Foreign Banks*	
	Gross NPAs	*Net NPAs*	*Gross NPAs*	*Net NPAs*	*Gross NPAs*	*Net NPAs*	*Gross NPAs*	*Net NPAs*
Volume of NPAs (Rs. Crore)								
1996–97	47300	22340	43577	20285	2542	1539	1181	516
1997–98	50815	23761	45653	21232	3186	1863	1976	666
1998–99	58722	28020	51710	24211	4655	2943	2357	866
1999–00	60408	30073	53033	26187	4761	3031	2614	855
2000–01	63741	32461	54672	27977	5963	3700	3106	785
2001–02	70861	35554	56473	27958	11662	6676	2726	920
2002–03	68717	29692	54090	24877	11782	3963	2845	903
2003–04	64812	24396	51537	19335	10381	4128	2894	933
2004–05	57396	21754	46599	16904	12765	6071	2233	639
NPAs as % of Advances								
1996-97	15.7	8.1	17.8	9.2	8.5	5.4	4.3	1.9
1997-98	14.4	7.3	16.0	8.2	8.7	5.3	6.4	2.2
1998–99	14.7	7.6	15.9	8.1	10.8	6.9	7.6	2.9
1999–00	12.7	6.8	14.0	7.4	8.5	5.6	7.0	2.4
2000–01	11.4	6.2	12.4	6.7	8.4	5.4	6.8	1.8
2001–02	10.4	5.5	11.1	5.8	9.6	5.7	5.4	1.9
2002–03	8.8	4	9.4	4.5	8.1	5.0	5.3	1.7
2003–04	7.2	2.8	7.8	3.1	5.8	2.8	4.6	1.5
2004–05	4.9	1.9	5.4	2.0	3.8	1.9	3.1	0.8

Source: Calculation based on RBI data.

A more disaggregated data at bank level shows that several PSBs did register higher GNPA ratio in comparison to private and foreign banks. Between 1997 and 2001, the GNPA ratio of nationalised banks reduced to 12.16 percent in 2001 from as high as 19.05 percent in 1997 (Table 2). The State Bank of India (SBI) also recorded a high GNPA ratio, though it lessened to 12.73 in 2001 from a high 15.81 percent in 1998. Though the GNPA ratio for all of the above banks declined, the ratio of non-performing loans was still fairly high. During this time period, Allahabad Bank, Central Bank of India, Indian Bank, Dena Bank, Punjab and Sindh Bank, and United Bank of India registered their highest GNPA ratios. Though their GNPAs reduced during this period, it still remained quite high. The GNPA ratio of Allahabad Bank declined to 17.66 percent in 2001 from 23.93 percent in 1997, Central Bank of India saw a reduction to 16.06 percent from 25 percent, Indian Bank recorded a reduction to 21.76 percent from 39.12 percent, Punjab and Sindh Bank saw a reduction to 18.45 percent from 30.71 percent, and United Bank of India saw a fall to 21.51 percent from 36.20 percent during the same period, whereas Dena Bank registered an increase to 25.31 percent from 15.10 percent during the same period.

Table 2: GNPA Ratio of Public Sector Banks in India: 1996–2004

Name of the Bank	*1996–97*	*1997–98*	*1998–99*	*1999–00*	*2000–01*	*2001–02*	*2002–03*	*2003–04*	*2004–05*
Allahabad Bank	23.93	23.18	20.09	19.07	17.7	16.9	13.7	8.66	5.8
Andhra Bank	11.81	9.86	9.42	7.83	6.13	5.26	4.89	4.6	2.46
Bank of Baroda	17.15	14.63	16.03	14.73	14.1	12.4	11.0	10.5	7.3
Bank of India	11.78	11.55	11.87	12.90	10.3	9.37	8.55	7.86	5.45
Bank of Maharashtra	20.67	17.39	15.97	12.65	12.4	10.4	9.55	7.7	7.0
Canara Bank	20.26	18.69	18.32	10.42	7.48	6.22	5.96	6.33	3.89
Central Bank of India	25.00	20.47	17.41	16.63	16.1	14.7	13.1	12.6	9.5
Corporation Bank	9.92	7.60	5.66	5.39	5.4	5.19	5.27	5.03	3.41
Dena Bank	15.10	13.73	12.37	18.15	25.3	24.1	17.9	14.8	9.67
Indian Bank	39.12	38.96	38.70	32.77	21.8	17.9	12.4	7.98	4.19
Indian Overseas Bank	15.80	13.38	13.32	13.18	11.8	11.4	10.3	7.4	5.28
Oriental Bank of Commerce	7.36	6.16	6.30	5.54	5.21	6.57	6.94	5.87	9.06
Punjab and Sind Bank	30.71	26.79	23.01	15.27	18.5	18.2	19.3	18.2	17.2
Punjab National Bank	16.31	14.50	14.12	13.19	11.7	11.4	11.6	9.35	5.96
Syndicate Bank	19.32	15.31	10.72	7.74	7.87	8.35	8.34	7.33	5.17
UCO Bank	28.35	24.04	22.55	18.79	11.6	9.59	8.24	6.93	4.96
Union Bank of India	10.38	11.18	12.41	12.27	11.2	10.8	8.96	7.59	5.01
United Bank of India	36.20	33.50	32.38	27.60	21.5	16.2	12.2	9.07	6.14
Vijay Bank	18.73	15.21	13.65	11.52	10	9.39	6.18	3.44	2.94
State Bank Group	**15.81**	**14.57**	**15.67**	**14.08**	**12.7**	**11.2**	**8.68**	**6.98**	**5.32**
Nationalised Banks	**19.05**	**16.88**	**16.02**	**13.99**	**12.2**	**11**	**9.72**	**8.58**	**5.36**
All Public Sector Banks	**17.8**	**16**	**15.9**	**14**	**12.4**	**11.1**	**9.4**	**7.8**	**5.4**

Source: Calculation based on RBI data.

Private banks also registered a significant increase in their GNPA ratios towards the end of 1990s. Leading private banks like the ICICI Bank, IndusInd Bank, and Axis Bank recorded a substantial rise in non-performing loans (Table 3). While Axis Bank and IndusInd Bank registered high GNPA ratio towards the second half of the 1990s, ICICI Bank recorded a high GNPA ratio during early 2000s. Axis Bank saw its peak GNPA ratio of 7.86 percent during 1998–99, which subsequently declined at a very fast rate. Similarly, IndusInd Bank registered its peak GNPA ratio (10.1 percent) during 1998–99, though the decline was not rapid. On the other side, ICICI Bank registered its peak GNPA ratio of 10.23 percent during 2001–02, which declined at a faster rate during the succeeding years.

Table 3: GNPA Ratio of Leading Private Sector Banks in India: 1996–2004

Name of the Bank	*1996–97*	*1997–98*	*1998–99*	*1999–2000*	*2000–01*	*2001–02*	*2002–03*	*2003–04*	*2004–05*
HDFC Bank Ltd	0.50	3.04	1.65	3.07	2.81	3.18	2.22	1.86	1.69
ICICI Bank Ltd	2.24	1.93	4.72	2.54	5.42	10.23	8.72	4.7	4.27
IndusInd Bank Ltd	2.74	5.33	10.08	7.14	6.13	7.41	4.94	3.3	3.53
Kotak Mahindra Bank Ltd						–	1.2	0.85	0.69
Axis Bank	4.33	7.15	7.86	5.47	4.64	5.18	3.16	2.88	1.98
Private Banks	**8.5**	**8.7**	**10.8**	**8.5**	**8.4**	**9.6**	**8.1**	**5.8**	**3.8**

Source: Calculation based on RBI data.

The bank-wise NPA figures of foreign banks suggest that several leading foreign banks registered high GNPA ratio between 1996 and 2004 (Table 4). While HSBC Bank, Standard Chartered Bank, and Barclays Bank saw rising non-performing loans during the second half of 1990s, American Express Bank registered its peak GNPA ratio during the early years of 2000s. And, some leading foreign bank like Citibank did not face this problem on a large scale. However, it is to be noticed that the GNPA ratio of several foreign banks is higher than that of the domestic private banks. In a comparative sense, domestic private banks did outperform foreign banks on the indicator of non-performance of advances.

Table 4: GNPA Ratio of Leading Foreign Banks in India: 1996–2004

Name of the Bank	*1996–97*	*1997–98*	*1998–99*	*1999–00*	*2000–01*	*2001–02*	*2002–03*	*2003–04*	*2004–05*
American Express Bank Ltd	3.63	3.56	6.25	7.14	11.92	14.56	19.29	16.47	1.63
Barclays Bank PLC	7.77	15.76	17.04	23.4	0	43.58	64.01	65.36	
Citibank NA	1.22	1.22	3	1.8	1.35	0.93	1.94	2.52	2.01
DBS Bank Ltd					0	0.16	12.65		
HSBC Ltd	6.06	7.91	8.38	9.38	6.64	5.51	5.09	4.2	3.16
Standard Chartered Bank	5.6	7.47	8.5	7.94	7.59	3.44	3.17	2.91	2.73
Foreign Banks	**4.29**	**6.38**	**7.59**	**6.99**	**6.84**	**5.38**	**5.25**	**4.85**	**3.05**

Source: Calculation based on RBI data.

3. Current NPAs Crisis: Phase 2 (Post 2005)

The current crisis in India's banking system is largely due to the unprecedented accumulation of bad or non-performing loans. All banks, irrespective of their ownership, have registered substantial volume of bad loans, though the incidence of NPA is prevalent in PSBs. The widespread prevalence of bald loans came to light with the conduct of asset quality review (AQR) in 2015 by the RBI. The ratio of NPAs to total advances (GNPA ratio) of scheduled commercial banks (SCBs) has risen significantly to a mammoth 11.2 percent in 2017–18 from a moderate NPA of 2.2 percent in 2007–08 (Table 5). The NPA figures of the PSBs increased significantly to 14.6 percent in 2017–18 from 2 percent in 2008–09. As per the recent data, the ratio of bad loans to total advances of PSBs is 10.25 percent. Similarly, the GNPA ratio of private banks also increased to 5.45 percent in 2019–20 from a moderate 1.8 percent. Foreign banks also recorded substantial rise in their NPA figures, from 1.9 percent in 2007–08 to 4.2 percent in 2015–16. However, the recent year data suggests that it has declined to 2.3 percent in 2019–20.

Between 2015 and 2018, there was a rapid increase in the NPA figures of PSBs and private banks. The NPA figures of PSBs rose to 14.6 percent in 2018 from five percent in 2015, which is almost three times higher. Similarly, the GNPA ratio of private banks increased to 5.45 percent in 2019–20 from 2.1 percent in 2015, which is more than double. As per the data, foreign banks recorded a rapid increase in their NPA figures beginning 2013 (three percent) and reached its peak level (4.2 percent) in 2016. While the GNPA ratio of PSBs and private banks followed an upward movement beginning 2016, foreign banks witnessed a decline in their GNPA ratios.

Table 5: Bank Group-wise NPAs in India's Banks: 2005–2020

Year (end march)	*All SCBs*		*Public Sector Banks*		*Private Banks*		*Foreign Banks*	
	Gross NPAs	*Net NPAs*	*Gross NPAs*	*Net NPAs*	*Gross NPAs*	*Net NPAs*	*Gross NPAs*	*Net NPAs*
NPAs (Rs Crore)								
2005–06	51753	18543	42117	14566	11358	4545	2037	808
2006–07	50517	20280	38968	15325	12114	4919	2399	927
2007–08	56606	24730	40600	17836	15479	6387	3084	1247
2008–09	69954	31564	45918	21155	19859	8571	7249	2996
2009–10	81718	39127	57301	29643	20929	7777	7111	2977
2010–11	93997	41799	71042	36055	21505	5332	5045	1313
2011–12	136968	65205	112488	59391	22410	5701	6297	1412
2012–13	192769	98693	164461	90037	25592	7994	7925	2663
2013–14	263015	142656	227264	130635	24184	8862	11565	3160
2014–15	322916	175841	278468	159951	33690	14128	10761	1762
2015–16	611607	349814	539956	320376	55853	26677	15798	2762
2016–17	791791	433121	684732	383089	93209	47780	13629	2137
2017–18	1039679	520679	895601	454473	129335	64222	13850	1548
2018–19	933609	355076	739541	285123	180872.4	67309	12183	2050
2019–20	896082.5	289531	678317	230918	205847.8	55746	10208.35	2084
NPAs as % of Advances								
2005–06	3.3	1.2	3.7	1.3	2.4	1	2.1	0.8
2006–07	2.5	1	2.7	1.1	2.2	1	1.9	0.7

Year (end march)	All SCBs		Public Sector Banks		Private Banks		Foreign Banks	
	Gross NPAs	Net NPAs	Gross NPAs	Net NPAs	Gross NPAs	Net NPAs	Gross NPAs	Net NPAs
2007–08	2.2	1	2.2	1	2.5	1.1	1.9	0.8
2008–09	2.3	1.1	2	0.9	2.9	1.3	4.4	1.8
2009–10	2.5	1.1	2.3	1.1	3	1	4.4	1.8
2010–11	2.4	1	2.3	1.1	2.5	0.6	2.6	0.7
2011–12	2.9	1.3	3.2	1.5	2.1	0.5	2.8	0.6
2012–13	3.2	1.7	3.6	2	1.8	0.5	3	1
2013–14	3.8	2.1	4.4	2.6	1.8	0.7	3.9	1.1
2014–15	4.3	2.4	5	2.9	2.1	0.9	3.2	0.5
2015–16	7.5	4.4	9.3	5.7	2.8	1.4	4.2	0.8
2016–17	9.3	5.3	11.7	6.9	4.1	2.2	4	0.6
2017–18	11.2	6	14.6	8	4.7	2.4	3.8	0.4
2018–19	9.08	3.7	11.59	4.8	5.3	2	2.99	0.5
2019–20	8.21	2.8	10.25	3.7	5.45	1.5	2.34	0.5

Source: Calculation based on RBI data.

The bank-wise analysis of NPA data of all PSBs[3] shows that the GNPA ratios started increasing, beginning 2011 (Table 6). Most of the PSBs recorded an increase in their GNPA ratios during that year. The GNPA ratios of UCO Bank, United Bank of India, Punjab National Bank, Oriental Bank of Commerce, and Central Bank of India were among the highest in this group in the years after 2011. The GNPA ratio of UCO Bank increased to 24.64 percent in 2018 from 3.73 percent in 2011. The GNPA ratio of United Bank of India increased to 24.10 percent from 3.41 percent, of Punjab National Bank to 18.38 percent from 3.15 percent, of Oriental Bank of Commerce to17.63 percent from 3.17, and of Central Bank of India to 21.48 percent from 4.83 respectively during the same period. Large banks like the SBI also registered an increase in their GNPA ratio. During the same period, the GNPA ratio of SBI rose to 10.9 percent from 4.4 percent. The GNPA ratio of almost all PSBs registered a rapid increase in bad loans, beginning 2015.

Bank group-wise distribution of NPAs suggests that PSBs constitute more than three-fourths of the NPAs in India's banks. The NPA share of PSBs declined to 75.7 percent in 2019–20 after the peak of 88.3 percent 2015–16 (Figure 1). On the other side, the share of private banks in NPAs increased to 23 percent in 2019–20. Their NPA share increased rapidly to 23 percent in 2019–20 from 9.1 percent in 2015–16. The NPA shares of foreign banks have declined substantially in recent years. Their NPA share declined to 1.1 percent in 2019–20 from 4.4 percent in 2013–14.

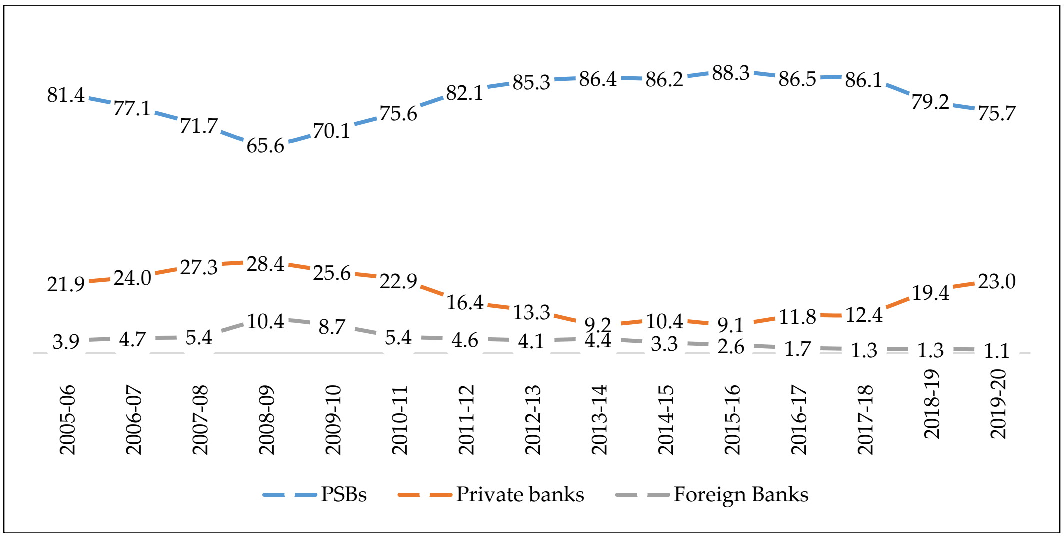
[3] As per the recent announcements of merger among PSBs, the number of PSBs has reduced to 12 from 27. The OBC and the United Bank have merged into Punjab National Bank. Similarly, Syndicate Bank has merged with Canara Bank. Andhra Bank and Corporation Bank have merged into Union Bank of India. And, Allahabad bank has amalgamated with Indian Bank.

Table 6: GNPA Ratio of Public Sector Banks in India: 2005–2020 (%)

Name of the Bank	*2005-06*	*2006-07*	*2007-08*	*2008-09*	*2009-10*	*2010-11*	*2011-12*	*2012-13*	*2013-14*	*2014-15*	*2015-16*	*2016-17*	*2017-18*	*2018-19*	*2019-20*
Allahabad Bank	3.94	2.61	2.01	1.81	1.71	1.8	1.91	3.92	5.73	5.46	9.76	13.09	15.96	17.55	17.11
Andhra Bank	1.94	1.41	1.08	0.83	0.86	1.38	2.12	3.71	5.29	5.31	8.39	12.25	17.09	16.21	16.07
Bank of Baroda	3.9	2.47	1.84	1.27	1.64	1.62	1.89	2.4	2.94	3.72	9.99	10.46	12.26	9.61	9.4
Bank of India	3.72	2.42	1.68	1.71	3.31	2.64	2.91	2.99	3.15	5.39	13.07	13.22	16.58	15.84	14.78
Bank of Maharashtra	5.53	3.5	2.57	2.29	2.96	2.47	2.28	1.49	3.16	6.33	9.34	16.93	19.48	16.4	12.81
Canara Bank	2.25	1.51	1.32	1.56	1.53	1.47	1.75	2.57	2.49	3.89	9.4	9.63	11.84	8.83	8.04
Central Bank of India	6.85	4.81	3.16	2.67	2.32	1.82	4.83	4.8	6.27	6.09	11.95	17.81	21.48	19.29	18.92
Corporation Bank	2.56	2.05	1.47	1.14	1.02	0.91	1.26	1.72	3.42	4.81	9.98	11.7	17.35	15.35	13.8
Dena Bank	6.44	4.07	2.45	2.13	1.8	1.86	1.67	2.19	4.9	5.45	9.98	16.27	22.04	21.07	*
Indian Bank	2.91	1.85	1.21	0.89	0.76	0.99	1.94	3.33	3.67	4.4	6.66	7.47	7.37	7.11	6.87
Indian Overseas Bank	3.43	2.34	1.63	2.54	4.71	2.71	2.79	4.02	4.98	8.33	17.4	22.39	25.28	21.97	14.78
Oriental Bank of Commerce	5.95	3.2	2.31	1.53	1.74	1.98	3.17	3.21	3.99	5.18	9.57	13.73	17.63	12.66	12.67
Punjab and Sind Bank	9.61	2.44	0.74	0.65	0.63	0.99	1.65	2.96	4.41	4.76	6.48	10.45	11.19	11.83	14.18
Punjab National Bank	4.1	3.45	2.74	1.77	1.71	1.79	3.15	4.27	5.25	6.55	12.9	12.53	18.38	15.5	14.21
Syndicate Bank	4	2.95	2.71	1.93	2.43	2.65	2.75	1.99	2.62	3.13	6.7	8.5	11.53	11.37	12.04
UCO Bank	3.27	3.17	2.97	2.21	2.15	3.31	3.73	5.42	4.32	6.76	16.09	17.12	24.64	25	16.77
Union Bank of India	3.84	2.94	2.18	1.96	2.25	2.37	3.16	2.98	4.08	4.96	8.7	11.16	15.73	14.98	14.15
United Bank of India	4.66	3.61	2.7	2.85	3.21	2.51	3.41	4.25	10.47	9.49	13.26	15.53	24.1	16.48	13.4
Vijay Bank	3.17	2.29	1.6	1.95	2.37	2.56	2.93	2.17	2.41	2.79	6.64	6.59	6.34	6.58	*
State Bank of India	3.51	2.59	2.56	2.56	2.82	3.12	4.36	4.42	4.96	4.28	6.38	9.11	10.9	7.53	6.15
All Public Sector Banks	**3.7**	**2.7**	**2.2**	**2**	**2.3**	**2.3**	**3.2**	**3.6**	**4.4**	**5**	**9.3**	**11.7**	**14.6**	**11.59**	**10.25**

Note: *In 2018, Vijay Bank and Dena Bank were merged with the Bank of Baroda.
Source: Calculation based on RBI data

Figure 1: Bank Group-wise NPA Share (%)



Source: Calculation based on RBI data.

The GNPA ratio of PSBs shows considerable variation among the banks. The average GNPA ratio of different time periods has been analysed to identify banks with high exposure to bad loans (Table 7). The average GNPA ratio of most of the PSBs was moderately low, raging from about 1.5 percent to about 4.5 percent between 2009 and 2014. The GNPA ratio is found to be significantly high for most of the banks during 2015–20. The average NPA figures during this period varied from 7.1 percent GNPA ratio (Indian Bank) to 20.3 percent (Indian Overseas Bank). Following the AQR exercise of the RBI, the NPA figures of PSBs spiked up during this period. Banks with high GNPA ratio (> 10 percent) include Indian Overseas Bank (20.3 percent), IDBI bank Ltd (16.4 percent), UCO Bank (19.9 percent), United Bank of India (16.5 percent), Central Bank of India (17.9 percent), Dena Bank (13.3 percent), Bank of Maharashtra (14.9 percent), Punjab National Bank (14.7 percent), Allahabad Bank (14.7 percent), Bank of India (14.7 percent), Andhra Bank (14 percent), Oriental Bank of Commerce (13.25 percent), Corporation Bank (13.6 percent), Union Bank of India (12.9 percent), Punjab and Sindh Bank (10.8 percent), and Bank of Baroda (10.3 percent). Other PSBs with high bad loan exposure include Canara

Table 7: Average GNPA Ratio of Public Sector Banks (%)

Name of the Bank	*2005–20*	*2005–09*	*2009–14*	*2015–20*
Allahabad Bank	6.96	3.23	2.81	14.69
Andhra Bank	6.26	1.54	2.37	14.00
Bank of Baroda	5.03	3.35	1.96	10.34
Bank of India	6.89	3	2.79	14.70
Bank of Maharashtra	7.17	4.18	2.44	14.99
Canara Bank	4.54	2.1	1.9	9.55
Central Bank of India	8.87	5.4	3.78	17.89
Corporation Bank	5.90	2.13	1.58	13.64
Dena Bank	6.82	4.95	2.42	13.87
Indian Bank	3.83	2.21	1.93	7.10
Indian Overseas Bank	9.29	3.04	3.63	20.36
Oriental Bank of Commerce	6.57	4.41	2.6	13.25
Punjab and Sind Bank	5.53	6.16	1.88	10.83
Punjab National Bank	7.22	3.61	2.99	14.70
Syndicate Bank	5.15	3.35	2.4	10.03
UCO Bank	9.13	3.32	3.52	19.92
Union Bank of India	6.36	3.19	2.8	12.94
United Bank of India	8.66	3.99	4.45	16.55
Vijay Bank	3.36	2.39	2.4	5.23
State Bank of India	5.02	3.31	3.71	8.01
IDBI Ltd	7.81	1.91	2.57	16.41
All Public Sector Banks	**5.92**	**3.13**	**2.63**	**11.49**

Note: *In 2018, Vijay Bank and Dena Bank were merged with the Bank of Baroda.
Source: Calculation based on RBI data.

Bank (9.5 percent), and Syndicate Bank (10.3 percent). Public sector banks with a GNPA ratio between four and seven percent include Indian Bank (7.1 percent) and Vijay Bank (5.2 percent). The GNPA ratio of SBI stood at 8.1 percent bad loans vis-à-vis its advances. However, given its size and volume of advances, 8.1 percent GNPA ratio is a huge exposure.

Similar to PSBs, the GNPA ratio of private banks rose from 2015 onwards, from 2.1 percent in 2015 to 5.45 percent in 2020 (Table 8). Major private banks did register rapid increase in bad loans during the same time period. The GNPA ratio of ICICI Bank increased to 9.9 percent in 2017–18 from 3.78 percent in 2015, but declined to 6 percent in 2019–20. IndusInd Bank also recorded an upward trend in its GNPA ratio, from 0.8 percent in 2015 to 2.45 percent in 2020. Axis bank saw an increase in its GNPA ratio, from 1.7 percent in 2015 to 5.4 percent in 2019 and 4.5 percent in 2020. Other leading banks like Kotak Mahindra Bank and Yes Bank also saw a rise in their GNPA ratio, from 1.85 percent to 2.14 percent and from 2.25 percent to 16.8 percent respectively between 2005 and 2020. However, both the above banks did not record high NPA figure. Another leading private bank, HDFC Bank, also did not record any significant increase in its NPA figures. The GNPA ratio of HDFC Bank increased to a low 1.29 percent in 2020 from a negligible 0.9 percent in 2015.

Table 8: GNPA Ratio of Leading Private Sector Banks in India: 2005–2020 (%)

Name of the Bank	*2005-06*	*2006–07*	*2007–08*	*2008–09*	*2009–10*	*2010–11*	*2011–12*	*2012–13*	*2013–14*	*2014–15*	*2015–16*	*2016–17*	*2017–18*	*2018–19*	*2019–20*
HDFC Bank Ltd	1.4	1.36	1.41	1.98	1.44	1.06	0.95	0.85	0.91	0.89	0.92	1.04	1.28	1.35	1.25
ICICI Bank Ltd	1.51	2.08	3.3	4.32	6.52	5.8	4.83	3.22	3.03	3.78	5.82	8.74	9.9	7.38	6.04
IndusInd Bank Ltd	2.86	3.08	3.04	1.61	1.23	1.01	0.98	1.03	1.12	0.81	2.36	0.93	1.17	2.1	2.45
Kotak Mahindra Bank Ltd	0.63	2.57	2.88	4.31	3.62	2.03	1.56	1.55	1.98	1.85	2.36	2.59	2.22	2.14	2.25
Yes Bank Ltd			0.12	0.68	0.27	0.23	0.22	0.2	0.31	0.41	0.76	1.52	1.28	3.22	16.8
Axis Bank	1.67	1.67	0.81	1.08	1.39	1.28	1.18	1.19	1.29	1.36	1.71	5.21	6.79	5.31	4.52
All Private Banks	**2.41**	**2.19**	**2.47**	**2.92**	**2.99**	**2.48**	**2.09**	**1.77**	**1.78**	**2.1**	**2.83**	**4.05**	**4.62**	**5.25**	**5.45**

Source: Calculation based on RBI data.

The average GNPA ratio of private banks as a whole does not suggest any deep crisis, though the NPA figures have increased between 2015 and 2020 (Table 9). Most of the leading private banks did not experience high GNPA ratio except for ICICI Bank. The average GNPA ratio of the ICICI Bank between 2015 and 2020 stood at 7.6 percent, which is the highest among leading private banks. Axis Bank averaged a GNPA ratio of 4.7 percent between 2015 and 2020, which is higher than that of several private banks. It is interesting to note that another leading private bank, HDFC Bank, did not record a rise in its GNPA ratio. On the contrary, it saw a decline in its average GNPA ratio during the same time period.

Table 9: Average GNPA Ratio of Leading Private Sector Banks (%)

Name of the Bank	*2005–20*	*2005–09*	*2009–14*	*2015–20*
HDFC Bank Ltd	1.21	1.57	1.2	1.17
ICICI Bank Ltd	5.08	3.1	4.62	7.58
IndusInd Bank Ltd	1.72	2.82	1.16	1.80
Kotak Mahindra Bank Ltd	2.30	2.22	2.51	2.31
Yes Bank Ltd	1.73	0.16	0.32	4.72
Axis Bank	2.43	1.44	1.24	4.71
All Private Banks	**3.03**	**2.76**	**2.34**	**4.44**

Source: Calculation based on RBI data.

Most of the leading foreign banks exhibit low GNPA ratio except for DBS Bank and Standard Chartered Bank (Table 10). The GNPA ratio of foreign banks as a whole grew at a faster rate between 2014 and 2016; however, it declined in the subsequent period. The peak GNPA ratio of the foreign bank group stood at 4.2 percent in 2016. The GNPA ratio of DBS Bank rose significantly, beginning 2013 (4.12 percent), and shot up to 13.5 percent in 2014. Similarly, the GNPA ratio of Standard Chartered Bank started showing an upward trend beginning 2012, from 2.29 percent in 2011 to 14.1 percent in 2016. However, as per the recent data, except for the Standard Chartered Bank, the rest of the leading foreign banks recorded low GNPA ratio. The GNPA ratio of Standard Chartered Bank during 2019–20 stood at 6.38 percent.

Table 10: GNPA Ratio of Leading Foreign Banks in India: 2005–2020 (%)

Name of the Bank	*2005 –06*	*2006 –07*	*2007 –08*	*2008 –09*	*2009 –10*	*2010 –11*	*2011 –12*	*2012 –13*	*2013 –14*	*2014 –15*	*2015 –16*	*2016 –17*	*2017 –18*	*2018 –19*	*2019 –20*
American Express Bank Ltd	1	1.4		6.35	1.98	1.87	1.58	2.59	0.92	0.87	1.65	1.32	1.65	3.67	1.99
Barclays Bank PLC			0.8	10.9	16.5	8.71	6.03	6.24	5.47	2.28	1.1	0.75	0.67	1.89	3.19
Citibank NA	2.13	2.09	2.6	5.1	3.43	2.05	1.78	2.58	2.59	1.27	1.39	1.53	1.54	1.37	1.43
DBS Bank Ltd			0.21	1.26	1.88	1.1	1.65	4.12	13.5	7.79	8.81	3.77	5.04	3.13	2.6
HSBC Ltd	1.86	1.69	2.29	5.36	6.84	3.54	2	1.77	1.65	1.68	1.5	1.91	1.77	0.89	0.87
Standard Chartered Bank	2.8	2.63	2.14	2.78	2.6	2.29	5.5	5.98	7.82	8.9	14.1	10.5	11.7	9.13	6.38
Foreign Banks	**2.12**	**1.92**	**1.92**	**4.37**	**4.36**	**2.48**	**2.76**	**3.04**	**3.86**	**3.2**	**4.2**	**3.96**	**3.81**	**2.99**	**2.34**

Source: Calculation based on RBI data.

Though the average GNPA ratio of foreign banks as a group has increased between 2015 and 2020 relative to the earlier time periods, it is still low (Table 11). Between 2005 and 2020, the GNPA ratio of foreign banks averaged 3.2 percent, and it increased to 3.67 percent during 2015–20. The average GNPA ratio of leading foreign banks suggests that Standard

Chartered Bank and DBS Bank are facing the bad loan crisis. The rest of the major foreign banks have registered low GNPA ratio. Between 2015 and 2020, the average GNPA ratio of Standard Chartered Bank stood at 10.4 percent. During the same time period, the GNPA ratio of DBS Bank averaged 4.7 percent.

Table 11: Average GNPA Ratio of Leading Foreign Banks (%)

Name of the Bank	*2005–20*	*2005–09*	*2009–14*	*2015–20*
American Express Bank Ltd	2.06	2.08	2.55	2.06
Barclays Bank PLC	4.96	2.35	8.99	1.52
Citibank NA	2.19	2.79	2.92	1.45
DBS Bank Ltd	4.22	0.29	3.91	4.67
HSBC Ltd	2.37	2.87	3.35	1.39
Standard Chartered Bank	6.35	2.62	4.5	10.36
All Foreign Banks	**3.16**	**2.68**	**3.48**	**3.46**

Source: Calculation based on RBI data.

4. Source of NPAs

As discussed in the previous sections, it is amply clear that PSBs are the source of the bulk of bad loans, as reflected in the high GNPA ratio. The present section will elaborate the sources of NPA from the demand side in terms of priority vs non-priority sector, board sectors and sub sectors, and size of the loans. The distribution of non-performing loans of PSBs between priority and non-priority sectors shows that during the earlier phase of NPA crisis in 1990s, priority sector had a substantial share, though the share of non-priority sector was also high (Table 12). Priority sector NPAs fell during 1996–2002 and those of the non-priority sector rose during the same period. The share of priority sector NPAs of PSBs fell to 46.2 percent in 2002 from 48.3 percent in 1996. Though in the subsequent period it increased to 61.4 percent in 2008, it fell sharply to 26.7 percent in 2019. The share of non-priority sector NPAs of PSBs rose to 52.2 percent in 2002 from 48.2 percent in 1996, but declined to 37.10 percent in 2008. Beginning 2012, the non-priority sector NPA shot up to 79.1 percent in 2018 from 50.2 percent. Out of the PSBs, the priority sector NPAs of SBI were higher during late 1990s compared to those of non-priority sector. Thereafter, the priority sector NPAs fell and those of non-priority sector rose. Priority sector NPAs fell to 47 percent in 2002 from 53.7 percent in 1996 and non-priority sector NPAs rose to 50.4 percent in 2002 from 40.1% percent in 1996.

Similar to PSBs, private banks also recorded lower NPAs in the priority sector and higher NPAs in the non-priority sector (Table 13). Data suggests that the share of priority sector NPAs of private banks fell to 19.7 percent in 2020 from 28.62 percent in 2001. On the other side, the non-priority sector NPA rose to 80.3 in 2020 from 69.45 percent in 2001. In terms of priority sector vs non-priority sector NPAs, in the case of both PSBs and private banks the non-priority sector has emerged as the source of current NPA crisis in India’s banks.

Another critical feature of the current NPA problem in India's banks is the non-performance of large loans. The share of large loans in total bank advances is more than 50 percent (Figure 2). Out of the total advances to large borrowers, more than 80 percent of the loans are found to be NPAs. Recent data shows that in 2019, more than 53 percent of the total bank advances was disbursed to large borrowers (large loans), out of which 85.4 percent turned into NPAs.

Table 12: Distribution of NPAs in Public Sector Banks: Priority vs Non-Priority Sector (%)

Year (End March)	*Priority Sector*	*Non-Priority Sector*	*Public Sector*
1996	48.3	48.2	3.5
1997	47.7	49	3.3
1998	46.4	50.6	3
1999	43.7	53.4	2.9
2000	44.5	53.5	2
2001	45.4	51.4	3.2
2002	46.2	52.2	1.6
2003	47.2	50.7	2.1
2004	47.5	51.2	1.2
2005	45.2	53.5	1.2
2006	53.8	44.2	2.1
2007	58	40.2	1.9
2008	61.5	37.1	1.4
2009	53.8	45.6	0.7
2010	50.9	48.6	0.5
2011	53.8	45.9	0.3
2012	47.6	50.2	2.3
2013	40.9	58.4	0.7
2014	35.2	64.8	0.1
2015	34.7	65.2	0.1
2016	23.3	76.1	0.6
2017	23.5	74.2	2.3
2018	20.9	79.1	1.9
2019	26.7	73.3	1.8
2020	36.7	63.3	4.4

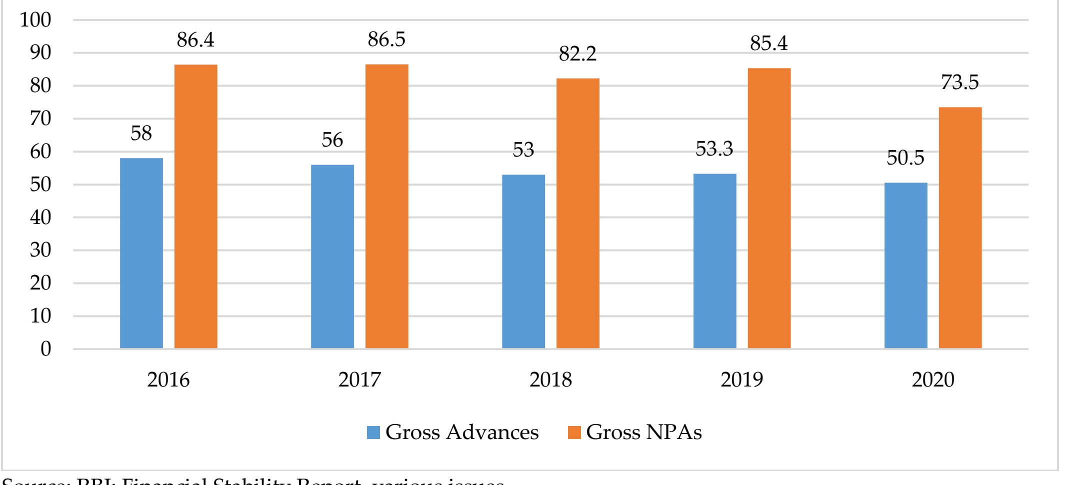
Source: Calculation based on RBI data.

Table 13: Distribution of NPAs in Private Banks: Priority vs Non-Priority Sector (%)

Year (End March)	*Priority Sector*	*Non-Priority Sector*
2001	28.62	69.45
2002	21.82	77.91
2003	20.61	78.60
2004	23.97	75.3
2005	24.87	74.65
2006	29.17	70.78
2007	31.22	68.75
2008	26.34	73.66
2009	21.6	78
2010	27.6	72.4
2011	26.8	73.2
2012	27.9	72.1
2013	26	74
2014	26.6	73.4
2015	22.8	72.2
2016	21.0	79.0
2017	18.0	82.0
2018	18.0	82.0
2019	19.0	81.0
2020	19.7	80.3

Source: Calculation based on RBI data.

Figure 2: Share of Large Borrowers in SCBs Loan Portfolio (%)



Source: RBI: Financial Stability Report, various issues.

Broad sector-wise data reveals that the industrial sector is the major source of NPAs/stressed assets in India's banking sector (Table 14). The GNPA ratio of the industrial sector increased to 20.9 percent in 2018 from 15.8 percent in 2016. As of March 2020, the GNPA ratio of the industrial sector stood at 12.4 percent. The GNPA ratio of the agriculture sector has also risen to 10.1 percent in 2019 from 6 percent in 2016. There are also a substantial number of NPAs in the services sector, though their GNPA ratios remained stagnant between 2016 and 2019. Recent data shows that the GNPA ratio of services sector stood at 6.9 percent in 2020. While the incidence of loan default is found to be increasing in the agriculture sector and the industrial sector, it has declined in the case of the retail sector. The GNPA ratio of the retail sector fell to 1.7 percent in 2020 from 2.3 percent in 2016. Similarly, the stressed advance ratio suggests that a substantial volume of advances or loans disbursed to the industrial sector is under stress.

Sub-sector-wise analysis of credit share and stressed advance ratio shows that between 2016 and 2018, the sectors that received higher advances or credit are the ones that exhibited higher stress (Table 15). The infrastructure sector received 35 percent of the bank credit on average between 2016 and 2019, and has recorded high stressed advance ratio between 2016 and 2018. Similarly, sectors with high credit share include basic metal and products, textile, chemicals and their products, and engineering. These sectors have also registered high stressed advance ratio. There are also several sectors with low credit share; however, they have registered high stressed advance ratio. These include food processing; rubber, plastic and their products; construction; and, mining & quarrying.

Table 14: NPAs and Stressed Advances in Broad Sectors (%)

Year	*Agriculture*	*Industry*	*Services*	*Retail*
GNPA Ratio (%)				
2016	6	15.8	6.5	2.3
2017	6.4	19.3	5.7	2.1
2018	8.4	20.9	6	2.1
2019	10.1	17.3	6.3	1.8
2020	9.6	12.4	6.9	1.7
Stressed Advances Ratio (%)				
2016	7.2	22.3	8.3	2.4
2017	6.9	23.9	6.4	2.1
2018	8.6	21.8	6.5	2.1
2019	5.1	3.8	4.1	2
2020	9.8	13.2	7.4	1.8

Source: RBI: Financial Stability Report, various issues.

Table 15: Sub-sector-wise Credit Share and Stressed Advances Ratio

Sub-Sectors	*Credit to Industry (% Share)*	*Stressed Advance Ratio (%)*	*Credit to Industry (% Share)*	*Stressed Advance Ratio (%)*	*Credit to Industry (% Share)*	*Stressed Advance Ratio (%)*	*Credit to Industry (% Share)*	*Stressed Advance Ratio (%)*	*Credit to Industry (% Share)*	*GNPA (%)*
Year	*2016*	*2016*	*2017*	*2017*	*2018*	*2018*	*2019*	*2019*	*2020*	*2020*
Mining & Quarrying	1.3	18.7	1.2	27.1	1.5	29.7	1.4	3.3	1.5	15.6
Food Processing	5.3	20	5.7	24.9	5.3	21.4	5.3	5.8	5.5	13
Textile	7.3	23.7	7.3	23.7	6.9	18.7	6.3	6.5	6.3	11.7
Paper and their products	1.4	15	1.2	23.6	1.1	21.1	1.1	3	1.1	10.1
Chemicals and their products	6	11.7	6.2	8.1	6.5	10.7	6.6	1.6	6.4	6.3
Rubber, Plastic and their products	1.4	12.5	1.5	5.1	9.6	9.6	1.7	7.6	1.8	10.1
Basic Metal and their Products	14.6	42.9	14.4	44.5	12.7	34.2	11.5	2.5	11.3	12.6
Cement and their Products	2	16	2	12.8	1.8	18.3	2	2.3	2	8.2
Engineering	5.8	17.8	5.8	31	5.7	28.3	5.9	4.9	5.2	19.4
Vehicles Parts and Transport Equipment	2.9	15.9	2.9	21	3.1	23	3.3	1.4	3.5	8.3
Gems and Jewellery	2.8	17.6	2.9	11.7	2.8	24.9	2.6	2.4	2.4	24.1
Construction	3.3	27.9	3.8	26.7	3.9	25.6	3.9	7.8	4	21.5
Infrastructure	35	18.6	34.1	19.6	35.5	20.1	36.3	3.2	37.3	11.9

Source: RBI: Financial Stability Report, various issues.

5. Two Phases of NPAs: Similarities and Differences

The current crisis period has been different from the previous one in terms of magnitude, size, sources, and the requirement of recapitalisation. The magnitude of the current crisis has been larger in comparison to the previous crisis of 1990s. There has been a rapid increase in the NPA figures in the current crisis period compared to the previous period. The bank group-wise figures suggest that the NPA problem is of a greater magnitude for the PSBs in the current period compared to the previous period, though during the both the periods, the PSBs were found to be badly affected by the incidence of loan failure. Private and foreign banks are found to be in better shape in terms of GNPA ratio, though there are a few private banks like ICICI Bank and Axis Bank, and foreign banks like Standard Chartered Bank and DBS Bank that exhibit high GNPA ratio. While the incidence of loan default in terms of volume is less in the case of private and foreign banks, it has increased for both the bank groups in recent years. Among private and foreign bank groups, foreign banks as a whole are largely insulated from the current NPA crisis. A comparison of the GNPA ratio figures of private and foreign banks shows that it was higher during the earlier period (later part of 1990s) compared to the current period. The asset quality of PSBs deteriorated faster than that of their counterparts in the private sector.

The average NPA ratio of PSBs suggests that majority of them have recorded high rates of NPA in both the time periods (Table 16). On the other side, five PSBs exhibit high NPA rates in the current phase in comparison to the earlier phase. Interestingly, four PSBs including the SBI exhibit lower NPA ratio in the current crisis vis-à-vis the crisis of the 1990s. However, the NPA ratio is found to be similar for PSBs as a group in both the periods. Among private banks, majority of the large banks were more or less insulated from the NPA problem in both the periods, except for ICICI Bank (Table 17). ICICI Bank recorded higher NPA ratio (7.6 percent) in the current phase. Yes Bank and Axis Bank have also recorded high NPA ratio (close to 5 percent). However, these numbers are substantially low in comparison to their counterparts in the public sector. Private sector as a group recorded a substantial decline in its NPA ratio in the current period vis-à-vis the earlier period, though the volume of NPAs has increased.

Table 16: NPAs in PSBs in Two Time Periods

Name of the Bank	*1996–97 to 2004–05*	*2015–16 to 2019–20*	*Remark*
Allahabad Bank	16.56	14.69	
Bank of Baroda	13.09	10.34	
Bank of Maharashtra	12.64	14.99	
Canara Bank	10.84	9.55	
Central Bank of India	16.17	17.89	
Dena Bank	16.79	13.87	**High in both periods**
Punjab and Sind Bank	20.80	10.83	
Punjab National Bank	12.01	14.7	
Syndicate Bank	10.02	10.03	
UCO Bank	15.01	19.92	
Union Bank of India	9.98	12.94	
United Bank of India	21.64	16.55	
Andhra Bank	6.92	14	
Bank of India	9.96	14.7	
Corporation Bank	5.87	13.64	**High in current period**
Indian Overseas Bank	11.32	20.36	
Oriental Bank of Commerce	6.56	13.25	
Indian Bank	23.76	7.1	
Punjab and Sind Bank	20.80	10.83	
Vijay Bank	10.12	5.23	**High in earlier period**
State Bank Group	11.67	8.01	
All Public Sector Banks	**12.20**	**11.49**	**High in both periods**

Source: Calculation based on RBI data.

Table 17: NPAs in Private Banks in Two Time Periods

Name of the Bank	*1996–97 to 2004–05*	*2015–16 to 2019–20*	*Remark*
HDFC Bank Ltd	2.22	1.17	
Kotak Mahindra Bank Ltd	0.30	2.31	
Yes Bank Ltd	0.00	4.72	**Low in both periods**
Axis Bank	4.74	4.71	
ICICI Bank Ltd	4.97	7.58	**High in current period**
IndusInd Bank Ltd	5.62	1.8	**High in earlier period**
All Private Banks	8.02	4.44	**High in earlier period**

The major contributor to NPA in both the periods was the non-priority sector, but the situation was more pronounced in the current period compared to the previous crisis period. During the earlier NPA crisis, there was a substantial volume of NPA in the priority sector as well. However, recent data suggests that the current NPA crisis is due to the overwhelming non-performance of the non-priority sector advances.

Between the two crisis episodes, the current crisis is more pronounced than the previous one as the growth rate of NPAs is significantly high. The size of the overall banking sector was small compared to recent times, and the size of the stressed asset problem did not impose such a great pressure on the balance sheets of banks in the 1990s compared to the current crisis problem. The non-priority sector has been the major contributor to the NPA problem and the bulk of the burden of NPAs falls on the PSBs, with their balance sheets severely troubled, but it is to be noted that the bulk of the banking activity in India is carried out by the PSBs.

6. Why are PSBs Affected?

In order to explain the differences in NPA accumulation in PSBs via-à-vis private banks, it is important to understand the lending pattern or behaviour of the major public and private banks. To understand the differences in the credit approach of PSBs and private banks, the lending behaviour of major public and private banks has been examined on three aspects – industrial lending, lending to infrastructure, and lending personal loans. Data suggests that the infrastructure industry constituted the largest share in bank credit in India (Table 18). During the last decade, on an average, about 30 percent of the bank credit went to the infrastructure sector, and during the last five years, the average credit share is more than 35 percent. Within infrastructure, power industry constituted about 20 percent of the total bank credit. Sectors with high credit share include basic metal and metal products (12 percent), textiles (6.7 percent), and engineering (3.6 percent). In recent years, non-banking financial companies (NBFCs) have become a favoured destination of bank credit. In 2020, NBFCs constituted nearly 28 percent of the bank credit. The infrastructure industry and the NBFCs together constituted nearly 64 percent of the bank credit in India.

Table 18: Distribution of Bank Credit: Industry-wise (percent of total credit)

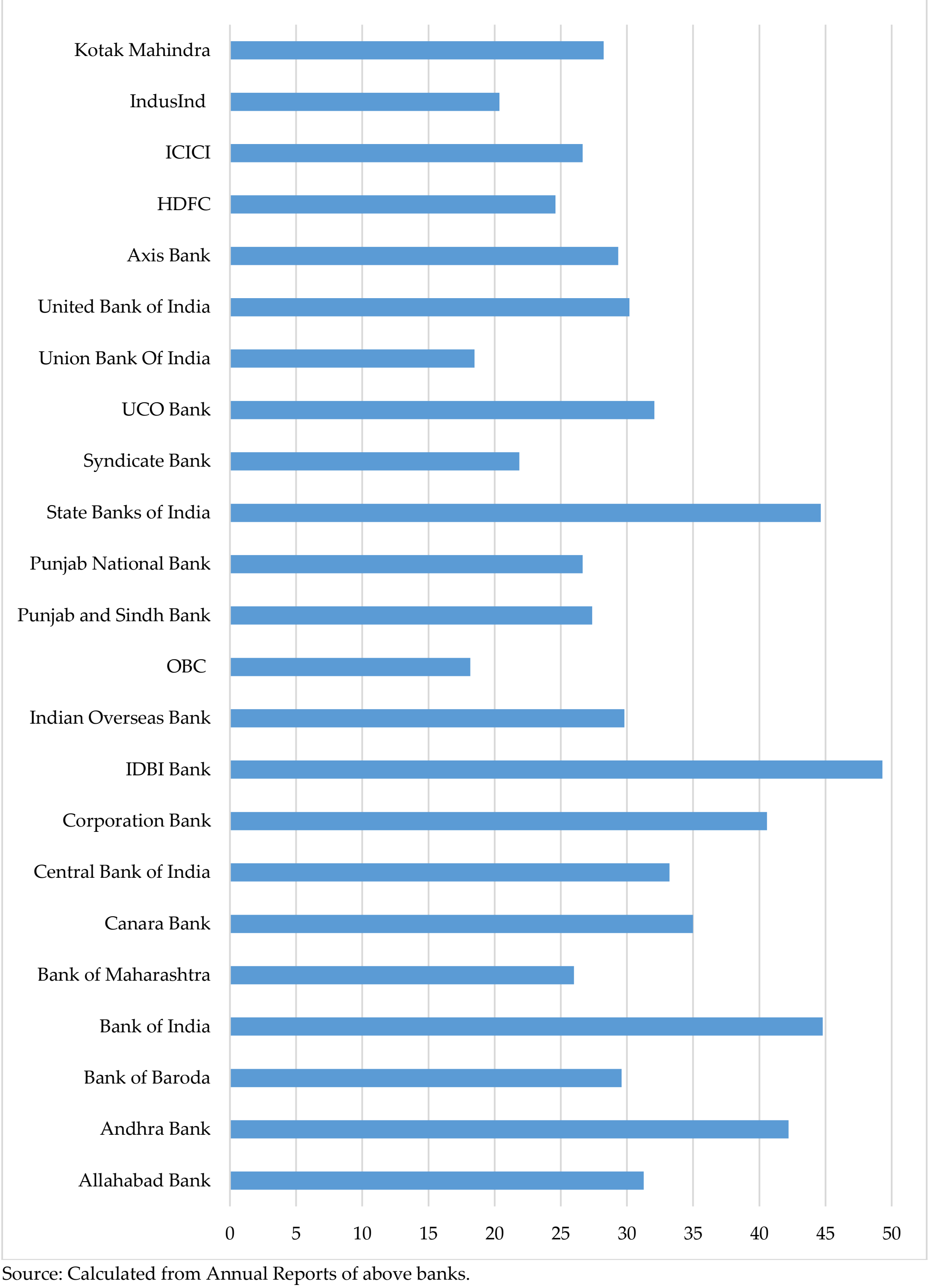
Industry Credit Share (%)	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*
Textiles	7.6	7.54	7.32	7.78	7.05	6.62
Petroleum, Coal Products & Nuclear Fuels	2.11	1.88	2.22	2.41	2.19	2.61
Basic Metal & Metal Product	14.5	15.23	15.71	15.41	12.88	12.06
Iron & Steel	*10.66*	*11.41*	*11.91*	*12.08*	*9.8*	*9.03*
All Engineering	5.79	5.65	5.58	5.75	5.84	5.41
Construction	2.8	2.73	3.07	3.34	3.45	3.59
Infrastructure	34.79	35.33	33.82	33.01	36.59	36.28
Power	*20.98*	*21.24*	*19.61*	*19.25*	*19.72*	*19.27*
Telecommunications	*3.46*	*3.34*	*3.17*	*3.13*	*4.01*	*4.95*
Commercial Real Estate	*6.26*	*6.5*	*6.92*	*6.88*	*7.01*	*7.91*
NBFCs	11.73	12.92	14.59	18.39	22.22	27.79

Source: calculations based on RBI data.

It is seen that most of the PSBs undertake industrial credit (Figure 3). A comparison between the leading PSBs and the leading private banks show that the former tend to lend more to the medium and large scale industries relative to their private counterparts. IDBI Bank disburses nearly 50 percent of its lending to the small and medium industries. It is followed by SBI (44.6 percent), Bank of India (45 percent), Andhra Bank (42.2 percent), and Corporation Bank (40.6 percent). Out of 20 PSBs, 14 banks have disbursed about 30 percent of their lending to the medium and small industries in 2019 and 2020. On the other side, it can be seen that though the leading private banks lend to the medium and large industries, the share of lending to this sector is relatively low. In 2020, Axis Bank disbursed 29.3 percent of its lending to the medium and large industries, which is highest in the case of any private bank. HDFC Bank, the largest private bank, disbursed only 24.6 percent of its lending to the medium and large industries. Therefore, on industrial lending it can be seen that PSBs tend to lend heavily to the industrial sector.

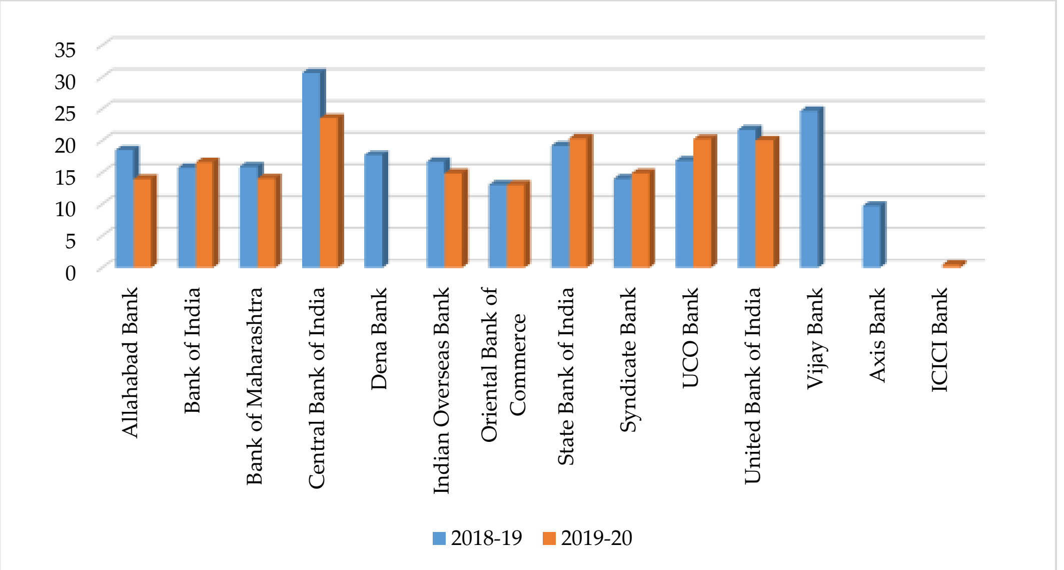
A comparison between PSBs and private banks in terms of infrastructure lending shows that the infrastructure projects are largely financed by the PSBs (Figure 4). It is important to mention that the NPAs are predominant in the infrastructure sector. On the other side, private banks chose not to lend to this sector as the gestation period is too long and the projects are of high value. Data shows that, on an average, PSBs disburse about 20 percent of their lending to the infrastructure sector. Among the private banks, Axis Bank and ICICI Bank are found to have some credit exposure to the infrastructure sector. Majority of the private banks do not lend to the infrastructure sector, which partly explains the lower incidence of NPAs in private banks.

Figure 3: Lending to Medium and Large Scale Industries in 2019-20 (% of Total Lending)



Source: Calculated from Annual Reports of above banks.

Figure 4: Infrastructure Sector in Total Bank Lending (%)



Source: Calculated from Annual Reports of above banks.

While PSBs are found to have greater exposure in terms of lending to the industrial and infrastructure sector, private banks seem to have focused more on financing personal loans. The differential approach of lending between the PSBs and the private banks to a large extent explains the varied degree of stress in these two categories of banks. It is evident from the fact that as PSBs have been lending to both the industrial and the infrastructure sectors heavily, and due to non-performance of their loans in these sectors, substantial stress has built-up in the PSBs.

7. Summary and Conclusion

The paper analyses the two phases of NPA crisis in India's banking sector, with emphasis on understanding the critical features and dimensions of the current phase of crisis. The paper has also attempted to explain the possible reason for the concentration of higher levels of NPAs in PSBs vis-à-vis their private counterparts by analysing the differences in their credit approach. We found that during the current NPA crisis, the PSBs have been badly affected. The NPA problem is not prevalent in private banks as a group, though their volume of loan defaults has increased. While private banks as a group do not seem to be facing a deep crisis in terms of NPA figures, there are certain private banks that exhibit high GNPA ratio. The story is similar in the case of foreign banks. Another critical dimension of the current NPA crisis is the non-performance of large loans. Broad sector-wise analysis suggests that loan failure or default is prevalent in the industrial sector, though the NPA in other sectors like agriculture is increasing. Sub-sector-wise analysis of NPA data suggests that sectors with high credit share tend to exhibit high GNPA ratio. The share of stressed advances is also high in several other sectors with low credit share.

Infrastructure sector is found to be the destination of more than one-third of the bank credit, and a significant amount of the advances have turned into NPAs. Therefore, it can be concluded that the current NPA problem is largely due to the failure of large loans located in the industrial and infrastructure sectors. A comparative analysis of the current NPA crisis with the earlier one in 1990s suggest that in terms of magnitude, the current crisis is more severe, having adverse consequences as largely the loan default is happening within the industrial and infrastructure sectors. Overwhelmingly, the current NPA problem is due to the non-performance of non-priority sector advances. However, it was not the case during the earlier NPA crisis. Priority sector had been equally hit by the NPA crisis during the 1990s. The credit approach of PSBs and private banks shows that private banks refrain from large size lending. It is largely the PSBs that have undertaken term lending and their credit exposure in the industrial and infrastructure sectors is significant, which explains the high rate of NPAs in these banks. Private banks have adopted the risk averse policy by not lending to the infrastructure projects and by limiting their credit exposure to the medium and large industries.

References

RBI, *Financial Stability Report*, various issues.

RBI (2014a), "RBI Releases Framework for Revitalising Distressed Assets in the Economy," Press Release, January 30. Available at: https://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=30519; accessed on March 12, 2020.

RBI (2014b), "Notifications: Framework for Revitalising Distressed Assets in the Economy – Refinancing of Project Loans, Sale of NPA and Other Regulatory Measures," Circular RBI/2013-14/502, DBOD.BP.BC.No. 98/21.04.132/2013-14, February 26. Available at: https://www.rbi.org.in/scripts/NotificationUser.aspx?Id=8756; accessed on March 20, 2020.

RBI (2014c), "Notifications: Prudential Norms on Income Recognition, Asset Classification and Provisioning Pertaining to Advances – Projects under Implementation," Circular RBI/2014-15/182, DBOD.No.BP.BC.33/21.04.048/2014-15, August 14. Available at: https://www.rbi.org.in/scripts/NotificationUser.aspx? Id=9176&Mode=0 https://rbi.org.in/scripts/BS_CircularIndexDisplay.aspx?Id=9176

RBI (2014d), "Notifications: Flexible Structuring of Existing Long Term Project Loans to Infrastructure and Core Industries," Circular RBI/2014-15/354 DBR.No.BP.BC.53/21.04.132/2014-15, December 15. Available at: https://www.rbi.org.in/scripts/NotificationUser.aspx?Id=9406&Mode=0

RBI (2015), "Notifications: Strategic Debt Restructuring Scheme," Circular RBI/2014-15/627, DBR.BP.BC.No.101/21.04.132/2014-15, June 8. Available at: https://rbi.org.in/Scripts/NotificationUser.aspx?Id=9767

RBI (2020), *Handbook of Statistics on Indian Economy.*

RBI (2020), *Statistical Tables Relating to Banks in India.*

RBI (2021), *Financial Stability Report*, July.

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