

**ANALYZING THE IMPACT OF DISTRESSED ASSETS ON BANKING:
A DESCRIPTIVE AND ANALYTICAL EXPLICATION**

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Abstract

A sound and healthy banking system is an indication of a stable economy. If the banking sector becomes vulnerable, it will have a devastating impact on the functioning of other sectors and eventually affects the growth of the country. Bad loans have disastrous impact on the operations of banks as they result in huge amount of losses. Non-Performing Assets (NPAs) act as a termite for the banking system as they gradually eat good assets by creating provisions and make banks hollow from inside. The present study is descriptive and empirical in nature analyzing the impact of NPA on banking operations of banks particularly on profitability of the Scheduled Commercial Banks (SCBs) for the period ranging from 2010 to 2020. The study revealed that NPAs have a catastrophic impact on profitability, productivity, liquidity, solvency, credibility, and competitive functioning of banks. High level of NPAs has a catastrophic impact on net profit of banks. The study also found that there is significant negative correlation between NPAs and net profit of SCBs. If NPAs level will not brought down upto a manageable limit, they will pose serious threat for banks survival, growth, and expansion.

Keywords: *NPAs, banking, SCBs, profitability*

1. Introduction

Banking sector plays a significant role in the economic development of a country. It advances loans to various sectors viz. industrial, agricultural, infrastructural, and so forth and thereby accelerates the business cycle of economy. The Indian Banking sector is regulated under the Banking Regulation Act, 1949. Commercial banks refer to both scheduled and non-scheduled banks that are regulated under this Act (*Explanatory Notes, 2015*). Scheduled Banks are the banks which are included in the Second Schedule of RBI Act, 1934. As per RBI guidelines, the SCBs in India are categorized into six distinguished groups depending on their nature of operation and/or type of ownership, that is, Public Sector Banks (12), Private Sector Banks (22), Foreign Banks (46), Small Finance Banks (10), Regional Rural Banks [RRBs] (43), and Scheduled Payments Banks (2).

In the recent years, banks have become cautious while advancing loans. The major reason behind this is momentous amount of NPAs which are affecting banking operations dreadfully. NPAs have been plaguing the Indian financial sector since long, but its ill-effects came to light in the early nineties. Before 1991, the NPAs were not regarded as a nuisance as in present context because banks were not having any objective criteria for determining bad assets. The problem of NPAs was seriously highlighted after Banking Sector Reforms (BSRs) when Narasimham Committee found that the foremost reason for banks low profitability, low efficiency, and high amount of losses is gigantic amount of NPAs (Rao, 2008).

Reserve Bank of India (RBI) Master Circular defined NPAs as "An asset, including a leased asset, becomes non-performing when it ceases to generate income for the bank. A NPA is defined as a credit facility in respect of which the interest and/ or instalment of principal has remained 'past due' for a specified period of time". From March 31, 2004, banks have adopted "90 days" overdue norms for classifying an asset under NPA category to bring more transparency and precision.

NPAs are of two types that is, Gross NPAs (GNPAs) and Net NPAs (NNPAs). GNPAs are the sum total of NPAs on a particular balance sheet date whereas NNPAs are the NPAs regarding which banks have made provision. The formulas for calculating GNPA and NNPA ratio are as follows:

$$GNPA\ ratio = \frac{\text{Gross NPAs}}{\text{Gross Advances}}$$

$$NNPA\ ratio = \frac{\text{Gross NPAs} - \text{Provision}}{\text{Gross Advances} - \text{Provision}} = \frac{\text{Net NPAs}}{\text{Net Advances}}$$

Banks have to classify assets into four categories: (a) Standard Assets- these are the assets on which banks receive regular interest income. They are the "performing assets". (b) Substandard Assets-these are the assets which remained NPAs for a period of less than or equal to 12 months. (c) Doubtful Assets- these are the assets which remained in the substandard category for a period of 12 months. (d) Loss Assets- these are the assets where loss has been identified by the bank or internal or external auditors.

As per RBI Master Circular (2015), banks have to make provision of NPAs on the basis of asset classification. For Substandard Assets, banks are required to make a general provision of 15% on total outstanding whereas a provision of 25% has to be made in regard to unsecured exposures. For Doubtful Assets, in regard to unsecured portion, 100% of the provision is made to the extent to which the advance is not covered by the realizable value of the security. In respect of secured

advances, a provision of 25% has to be made if the asset remained doubtful upto 1 year, 40% if it remained doubtful from 1 to 3 years and at the rate of 100% if it remained doubtful for more than 3 years. In respect of loss assets, 100% of the outstanding should be provided for.

2. Literature Review

NPAs pose a serious threat to the growth and survival of banks. There are numerous studies conducted on NPAs regarding identifying the reasons responsible for NPAs, its impact on functioning of banks and how they can be reduced up to a manageable level. Some of the studies examining the various aspects of NPAs are: Hafsal, Suvvari, and Durai (2020) analyzed the relationship between NPAs and banks efficiency by integrating NPAs into the measurement of banking efficiency through data envelopment analysis for 46 Indian banks covering period from 2014 to 2016. The study revealed that NPAs are a major reason for banks inefficiency and around 16.2% of the banks efficiency is lost due to momentous amount of NPAs. The researchers Mishra, Garg, Grover, and Gupta (2020) assessed the impact of NPAs on profitability of selected public and private sector banks in India for the period ranging from 2010-11 to 2017-18. The result of regression analysis found that NPAs significantly affect the profitability of banks. Another study by Varun Agarwala and Agarwala (2019) analyzed the NPA mean growth rate for individual and different bank groups as well as examined the growth pattern of GNPA's in the banks for the period covering 2010-2017. The results of geometric mean revealed that the NPA growth rate was lower in private sector banks as compared to nationalized and SBI Group. The study concluded that public sector banks have failed in effectively managing NPAs. Mishra and Pawaskar (2017) analyzed the various ratios relating to NPAs in Bank of Maharashtra for the period covering 2011-16 as well as assessed their impact on banking sector. The study emphasized that high level of NPAs have severe impact on banks efficiency and profitability. The author concluded that bank should be proactive in the selection of borrowers while advancing loans and it should conduct proper credit appraisal process for reducing NPAs. Chimkono, Muturi, and Njeru (2016) interrogated the effect of NPLs, cost-efficiency ratio, and Cash Reserve Ratio on the functioning of commercial banks in the Malawian banking sector for the time span of 2008 to 2014. The study employed census method for collecting data of ten commercial banks in Malawi, which was analyzed, by correlation and multiple linear regression technique. The empirical findings revealed that NPL, CRR, and cost efficiency are negatively associated with financial performance of banks. Similarly, Narayanan and Surya (2014) analyzed the impact of NPAs on revenue and profit of Indian bank of Sivaganga district, Tamil Nadu, India for the period ranging from 2007-2012. The study employed interview schedule method for collecting primary data from bank officials as well as used secondary sources from banks annual reports and RBI publications. Result of t-test revealed that bad debts written-off have a significant effect on operating profit of Indian bank. The authors concluded that though Indian bank has successfully managed its asset quality, NPAs are still a threat to its profitability. Study

by Rath, P.C. Mishra, and B.B. Mishra (2013) made an empirical investigation of the factors attributable for the incidence of bad assets in Indian SCBs for the period covering 1998-99 to 2008-09. The result of OLS revealed that NPAs have a negative impact on the overall profitability of banking industry. It suggested banks to carry out proper credit appraisal of projects, careful screening of loan application, credit monitoring, and follow-up visits for curbing the menace of NPLs. In same line, Rajput, Gupta, and Chauhan (2012) analyzed the nature, extent, and magnitude of NPAs in SCBs for the period ranging from 1997-98 to 2009-10. The study also examined the relationship between NPAs and profitability of banks by applying correlation and regression technique. The analytical results showed that there exists strong negative relationship between NPAs and profitability measure. It concluded that NPAs have a significant negative impact on return on assets of banks and therefore, it should be reduced by adopting proper recovery mechanisms.

3. Objectives of the Study

- To extend a conceptual elucidation on NPAs.
- To examine the impact of NPAs on the banking operations of banks.
- To analyze the degree of correlation between GNPA and Net Profits, NNPA and Net Profit and Provision on NPAs and Net Profit of SCBs.

4. Research Methodology of the Study

The present study is descriptive and empirical in nature. The study is entirely based on secondary data collection conducted for the period of 11 years ranging from 2010-2020. The researcher has employed various statistical tools such as average, ratio analysis, standard deviation, and correlation for analyzing the data. The data has been extracted primarily from RBI website. For study purpose, the researcher has analyzed the data of SCBs excluding RRBs.

5. Impact of Non-Performing Assets on Banking Operations

These factors relate to impact of NPAs on bank operations and borrowers' interests.

1. Reduce profitability of banks: Banks have to charge provision on substandard assets and doubtful assets as per RBI guidelines as well as they have to write-off bad debts from profits. Banks have to charge this provision from profits. The massive provisioning on NPAs along with holding cost of such unproductive assets over the years deplete present and future profits which results in losing long-term profitable opportunity (Batra, 2003).

2. Low Return on investments, assets, and equity: As profit gets reduced due to bulging amount of NPAs, banks are left with investing lesser amount that consequently reduces return on investments which negatively affect their current earning ability. High NPAs also have a direct and negative effect on return on assets and equity which are the two important parameters for judging the profitability of banks (Batra, 2003; Madapana & Mohanty, 2014; Yadav, 2014).

3. Excessive focus on credit risk management: One of the most notable impacts of mounting level of bad assets is that management gets indulge in rooting out measures for reducing them. When NPAs rise, banks are compelled to divert their existing resources and work force in managing stressed assets, which is also an indirect cost to them. As a result, banks lose out their potential ability to capitalize other productive avenues of investment (Bansal, 2012; Batra, 2003; Zafar, Maqbool, & Khalid, 2013).

4. Additional cost: When level of NPAs surpasses beyond the manageable limit of credit officials, banks set up special credit management divisions or appoint special employees who are expert in managing credit risk as well as have good experience in handling NPAs. Hence, banks have to incur additional cost for maintaining bad loans such as administration cost, legal costs, and cost of procuring the resources locked in (Ainapur, 2014; Batra, 2003).

5. Change in bankers' sentiments: Another prominent effect of stressed assets is change in bankers' sentiments, which might choke lending for productive and economic activities. Soaring level of NPAs may induce banks to go for risk free investment and to keep themselves restricted only in safer avenues, which is not favorable for the economic development of a country. They become risk averse and start their subsidiaries for managing mutual funds, giving insurance policies, and providing factoring services, and so forth (Ainapur, 2014; Balasubramaniam, n.d.; Batra, 2003; Grewal, 2010; Karunakar, Vasuki, & Saravanan, 2008).

6. Affects liquidity position: As high level of NPAs block money and reduces profitability, banks encounter the problem of liquidity. They do not have enough cash to carry out their business operations effortlessly. With lower liquidity, the economy shows a negative trend, people purchasing power goes down, and they take minimal risks, which affects the whole economy.

7. Reduce Economic Value Addition (EVA): NPAs have a negative impact on EVA of banks. EVA is calculated for measuring company's performance towards shareholders value creation. Its formula is- [$EVA = \text{Net operating profit after tax} - \text{Cost of Capital}$]. While computing EVA, cumulative loan loss provisions on NPAs is considered as capital, which further increases the amount of cost of capital of banks and results in reducing EVA (Singh, 2013).

8. Affect capital adequacy ratio: NPAs carry risk weight of 100 percent (to the extent, it is uncovered) which results in jamming capital. Since, these assets do not produce any income for sustaining the capital blocked by them, which again reduce the profits generated by other performing assets. Hence, CAR calculation gets disturbed because of mounting NPAs (Prasad & Veena, 2011; Saxena, Shrivastava, & Mohan, 2013; Soni & Heda, 2014; Sontakke & Tiwari, 2013; Zafar et al., 2013).

9. Credit loss: If a bank is facing serious problem of NPAs, then it will lose its goodwill, brand image, and credit that adversely affect its position in the eye of customers. A high percentage of NPAs in the balance sheet has a negative impact on the value of bank in terms of market for credit. People neither trust bank nor deposit money with full confidence (Prasad & Veena, 2011; Grewal, 2010; Rai, 2012).

10. High cost of funds: Because of swelling NPAs, genuine borrowers confront difficulty in raising funds from banks. In order to recompense the losses generated by NPAs, banks are either reluctant in providing loans or if they provide loans, they charge very high rate of interest and provide low interest on depositors saving. High cost of funds directly influences the small and medium investors who wish to take loans for setting up new industrial or infrastructural projects. Hence, banks reimburse the loss of NPAs by charging high cost of funds from borrowers.

11. Low yield on advances: Due to escalating level of NPAs, yield on advances shows a lower amount than actual yield on “standard advances”. This is because yield is computed on weekly average total advances including NPAs (Narayanan & Surya, 2014; Batra, 2003; Chatterjee, Mukharjee, & Das, 2012; Dubule, 2009; Grewal, 2010; Joseph & Prakash, 2014; Narula & Singla, 2014; Sant, 2014; Jain, 2007).

12. Erodes net worth: Rising NPAs critically impact banks net worth because they are in severe pressure to maintain minimum capital requirements and provisions on bad assets. Because of inadequate profit, banks try to meet these prudential standards from their internal financial sources, which slowly erode the net worth (Soni & Heda, 2014; Jain, 2007).

13. Impact on shareholders: Due to massive bad debts, earning per share declines, which eventually decreases the value of share and thereby results in direct loss to shareholders. Further, if the level of NPA in a bank exceeds 3 percent in any year, then the bank is not allowed to announce the dividend (Soni & Heda, 2014; Jain, 2007).

14. Impact on banks scrips on Stock Exchanges: RBI incorporates stock market behavior of bank scrips in its annual review of banking sector. It has mentioned in report that informational asymmetries arising from on-site/off-site inspection, weak performance, and increasing bad assets weighed profoundly on bank stocks. Due to high NPAs, bank scrips remain illiquid and thinly traded (Batra, 2003).

15. Less interest income: Interest income is the main income of banks. On NPAs, banks do not receive interest income. Further, banks do not record interest income on accrual basis, but it is recorded only when it is actually received.

16. Impact on productivity: High NPAs reduces the productivity of bank employees because it keeps whole bank machinery busy in the task of recovery as well as demoralizes the operating personnel (Srinivas, 2013; Yadav, 2014; Zafar et al., 2013).

6. Analysis and Interpretation

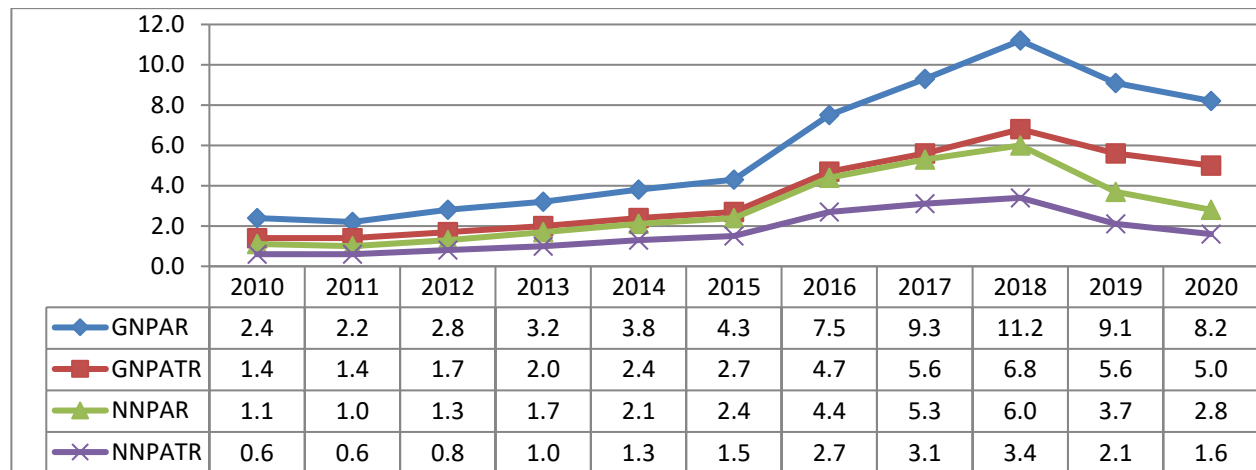
It is evident from the Table 1 that the GNPA's have increased significantly from Rs. 846.98 billion in 2010 to Rs. 10396.79 billion in 2018 thereby resulting an increase of Rs. 9549.81 billion in absolute terms and 8.15% in relative terms. On other hand, NNPA's increased substantially from Rs. 387.23 billion to Rs. 5208.38 billion during the same period marking an increase of Rs. 4821.15 billion in absolute terms and 7.43% in relative terms during the same period. It reveals that the banks have not carried out proper credit appraisal of the projects and there is poor credit management. However, both GNPA's and NNPA's have reduced continuously in the years 2019 and 2020 which is a positive sign of managing asset quality.

Table 1: GNPA and NNPA of SCBs in India as on March 31 (Amount in Billion)

Year	Gross Advances	GNPAs	Net Advances	NNPAs
2010	35450.00	846.98	34970.54	387.23
2011	43575.48	979.73	42987.04	417.99
2012	51588.78	1429.03	50735.59	652.05
2013	59882.77	1940.53	58797.73	986.93
2014	68757.48	2633.62	67352.13	1424.21
2015	75597.60	3233.35	73881.60	1758.41
2016	81731.21	6119.47	78964.67	3498.14
2017	84925.65	7917.91	81161.09	4331.21
2018	92662.10	10396.79	87459.97	5208.38
2019	102944.63	9364.74	96761.83	3550.68
2020	109189.18	8998.03	103019.14	2895.31
Mean	73300.44	4896.38	70553.76	2282.78

Source: RBI. (2020-21). Handbook of Statistics on the Indian Economy 2020-21. Retrieved from www.rbi.org.in

Graph 1: Trend of GNPA and NNPA ratios as on March 31 (in %)



Source: RBI. (2021). Handbook of Statistics on the Indian Economy 2020-21. Retrieved from www.rbi.org.in

Note: GNPARG: GNPAAs as percentage of Gross Advances; GNPATR: GNPAAs as percentage of Total Assets; NNPAR: NNPAAs as percentage of Net Advances; and NNPATR: NNPAAs as percentage of Total Assets.

It is clear from Graph 1 that all the ratios have increased noticeably from the year 2010 to 2018 and decreased slightly in the years 2019 and 2020. In the year 2018, the GNPA and NNPA ratio increased to a soaring level of 11.2% and 6% respectively indicating poor management of stressed assets.

Table 2: Classification of Loan Assets of all SCBs as on March 31 (Amount in Billion)

Year	Standard Advances		Sub-Standard Advances		Doubtful Advances		Loss Advances		Total Advances
	Amt	%	Amt	%	Amt	%	Amt	%	Amt
2010	34603	97.6	426	1.2	334	0.9	87	0.2	35450
2011	42596	97.8	414	1.0	461	1.1	104	0.2	43575
2012	50168	97.3	695	1.4	617	1.2	109	0.2	51589
2013	57951	96.8	909	1.5	900	1.5	123	0.2	59883
2014	66138	96.2	1087	1.6	1374	2.0	170	0.2	68768
2015	72391	95.7	1186	1.6	1861	2.5	182	0.2	75620
2016	75668	92.5	2254	2.8	3603	4.4	260	0.3	81784
2017	76804	90.7	2082	2.5	5503	6.5	317	0.4	84707
2018	82300	88.8	2509	2.7	7248	7.8	604	0.7	92662
2019	93535	90.9	1888	1.8	6578	6.4	870	0.8	102871
2020	100228	91.8	2008	1.8	5385	4.9	1567	1.4	109189
Mean	68398	94.2	1405	1.8	3079	3.6	399	0.4	73282

Source: Reserve Bank of India. (2021). Statistical Tables Relating to Banks in India 2020-21. Retrieved from www.rbi.org.in

It is apparent from Table 2 that the substandard advances increased significantly from Rs. 426 billion in the year 2010 to Rs. 2509 billion in the year 2018 resulting an increase of Rs. 2083 billion in absolute terms and 17% in relative terms whereas doubtful assets increased by Rs. 6914 billion in absolute terms and 5% in relative terms during the same period. The loss assets reached to a staggering level of Rs. 1567 billion in the year 2019. This signifies poor risk management practices followed by SCBs. In the year 2018, SCBs have the lowest level of standard advances which is a clear indication of banks failure in managing distressed loans. This clearly implies SCBs failure in detecting early warning signals which result in slippage of asset from sub-standard to doubtful category.

Table 3: Provision on NPAs and Net Profit of SCBs as on March 31(Amount in Crore)

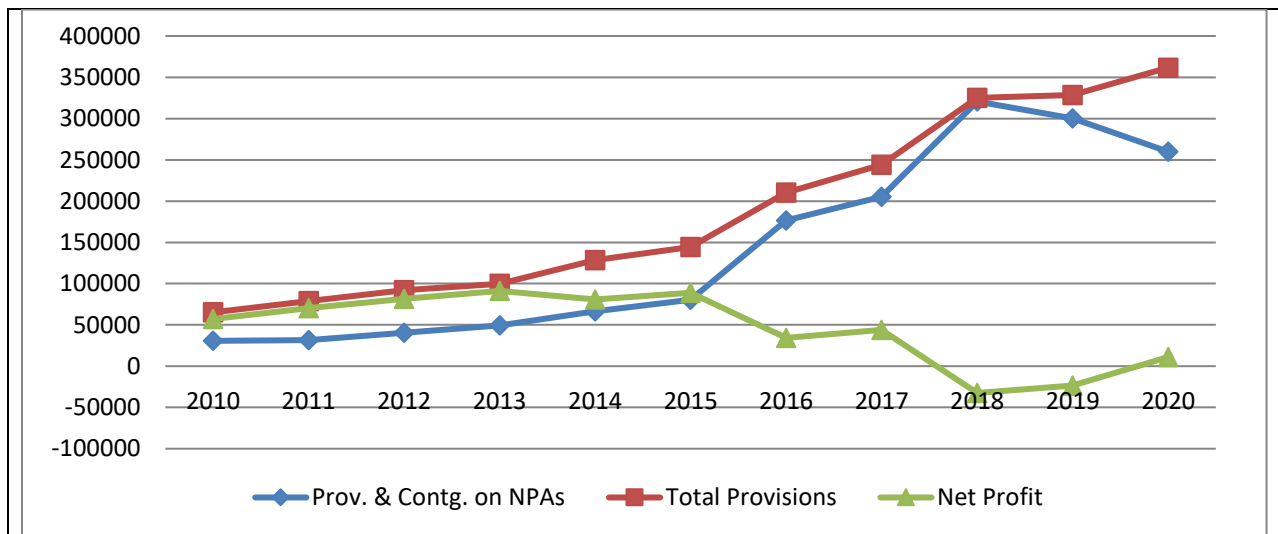
Year	Provisions & contg. on NPAs	Total Provisions	Net profit
2010	30680.61	65202.83	57109.25
2011	31578.75	78799.31	70331.27
2012	40550.61	91950.53	81658.28

2013	49585.70	99751.02	91164.66
2014	66644.64	128680.24	80912.68
2015	80482.66	144247.77	89077.79
2016	176658.93	210281.39	34148.17
2017	205161.83	243834.15	43899.50
2018	320624.34	325032.41	-32437.68
2019	300269.87	328617.72	-23397.39
2020	259888.63	361684.49	10910.69
Mean	142011.51	188916.53	45761.57

Source: RBI. (2021). Statistical Tables Relating to Banks in India 2020-21. Retrieved from www.rbi.org.in

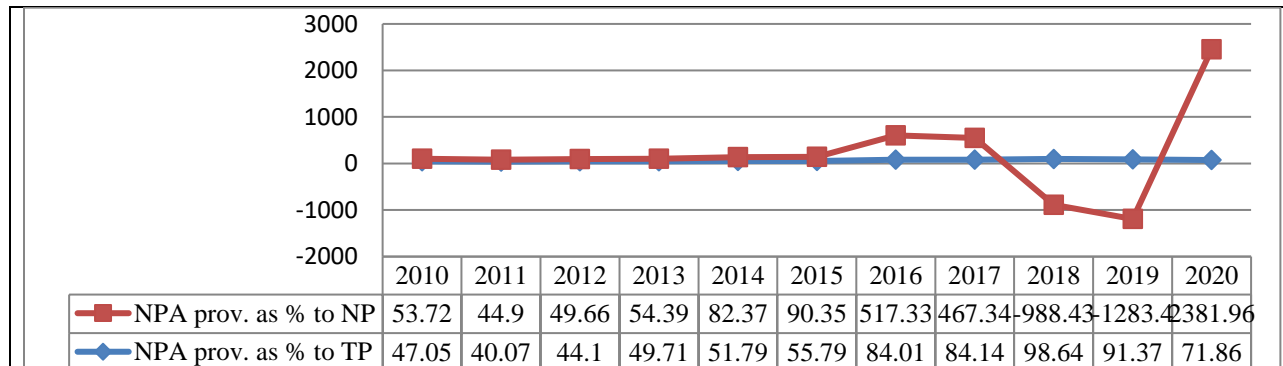
It is evident from Table 3 that the NPA provision and contingencies increased continuously except in the years 2019 and 2020 whereas Net Profit became negative in the years 2018 and 2019. The provision on NPAs increased from Rs. 30681 crores in the year 2010 to Rs. 320624 crores in the year 2018 reporting an increase of Rs. 289944 crores in absolute terms and 9.6% in relative terms which signifies increase in the level of NPAs due to faulty lending and poor credit management.

Graph 2: Trend of Provision & Contingencies on NPAs, Total Provisions, and Net Profit



Source: Based on data given in Table 3.

Graph 2 clearly shows that provision on NPAs has occupied a major portion of total provision. Provision on NPAs severely affects the operating profit and net profit of the banks. There was steep rise in the provision on NPAs during the period 2015 to 2018 which signifies that bank have not initiated efficient measures for identifying potential NPAs which resulted in creation of sub-standard and doubtful assets and thereby banks have to maintain high amount of provision on NPAs from profit.

Graph 3: Trend of NPA provision as % to Net Profit and as % to Total Provision

Source: Based on data given in Table 3.

It is clear from Graph 3 that the banks have to make a substantial amount of NPA provision. From the year 2010 to 2015, provision on NPAs was 48.09% of the total provision on an average basis and thereafter from the year 2016 to 2020, the provisioning percentage on NPAs increased to 86% on an average basis. This clearly indicates that banks have not initiated timely action for efficient management of distressed assets which resulted in creation of high amount of provision and thereby resulted in less profitability and liquidity for the banks.

7. Results and Discussions

Table 4: Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
GNPAs	.218	11	.149	.867	11	.070
Net Profit	.166	11	.200*	.883	11	.114
NNPAs	.167	11	.200*	.914	11	.269
Provision NPAs	.252	11	.050	.850	11	.042

*. This is a lower bound of the true significance; a. Lilliefors Significance Correction

Source: Generated by researcher using SPSS 20

It is evident from Table 4 that the data is normal as the significant values under Kolmogorov-Smirnov and Shapiro-Wilk is greater than 0.05.

Table 5: Descriptive Statistics

	Mean	Std. Deviation	N
Net Profit	45761.5655	44096.88931	11
Provision on NPAs	142011.5064	113544.90144	11
NNPAs	2282.7764	1692.22426	11
GNPAs	4896.3800	3715.54816	11

Source: Generated by researcher using SPSS 20

It is apparent from Table 5 that the mean amount of GNPAs is more than NNPAAs by Rs. 2613.61 crore which indicates that banks have high amount of substandard and doubtful advances. The

value of standard deviation is closest in Net Profit which signifies those other values are more deviated from mean.

Table 6: Correlation Analysis between GNPA's and Net Profit

		GNPAs	Net Profit
GNPAs	Pearson Correlation	1	-.888**
	Sig. (2-tailed)		.000
	N	11	11
	Pearson Correlation	-.888**	1
	Sig. (2-tailed)	.000	
	N	11	11

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Generated by researcher using SPSS 20

Table 6 reveals that there is high degree of negative correlation (-.888) between GNPA's and Net Profit of SCBs which is significant at the 0.01 level. This implies that when SCBs have high amount of GNPA's, their profits will decrease and vice-versa.

Table 7: Correlation Analysis between NNPA's and Net Profit

		Net Profit	NNPAs
Net Profit	Pearson Correlation	1	-.795**
	Sig. (2-tailed)		.003
	N	11	11
NNPAs	Pearson Correlation	-.795**	1
	Sig. (2-tailed)	.003	
	N	11	11

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Generated by researcher using SPSS 20

It is evident from Table 7 that the correlation coefficient (-.795) shows negative correlation between Net Profit and NNPA's of SCBs. This confirmed the existence of strong negative relationship between the variables at 0.01 level.

Table 8: Correlation Analysis between Provision on NPAs and Net Profit

		Net Profit	Provision NPAs
Net Profit	Pearson Correlation	1	-.932**
	Sig. (2-tailed)		.000
	N	11	11
Provision NPAs	Pearson Correlation	-.932**	1
	Sig. (2-tailed)	.000	
	N	11	11

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Generated by researcher using SPSS 20

Table 8 clearly reveals that the correlation coefficient (-.932) is significant at the 0.01 level. It is evident from the result that there exists a strong negative relationship between Net Profit and Provision on NPAs.

8. Conclusion

Banking sector is the backbone for sustainable economic growth as banks are the intermediaries between savers and investors. When the banking sector is not sound, there will be no smooth flow of credit to other sectors which ultimately hampers the whole economy. Low level of NPAs is a significant indicator to gauge the financial soundness of banking system. NPAs are a two-edged weapon. On one side, it does not generate interest income for the banks and on the other; it requires provisioning from profit that affects banks' solvency. The study found that NPAs have serious repercussions on the functioning of banks. The improvement in the financial health and soundness of a bank is indirectly proportional to the level of NPAs. When the level of NPA increases, it causes a decrease in the liquidity, profitability, credibility and solvency of banks. The study has found that there exists significant negative correlation between NPAs and profitability of banks. The net profits of banks are mostly affected by provision on NPAs (-0.932) followed by GNPA (-0.888) and NNPA (-.795). Hence, NPAs are the biggest obstacles in the economic growth and development of any country and produce multiple challenges for present and future. Banks should undertake serious efforts to restrain them up to a manageable extent for ensuring smooth flow of credit in the country.

References

- Ainapur, J. (2014). Comparative analysis of NPA of old private sector banks in India. *International Journal of Public Administration & Management Research*, 2(1), 106-115.
- Agarwala, Varun., & Agarwala, N. (2019). A critical review of non-performing assets in the Indian banking industry. *Rajagiri Management Journal*, 13 (2), 12-23. Doi:[10.1108/RAMJ-08-2019-0010](https://doi.org/10.1108/RAMJ-08-2019-0010)
- Balasubramaniam, C.S. (n.d.). Non-performing assets and profitability of commercial banks in India: Assessment and emerging issues. *ABHINAV National Monthly Refereed Journal of Research In Commerce & Management*, 1(7), 41-52.
- Bansal, A. (2012). A study on recent trends in risk management of non-performing assets by public sector banks in India. *Journal of Information and Operations Management*, 3(1), 50-56.
- Batra, S. (2003). Developing the Asian markets for non-performing assets: Developments in India, 53-83. *Proceedings from the Third Forum for Asian Insolvency Reform*. Retrieved from <https://www.oecd.org/daf/ca/corporategovernanceprinciples/33962292.pdf>
- Chatterjee, C., Mukherjee, J., & Das, R. (2012). Management of non performing assets - A current scenario. *IRJC International Journal of Social Science & Interdisciplinary Research*, 1 (11), 204-214.
- Chimkono, E.E., Muturi, W., & Njeru, A. (2016). Effect of non-performing loans and other factors on performance of commercial banks in Malawi. *International Journal of Economics, Commerce and Management*, 4 (2), 549-563.

- Dubule, U.S. (2009). *Management of non performing assets with special reference to holding cost and profitability* (Doctoral thesis). Retrieved from <http://shodhganga.inflibnet.ac.in/handle/10603/4351>
- Explanatory Notes for Statistical Tables Relating to Banks in India, 2015. Retrieved from <https://rbi.org.in>
- Gopalakrishnan, T.V. (2004). *Management of non-performing advances*. New Delhi, India: Northern Book Centre.
- Grewal (2010). *Problem of NPA and its impact on banks: with special reference to State Bank of India* (Research Project). Retrieved from <https://www.scribd.com/doc/36883180/Non-Performing-Assets-in-SBI-Group>
- Hafsal, K., Suvvari, A., & Durai, S.R.S. (2020). Efficiency of Indian banks with non-performing assets: evidence from two-stage network DEA. *Future Business Journal*, 6 (1). Doi: <https://doi.org/10.1186/s43093-020-00030-z>
- Jain, V. (2007). *Non-performing assets in commercial banks*. New Delhi, India: Regal Publications.
- Joseph, A. L., & Prakash, M. (2014). A study on analyzing the trend of NPA level in private sector banks and public sector banks. *International Journal of Scientific and Research Publications*, 4(7), 1–9.
- Karunakar, M., Vasuki, K., & Saravanan, S. (2008). Are non-performing assets gloomy or greedy from Indian perspectives? *Research Journal of Social Sciences*, 3, 4–12.
- Krishna, G.R., & Rao, K.V.G. (2008). *Performance of public sector banks after reforms*. New Delhi, India: Serials Publications.
- Madapana, K., & Mohanty, D. (2014). A study on non-performing assets with reference to banking sector. *International Journal of Research*, 1(6), 401–411.
- Mishra, U.M., & Pawaskar, J.R. (2017). A study of non-performing assets and its impact on banking sector. *Journal of Research*, 3(1). Retrieved from <http://www.journal4research.org/articles/J4RV3I1007.pdf>
- Mishra, S., Garg, S., Grover, M., & Gupta, T. (2020). Examination of the impact of non-performing assets on profitability in India. *Journal of Critical Review*, 7(12), 2905-2914.
- Mohnani, P., & Deshmukh, M. (2013). A study of non-performing assets on selected public and private sector banks. *International Journal of Science and Research*, 2 (4), 278-281.
- Narayanan, B.B.S., & Surya, R. (2014). A study on non-performing assets in Indian bank. *International Journal of Management Research & Business Strategy*, 3 (3), 144-155.
- Narula, S., & Singla, M. (2014). Empirical study on non performing assets of banks. *International Journal of Advance Research in Computer Science and Management Studies*, 2(1), 194-199.
- Prasad, G.V.B., & D.Veena, D. (2011). NPAs reduction strategies for commercial banks in India. *International Journal of Management & Business Studies*, 1 (3), 47-53.
- Rai, K. (2012). Study on performance of NPAs of Indian commercial banks. *Asian Journal of Research in Banking and Finance*, 2(12), 16-26.
- Rajput, N., Gupta, M., & Chauhan, A.K. (2012). Profitability and credit culture of NPAs: An empirical analysis of PSBs. *International Journal of Marketing, Financial Services and Management Research*, 1(9), 91-109. Retrieved from www.indianresearchjournals.com

- Rao, D.S. (2008). *Banking reforms in India: An evaluative study of the performance of commercial banks*. New Delhi, India: Regal Publications.
- Rath, P.K., Mishra, P.C., & Mishra, B.B. (2013). *Menace of non-performing assets in banks*. New Delhi, India: Serials Publications.
- Reserve Bank of India.(2015). Master circular- Prudential norms on income recognition, asset classification and provisioning pertaining to advances. Retrieved from <https://rbidocs.rbi.org.in>
- Sant, R. K. (2014). Non performing assets by public sector banks in recent years. *European Academic Research*, 1 (11), 5086-5105. Retrieved from www.euacademic.org
- Saxena, M., Srivastava, N., & Mohan, P. (2013). Dynamics of non performing assets in Indian commercial banks under the new paradigm shift. *International Journal of Marketing, Financial Services & Management Research*, 2(4), 136-149.
- Singh, A. (2013). Performance of non-performing assets (NPAs) in Indian commercial banks. *International Journal of Marketing, Financial Services & Management*, 2 (9), 86-94.
- Soni, P., & Heda, B.L. (2014). NPA's impact on financial performance of public sector banks. *RESEARCH HUB-International Multidisciplinary Research Journal*, 1(3), 3-6.
- Sontakke, R. N., & Tiwari, C. (2013). Trend analysis of non performing asset in scheduled commercial banks in India. *International Journal of Application or Innovation in Engineering & Management*. Retrieved from <http://www.ijaiem.org>
- Srinivas, K. T. (2013). A study on Non-Performing Assets of commercial banks in India. *ABHINAV- International Monthly Refereed Journal of Research in Management & Technology*, 2, 61-69. Retrieved from www.abhinavjournal.com
- Yadav, S. (2014). NPAs: Rising trends and preventive measures in Indian banking sectors. *International Journal of Advance Research in Computer Science and Management studies*, 2(1), 129-141.
- Zafar, S.M.T, Maqbool, A., & Khalid, S.M. (2013). Non-performing assets and its impact on Indian public sector banks. *International Journal of Marketing, Financial Services & Management Research*, 3(2), 68-87. Retrieved from www.indianresearchjournals.com