

AN ANALYSIS AND ESTIMATION OF NON-PERFORMING ASSETS IN THE INDIAN ECONOMY

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Abstract

Banks have a critical role in the economy. Banks mobilize their resources in the form of deposits from the public and the same is diverted towards lending the deposits to the investors which helps in accelerating the economy towards higher level growth. In this process, the banks do have a responsibility to shoulder when it comes to contributing to the growth of productive sectors of the economy including infrastructure. The Non-Performing Assets (NPA) s in the Indian banking sector is in the alarming state standing fifth in the world. The economic and financial boom market in the mid-2000s and with the onset of financial crisis in the year 2008-09 is the main cause for these raising NPAs. The present study has made an attempt to examine the gross NPAs in both the scheduled commercial banks and scheduled co-operative banks in India confined to secondary data covering a period of seven years from 2011 to 2018 and forecasted further for ten years upto 2028. Consequences of the raising NPAs has been analyzed and suggestions has also been put forth to recover the bad loans. The findings shows that the annual growth rate of non-performing assets is higher in the year 2015-16 in all the banks except the Private sector banks which has the highest percentage in the year 2016-17. Foreign banks has negative growth rate which depicts that the non-performing assets are in the decline in the year 2014-15 and 2016-17. The percentage of Gross Non-Performing assets is higher among the rural cooperative banks compared to urban cooperative banks. Statistical tools like annual growth rate and compound annual growth rate has been applied. The Reserve Bank of India has revised its framework to revive the stressed assets by its impudent resolutions.

Keywords: Scheduled commercial banks, scheduled co-operative banks, investment, Board for Industrial and Financial Reconstruction

1. INTRODUCTION

Banking sector is the life blood of any economy to lead financially and be strong enough to carry out the economic activities effectively. Banks play a pivotal role in the development of a nation. The savings which the banks mobilize are channeled towards investment purposes, which help for the smooth functioning in the development of the nation. The role of the banks in strengthening the financial activities depends on the healthy transactions and transparency in lending and borrowing. The Non-Performing Assets NPAs in the Indian banking sector is in the alarming state standing fifth in the world. According to RBI those assets on which the installments of interest or principal or both remain overdue for a period of 90 days or more are classified as Non-Performing Assets (NPAs). In other words, when the assets of banks stopped performing, they were denoted as NPAs. These NPAs came into light when there was subsequent fall in the financial health of the companies and the RBI followed certain standards with the tool named Asset Quality Review (AQR), which came out with the report that many of the companies could not pay its installment to the banks. Many reasons have been stated for the rising

NPAs in the banking sector which is not a healthy state of affairs. Of the main reasons, it is stated that the economic and financial boom market in the mid-2000s is the main cause for this rising NPAs. And with the onset of financial crisis in the year 2008-09, the situation worsened as the infrastructural facilities were delayed and the resultant was high prices and shortage in supply of raw materials. Higher the level of NPAs, higher is the insecurity in the stability of the nation at all levels.

2. OBJECTIVES OF THE STUDY

1. To examine the status of NPAs in scheduled co-operative and commercial banks.
2. To analyse the consequences of NPAs on the Indian Economy.
3. To put forth suggestions to regulate and reduce the NPAs.

3. METHODOLOGY

Data pertains to the secondary sources from the reports of the Reserve bank of India, the guidelines issued by RBI and other published sources. The present analyses are confined to secondary data covering a period of seven years from 2011 to 2018 and forecasted further for ten years upto 2028. Data have been presented in view of tabulation and graphical manner to understand the changes occurred during the year. Presented data have been analysed by annual and compound growth rate to know the percentage changes in the NPAs in scheduled commercial banks. Moreover, collected and forecasted data have been analysed by descriptive statistics, Inter-item correlation matrix method and also distribution parameters, normal Q-Q plots applied for the study.

4. ANALYSES AND INTERPRETATION

4.1 Scheduled Co-operative Banks

In India, there are about 1544 urban co-operative banks and 96,248 rural co-operative banks as per march, 2019, of which 64.7% of the assets accounts to the rural co-operative sector. Under rural co-operative banks we have short term structure and long-term structure. Short-term structure includes State Co-operative banks, Primary Agricultural Co-operatives and District Central Co-operative banks. Long-term structure includes State Co-operative Agriculture and Rural Development Banks, Primary Co-operative Agriculture and Rural Development Banks.

Table No.1 shows the data pertaining to gross Non-Performing assets of co-operative banks, both urban co-operative banks and rural co-operative banks. The percentage of Gross Non-Performing assets is higher among the rural co-operative banks compared to urban co-operative banks. And particularly the long-term structure in the rural cooperative banks holds higher Non-Performing assets. The main reason stated for its poor performance is the poor governance. Even though there are fluctuations in the non-performing assets with regard to co-operative banks the year 2017-18 has witnessed an increase in terms of non-performing assets. Further, data have been estimated which focuses the fluctuated results during the specific periods. Significantly, SCBs in short term structure of rural Co-operative banks shows negative while DCCBs is static and PACs declined. SCARDBs and RCARDBs in long term structure results depicts declining trend for the estimated value. Thus, the estimated result for rural and urban Co-operative banks clearly portrays a downward trend.

Figure.1 graphically presents the estimated trend of both short and long term structure of rural Co-operative banks. Lines in the graph before 2018-19 were the observed data and after the period highlighted lines

focus the estimated value. The darkened steep down lines in the graph clearly reflects the trend values given in the table.1.

Table.1. Gross NPAs of Co-operative Banks

Year (end-March)	(Percent of gross advances)					Total of Rural Co-operative Banks (RCBs)	Urban Co-operative Banks (UCBs)
	Rural Co-operative Banks						
	Short-Term Structure			Long-Term Structure			
	SCBs	DCCBs	PACS	SCARDBs	PCARDBs		
2010-11	8.5	11.2	25.2	32.3	40.6	117.80	8.4
2011-12	7.0	10.2	26.8	33.1	36.7	113.80	7.0
2012-13	6.1	9.7	24.7	36.0	37.7	114.20	6.0
2013-14	5.5	10.3	19.0	31.6	38.0	104.40	5.7
2014-15	4.9	9.5	22.4	30.3	36.2	103.30	6.2
2015-16	4.5	9.4	17.6	22.0	36.6	90.10	6.1
2016-17	4.1	10.5	26.6	23.6	33.0	97.80	7.2
2017-18	4.7	11.2	20.83	25.0	38.3	100.03	7.1
2018-19	3.17	10.24	20.24	21.64	35.01	90.30	6.32
2019-20	2.62	10.24	19.65	19.95	34.54	87.00	6.23
2020-21	2.06	10.23	19.06	18.26	34.07	83.68	6.15
2021-22	1.51	10.23	18.47	16.57	33.59	80.37	6.06
2022-23	.96	10.23	17.88	14.88	33.12	77.07	5.97
2023-24	.40	10.23	17.29	13.19	32.65	73.76	5.89
2024-25	-.15	10.23	16.70	11.50	32.18	70.46	5.80
2025-26	-.70	10.22	16.11	9.81	31.70	67.14	5.71
2026-27	-1.26	10.22	15.53	8.12	31.23	63.84	5.63
2027-28	-1.81	10.22	14.94	6.43	30.76	60.54	5.54

Source: SCBs: State Co-operative Banks, DCCBs: District Central Co-operative Banks

Note: Values from 2018-19 estimated by author.

PACS: Primary Agricultural Credit Societies, SCARDBs: State Co-operative Agriculture and Rural Development Banks, PCARDBs: Primary Co-operative Agriculture and Rural Development Banks

Source: Reserve Bank for UCBs and NABARD for Rural Co-operative Banks (excluding PACS for which the source is NAFSCOB).

Figure.1. Estimated Trend of Rural Co-operative Banks

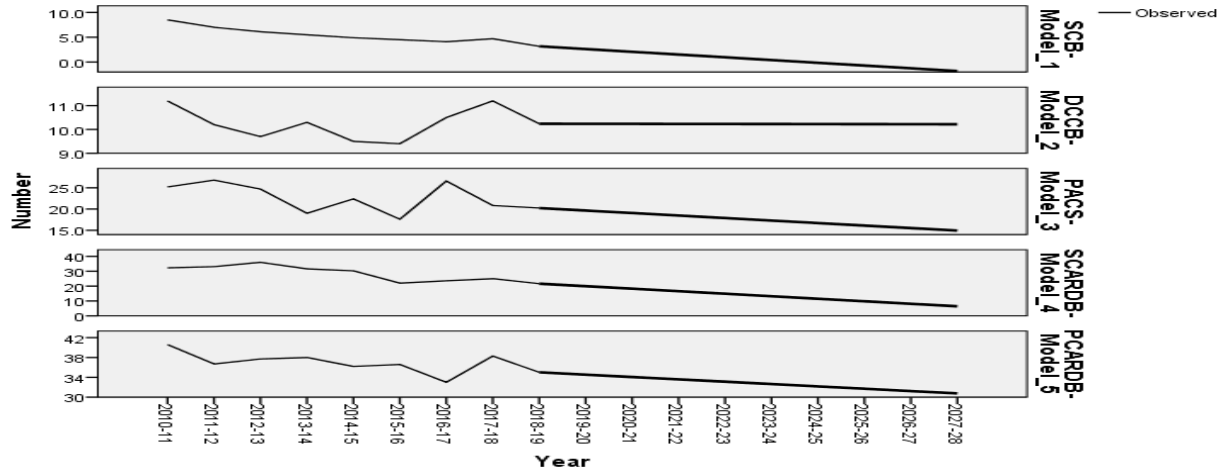


Table.2. Descriptive Statistics of Rural Co-operative Banks

Particulars	N	Minimum	Maximum	Mean	Std. Deviation
SCB	18	-1.81	8.50	2.8946	2.97992
DCCB	18	9.40	11.20	10.2381	.45131
PACS	18	14.94	26.80	19.9446	3.74897
SCARDB	18	6.43	36.00	20.7911	9.20874
PCARDB	18	30.76	40.60	34.7744	2.78356

Table.2 indicates the descriptive statistics of rural Co-operative banks which discovers the range of data set with significant standard deviation. The short and long term structure of rural Co-operative banks have the differentiation of mean, medium and mode. The result of standard deviation for each banks are emphasised to understand the mean deviation.

Figure.2. Estimated Trend of Urban Co-operative Banks and Rural Co-operative Banks

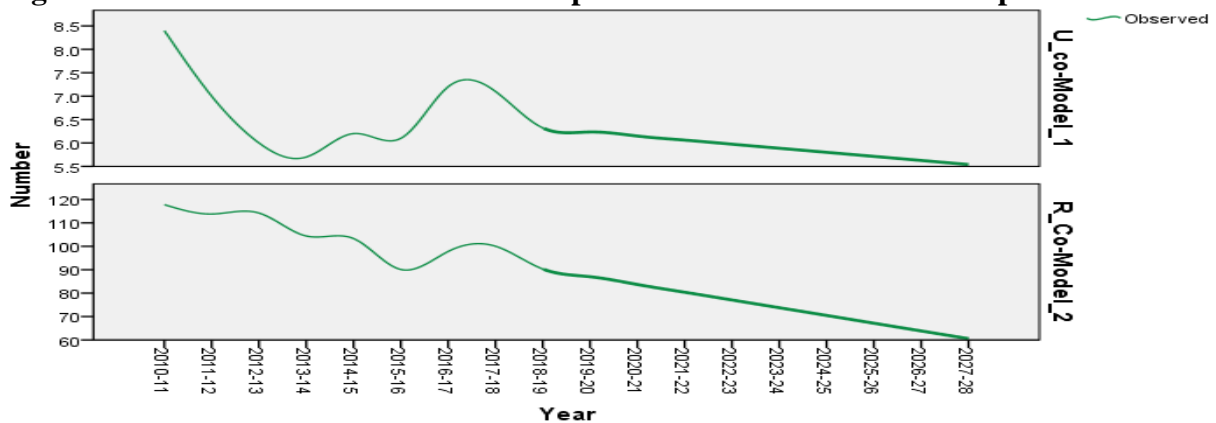


Figure.2 graphically explains the trend value of both urban Co-operative and total rural Co-operative banks. Lines in the graph before 2018-19 were the observed data and after the period highlighted lines focus the estimated value. The darkened steep down lines in the graph clearly reflects the trend values given in the table.1.

**Table. 3
Descriptive Statistics of Urban Co-operative and Total of Rural Co-operative Banks**

Particulars	N	Minimum	Maximum	Mean	Std. Deviation
Urban Co-operative Banks	18	5.54	8.40	6.2780	.72073
Total Rural Co-operative Banks	18	60.54	117.80	88.6439	17.93262

Table 3 explains the descriptive statistics of urban Co-operative banks and the total of rural Co-operative banks which identifies the range of data set with significant standard deviation. The urban Co-operative and total rural Co-operative banks have the different mean, medium and mode values. The result of standard deviation for each set of banks are signifies to understand the value of deviation.

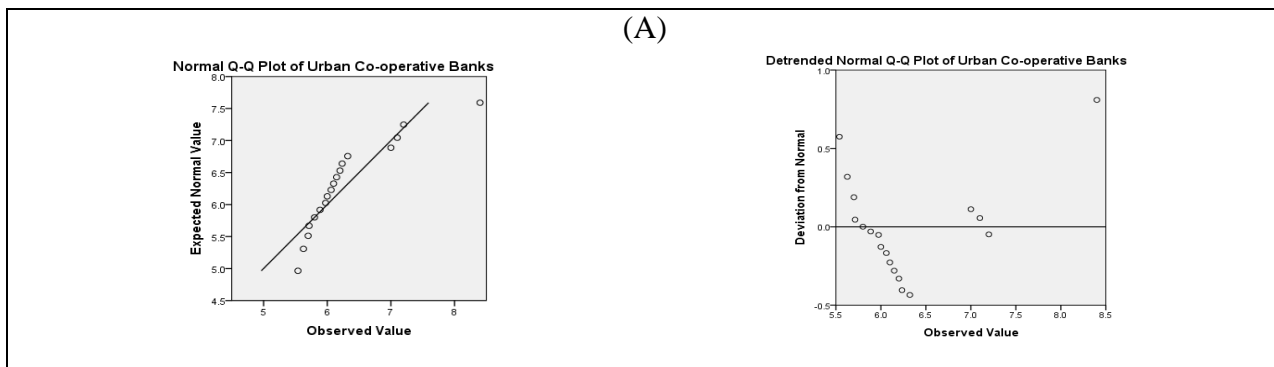
Table.4.
Estimated Distribution Parameters of Urban Co-operative and Total of Rural Co - operative Banks

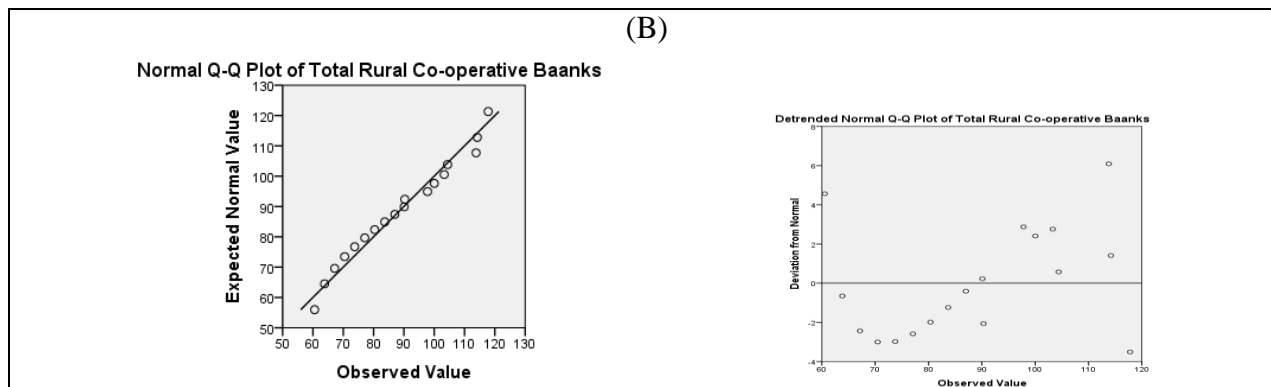
Type of Distribution	Descriptive	Urban Co-operative Banks	Total Rural Co-operative Banks
Normal Distribution	Location	6.2780	88.6439
	Scale	0.72073	17.93262

Table.4 describes the distribution Parameters of urban Co-operative and total rural Co-operative banks. Under the normal distribution, the location of urban banks at 6.2780 and rural 88.6439 while the scale of urban at 0.72073 and rural at 17.93262.

Figure.3 expresses the set of data on NPA of urban co-operative and total of rural co-operative banks on graphical presentation explains the normal Q-Q plots which help us to assess plausibly normal or exponential distribution. NPA of urban co-operative banks explains in set ‘A’ table is exponential not to normal distribution that observed clearly in the descended normal Q-Q plots. Likewise, set ‘B’ table explains normal distribution of data pertained to NPA of rural co-operative banks because maximum numbers of data have the structure of normal distribution and proved in descended normal Q-Q plots.

Figure.3. Normal Q-Q Plots of Urban Co-operative Banks and Rural Co-operative Banks





4.2 Scheduled Commercial Banks

A scheduled bank refers to a bank in India which comes under the 2nd schedule of the Reserve Bank of India Act, 1934. At present we have 69 Scheduled commercial banks in India. Scheduled commercial bank comprises commercial banks, public sector banks, private sector banks and foreign banks in India. Table 5 shows the annual growth rate for a period of over 7 years from 2011-2018. The annual growth rate clearly depicts that the gross NPAs for the commercial banks is on the increase every year but the year 2015-16 has a sharp increase in the growth rate with 47.20% of non-performing assets. The compound annual growth rate over the course of 7 periods shows that the NPAs have increased from Rs.136968 to Rs.1039679 and the rate is 33.58% in the case of commercial banks. With regard to public sector banks the annual growth rate has increased every year, but in the year 2015-16 there is a sharp increase in the percentage with 48.43%. The NPAs have increased from Rs.112488 to Rs.89560 and the compound annual growth rate is 34.50%. With regard to private sector banks the annual growth rate has increased every year, but in the year 2016-17 there is a sharp increase in the percentage holding 40.08%.

Table.5. Gross NPAs of Scheduled Commercial Banks

(amount in crores)								
Year	Commercial Banks	% change	Public Sector Banks	% change	Private Sector Banks	% change	Foreign Banks In India	% change
2011-12	136968	-	112488	-	18210	-	6297	-
2012-13	192769	28.95	164461	31.60	20382	10.66	7925	20.54
2013-14	263015	26.71	227264	27.63	24184	15.72	11565	31.47
2014-15	322916	18.55	278468	18.39	33690	28.22	10761	-7.47
2015-16	611607	47.20	539956	48.43	55853	39.68	15798	31.88
2016-17	791791	22.76	684732	21.14	93209	40.08	13629	-15.91
2017-18	1039679	23.84	895601	23.54	129335	27.93	13850	15.96
2018-19	1087645	4.41	943649	5.09	126509	-2.23	16875	17.92
2019-20	1239601	12.25	1075884	12.29	144748	12.60	18243	7.49
2020-21	1391557	10.91	1208119	10.94	162987	11.19	19611	6.97
2021-22	1543513	9.84	1340353	9.86	181226	10.06	20978	6.51
2022-23	1695469	8.96	1472588	8.97	199466	9.14	22346	6.12
2023-24	1847425	8.22	1604823	8.23	217705	8.37	23714	5.76
2024-25	1999381	8.22	1737058	7.61	235944	7.73	25082	5.45
2025-26	2151337	7.06	1869292	7.07	254183	7.17	26450	5.17

2026-27	2303293	6.59	2001527	6.60	272422	6.69	27818	4.91
2027-28	2455249	6.18	2133762	6.19	290662	6.27	29186	4.68

Source: Reserve Bank of India

In the case of Private Sector Banks, the NPAs have increased from Rs.18210 to Rs.129335 and the compound annual growth rate is 32.32%. With regard to foreign banks in India the annual growth rate has fluctuations, it is on the increase in some of the periods but the year 2014-15 and 2016-17 has witnessed a negative growth rate. The compound annual growth rate in foreign banks is 11.92% with NPA increasing from Rs.6297 to Rs.13850. The annual growth rate of non-performing assets shows that the percentage is higher in the year 2015-16 in all the banks except the Private sector banks which has the highest percentage in the year 2016-17. But comparatively the foreign banks have negative growth rate which depicts that the non-performing assets shows a declining trend in the year 2014-15 and 2016-17. Furthermore, estimated data of NPA of commercial, public, private and foreign banks are steeply down to negative value which indicates improvements to be enhanced in the economic efficiency of the banking sector. Compared with other criteria NPAs of foreign banks are declined and estimated value help us to enumerate future plans on NPAs but upto 2028 the result of NPAs are positive to the banking sector.

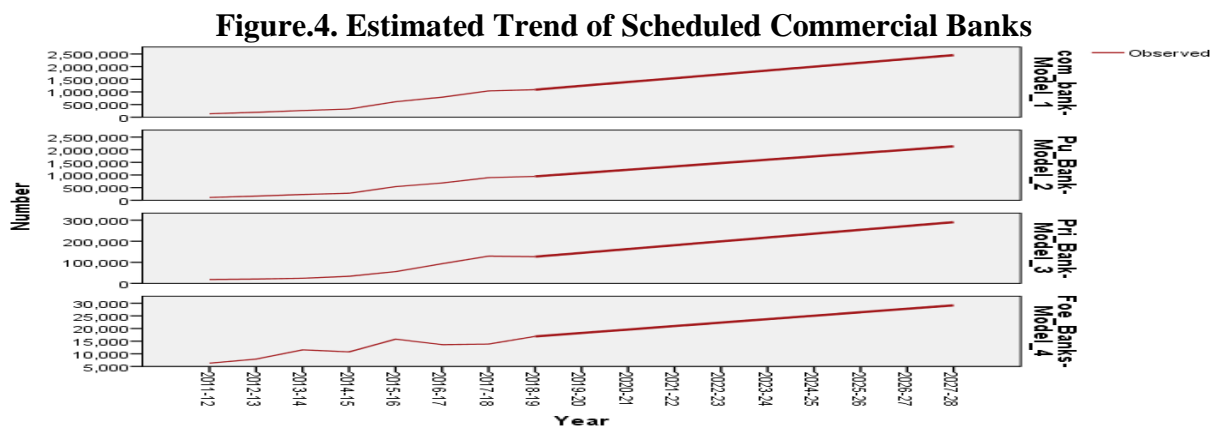


Figure.4 graphically expresses the trend value of scheduled commercial banks. Lines in the graph before 2018-19 were the observed data and after the period highlighted lines focus the estimated value. The darkened steep up lines in the graph clearly reflects the trend values given in the table.6.

Table.6 Descriptive Statistics of Scheduled Commercial Banks

Particulars	N	Minimum	Maximum	Mean	Std. Deviation
Commercial Banks	17	136968.00	2455249.00	1239600.8824	769502.50798
Public sector Banks	17	112488.00	2133762.00	1075883.82	669524.42
Private Sector Banks	17	18210.00	290661.60	144747.92	92649.03
Foreign Banks in India	17	6297.00	29185.71	18242.85	6981.48

Table.6 explains descriptive statistics of scheduled commercial banks that clarifies the range of data set with significant standard deviation. The scheduled commercial banks itself have some differentiated mean, medium and mode values. The result of standard deviation for each set of banks are signifies to understand the value of deviation.

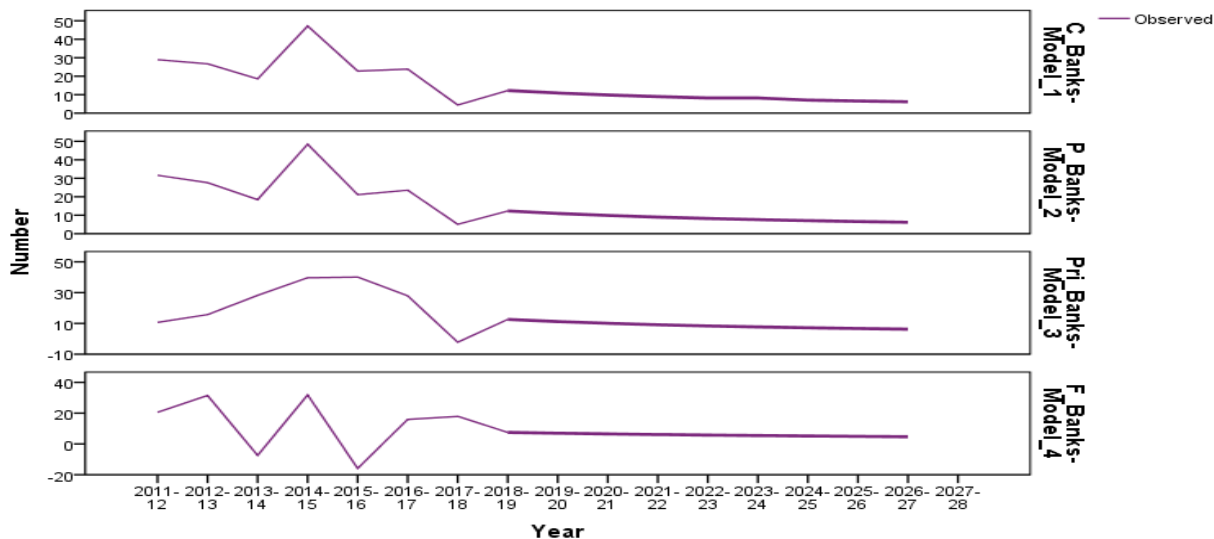


Figure.5 graphically presents the trend value of percentage growth rate of Scheduled commercial banks. Lines in the graph before 2018-19 were the observed data and after the period highlighted lines focus the estimated value. The darkened steep up and down lines in the graph clearly reflects the trend values given in the table.6.

Table.7 Inter-Item Correlation Matrix of Scheduled Commercial Banks

Particulars	Commercial Banks	Public sector Banks	Private Sector Banks	Foreign Banks in India
Commercial Banks	1.000	1.000	.999	.982
Public sector Banks	1.000	1.000	.999	.983
Private Sector Banks	.999	.999	1.000	.973
Foreign Banks in India	.982	.983	.973	1.000

Table.7. explains the statistical review of inter-item correlation matrix and estimated that there is well structured correlation between the variables. Because, correlated value of the variables are having efficient consistency while analyses of the ideal range of average inter-item correlation deals below 0.15 to 0.50 is not correlated.

5. CONSEQUENCES OF NPAs ON THE ECONOMY

The Reserve Bank of India keeps monitoring the Capital Adequacy Ratio or the ratio of the NPA to the Paid-Up Capital. If this ratio crosses 8% then the bank is said to be in trouble. The lending activities of these banks are forced to stop by the RBI. This impacts the growth of the economy to a great extent as the lending activities play a major role in the overall development of the nation. NPA plays an important role in every economic condition and also the main cause of the increase in the current account deficit. Interest rates, Loan, Housing Loans, CRR, and SLR all are directly affected by the system.

1. Stress in banking sector causes less money available to fund other projects, particularly the infrastructure. Infrastructure is the backbone which ensures the development of all the sectors. As all the sectors are inter related and inter dependent, the economy should have a potential investment in infrastructure to gain momentum. Therefore, lack of investment in infrastructure will have a larger negative impact on the national economy.

2. Higher interest rates will be charged by the banks to maintain the profit margin.
3. Funds may be redirected from one project to another which may affect the former projects.
4. As investments get reduced, it may result in unemployment to a large extent.
5. In the case of public sector banks, the bad health of banks means a bad return for a shareholder which means that the government of India gets less money as a dividend. Therefore, it may impact easy deployment of money for social and infrastructure development and results in social and political cost.
6. NPAs related cases add more pressure to already pending cases with the judiciary.
7. Rising NPAs is the main cause of the increase in current account deficit and interest rates, CRR, SLR are directly affected by the system.
8. Higher NPA loses the confidence of shareholders to make further investment or they may withdraw their investments which may add fuel to the rising problems.
9. Higher NPA not only affect the problematic borrowers but also affect borrowers who hold good credit scores.

6. SUGGESTIONS TO REGULATE AND REDUCE NPAs

1. Proper governance and effective measures has to be implemented by forming strict regulations and enforcing the rights.
2. Transparency in lending activities through proper submission of the annual reports by the banks.
3. Collateral security against loans has to be scrutinized to avoid quality less borrowers.
4. Screening by the Board for Industrial and Financial Reconstruction (BIFR) to provide funds for revival of the sick unit.
5. Assistance provided in the form of mergers to come out of the recession.
6. Various acts implemented to recover the NPAs should be given wide powers to perform its duty in the stipulated time.

7. CONCLUSION

The problem of stressed assets is being addressed and the resolution of non-performing assets (NPAs) has gathered momentum. Recently, scheduled commercial banks, especially the public sector banks, have had perceptible improvement in profitability. But still policy related issues and loop holes in the sector leads to increased NPAs. And in certain cases when the sick unit is put for auction, due its heavy investment or if there is no feasibility of the unit for revival, we cannot find buyers of the unit. In such situation the banks write off the unit. It is essential that proper guidance and information regarding the feasibility of the market should be analysed by both the banks as well as the unit concerned. Each individual has to shoulder the responsibility to work towards the development of the nation.

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