Non-Performing Assets (NPAs) Management In Indian Banks: Analyzing The Strategies Employed By Indian Banks To Manage And Reduce Non-Performing Assets

---

Table of Contents

Abstract **2**
Introduction **2**
  Banking Sector and Non- Non-Performing Assets **2**
  NPA Analysis **2**
  Nationalization of Banks - A Failed Policy **3**
  Unveiling Loan Defaulters in India **4**
  Causes of Non- Non-Performing Assets in India **5**
  Impact of NPAs on the Indian Economy **6**
Literature Review **6**
Strategies employed by banks to manage NPAs **8**
Strategies Implemented: A Success or Fail? **14**
Recommendations **15**
Conclusion **16**
References **16**

Abstract

Banks play a significant role in the growth and stabilization of the economy as they both are interlinked. After the nationalization of banks in India, the economy started to grow at a slow rate due to the increased cost of maintenance as the loans were given at a reasonable rate. Although utmost care was taken by the banks and the government, many assets and loans stopped generating income and turned into bad debts. These bad debts are termed as non-performing assets. A major issue faced by the banks in India is the rise of bad debts or non-performing assets (NPAs). This paper focuses on examining the reasons behind non-performing assets, their impact on the economy, and how banks work to implement various reforms to stabilize banking activities and avoid periodic up-downs in the economy. The study further focuses on various strategies implemented by the central and commercial banks to tackle the problem of rising Non- Performing Assets such as the SARFAESI Act, Debt Recovery Tribunal (DRT), Asset Quality Review (AQR), Corporate Debt Reconstructing (CDR), Joint Lenders Forum (JLF), Insolvency and Bankruptcy Code (IBC), and more. The act of Asset Quality Review has shown the reality of NPAs in the banking sector along with the reason behind the downfall in the banking sector. The paper focuses on the trends of the NPAs in the nation over the past few years along with whether the formation and implementation of different strategies by the banks have been successful or not. It tried to provide a few suggestions to the stakeholders considering the rise of NPAs in the Indian economy.

Introduction

1. Banking Sector and Non- Performing Assets

Banks are the significant drivers of growth and stabilization of the developing economies. The major role of banks is to accept deposits from the ones who wish to save and lend those deposits further in the form of loans for the development of the economy. For a healthy and growing economy, an effective banking system is required.

The first wave of nationalization of banks in India took place in 1969. It led to a rise in the cost of maintenance and a reasonable rate of interest was charged on loans. Various assets and loans stopped generating income even after the steps taken by the government. Those loans turned to NPAs and brought disturbance in the banks.

Bank's gross non-performing assets as a percentage of total loans have risen over the past few years, rising from 2.3% in 2008 to 9.3% in 2017.[1] The functions of the banks were affected due to the continuous rise in NPAs and their ability to lend loans was reduced due to a fall in the profitability, ceasing to produce income for the bank. Over the years, RBI has taken various

[1] PRS

measures to manage and reduce NPAs. Several revisions were done to bring down the percentage of NPAs. The RBI established a strict 180-day deadline for the implementation of a resolution plan in the revised framework. If this deadline is not met, stressed assets must be referred to the NCLT under the IBC within 15 days.

2. NPA Analysis

The NPAs are loans where the installment of the principal remains overdue for more than 90 days. NPAs are one of the indicators to measure the health and condition of the banking system and financial institutions. The problem of NPAs leads to the loss of sentiments of lenders, investors, and depositors. Due to the loss of trust of depositors and shareholders in the banks, there may be a withdrawal of deposits.

The government and central bank have classified NPAs into three categories.

a. Sub-standard Assets

   When an asset remains in the category of NPA for less than or equal to 12 months, it is classified as a sub-standard asset. There is a chance of asset recovery however, the borrower has not made timely payment of its installments in the past days.

b. Doubtful Assets

   When the asset remains in the category of NPA for more than 12 months, it is classified as a doubtful asset. It indicates a higher chance of losing the assets and brings doubts about the recovery of the loans.

c. Loss Assets

   When the banks believe that the asset won't be recovered anytime then it is classified as a loss asset. The assets are recognized as loss assets after proper inspections and assessments according to the guidelines provided by the Reserve Bank of India (RBI).

According to RBI, NPA would be an advance where-

a. interest and/or installment of principal remain overdue for more than 90 days in respect of a Term Loan
b. the account remains 'out of order' for more than 90 days, in respect of an Overdraft/Cash Credit (OD/CC),
c. the bill remains overdue for more than 90 days in the case of bills purchased and discounted

d. interest and/or installment of principal remains overdue for two harvest seasons but for a period not exceeding two half years in the case of an advance granted for agricultural purposes

e. any amount to be received remains overdue for more than 90 days in respect of other accounts.[2]

3. Nationalization of Banks- A Failed Policy

On 19 July 1969, Indira Gandhi leading the Indian National Congress nationalized 14 commercial banks in the country. It was estimated that those 14 banks were controlling 70% of the deposits in the country. It was said that the reason behind the privatization of banks is the non-reliability of the functioning of the private sector banks. Also, private-sector banks ignored the agricultural sector with 361 of them failing between 1947 and 1955.[3] By 1967, only 2.2% of the loans were channeled to the farmers as the preference was given to large industries and businesses.

The main aim behind the nationalization of banks was to make credit easily available to priority sectors like agriculture, small industries, traders, and entrepreneurs. They focused on the establishment of banks in rural areas so that people in the backward areas have easy access to banks.

Behind a strong reason to nationalize banks, there was a failure. But what led to the failure of the nationalization policy?

1. The political control of the banks has led to bad loans or non-performing assets. With the nationalization of the banks, the structure of interest rates became complex and never let the loans reach the needy ones.
2. The nationalization of banks reduced the competition between the public sector and private sector banks which further led to a lack of responsibility, a rise in the involvement of political leaders in the functioning of the banks, and delays in the tasks.
3. The banks were established in the rural areas but the loans' reach was restricted. Though on papers it was mentioned that the people in backward areas would have easy access to loans, the reach was limited to rich peasants, big industrial houses, and big traders. These people held inventories of goods including food grains which led to continuous rise in the prices and scarcity in the nation.

The nationalization of banks was a major reason behind the NPA crisis in the country.

---

2 RBI- Master Circulars

3 The Quint

4. Unveiling Loan Defaulters in India

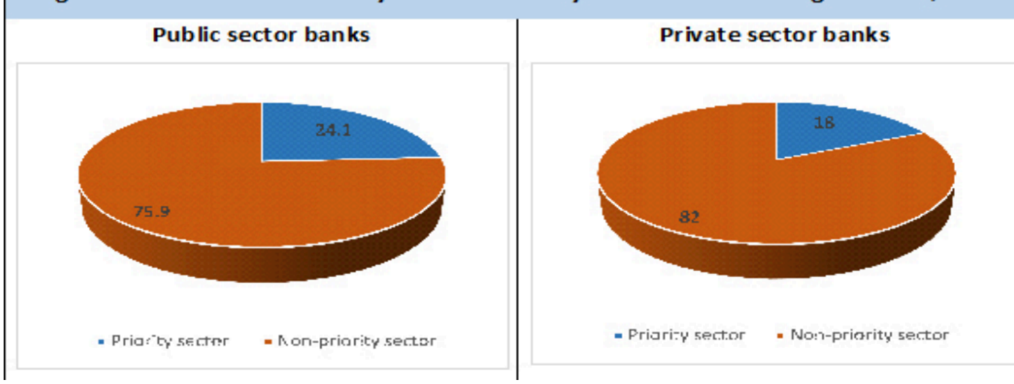
The high amount of bad loans and NPAs were recorded from public sector banks. The amount of NPAs is higher in the priority sector that is agricultural and industrial sectors, as compared to the non-priority sector such as the retail sector in both public sector banks and private sector banks.

The PSBs inclined towards priority sectors mainly, agriculture and small-scale industry lending have high NPAs as people do not have sufficient income to repay the loans and often fall into debt traps.

The second Narasimham Committee in 1998 observed that 47% of the NPAs are from the priority sector which adversely affected the profitability of the banks.[4]

There was a rise in NPAs during 2006-08 when there was high economic growth. The infrastructure projects were completed on time and it was done within the budget. This was the time when the banks considered that the growth in the past would continue in the future and they lent high amounts of loans to the investors with less equity. Sometimes, the banks lend to the investors based on their investment book and do not do their research about the project.

Figure 4: Gross NPAs in Priority and Non-Priority Sectors as Percentage of Total, 2017



Source: Reserve Bank of India DBIE (rbi.org.in)

In India, it is considered that the rise in NPAs is due to the rise in lending to the priority sector. However, the NPAs in both public sector banks and private sector banks have been significantly smaller from the priority sector as compared to the non-priority sector. The more share in NPAs is of loans made to sizable industrial companies in the brick-and-mortar sector.[5] The major industries receiving credit were textiles, infrastructure, and basic metals and metal

[4] NPAs of PSB and PVBs
[5] Acharya and Rajan

products. Steel prices fell from $1,265 per tonne in 2008 to $300 per tonne by December 2012.[6] Due to fall in commodity prices, the industries affected the producers and led to a rise in NPAs.

5. Causes of Non-Performing Assets in India

a. Historical factors

From 2000 to 2008, the Indian economy saw a boom period, and huge amounts of loans were given to corporate firms. However, due to the global financial crisis, there was an economic slowdown during 2008-09, a shortage in the availability of resources, and a rise in the prices of raw materials, the paying back of loans was affected. Many borrowers were unable to repay the installments which led to a rise in NPAs.

b. Weak Management of Banks

Loans were granted to the corporate sector without proper analysis of their financial status and credit score. Many loans were given without collateral. Non-repayment of the loan amount increased NPAs, especially in public sector banks.

c. Wilful Defaults

When an individual or entity with the ability to repay the loans intentionally plans to not repay it, it turns to wilful defaults. The PSBs in India are hit by such defaults. The borrowers deliberately engage the funds for other purposes besides those for which the loan was taken. It has increased NPAs held by banks.

d. Recovery Mechanism

The government has set up various tribunals to recover loans. The inefficient working of these tribunals raises the amount of NPAs of the banks. The banks suffer, and their capital gets reduced along with their profits.

6. Impact of NPAs on the Indian Economy

a. Disturbance in the functioning of banks

The NPAs reduce the income of the banks and weaken their financial stability. The main motive of the banks to lend is affected. With less money, the banks are unable to lend loans to the productive sectors, and economic growth is affected.

b. Loss of investor sentiments

The rise in NPAs reduces the faith of depositors and investors in the banks. There is an economic slowdown due to reduced domestic and foreign investments.

---

[6] CSEP

c. Higher rate of interest

   To maintain the level of profits and proper functioning of the banks, the rate of interest is increased. The investments get reduced and individuals find it difficult to manage their expenditures with the current level of income.

d. Current Account Deficit

   The major impact of NPAs is on the current account of the country. The rise in NPAs leads to a rise in the current account deficit. The exports got reduced as the rise in NPAs reduced the credit availability which hampered the ability of exporters to enhance their productive capabilities. There was a slowdown in foreign investment as foreign investors saw rising NPAs as a weak financial system.

Literature Review

A paper titled 'The Origins of India's NPA Crisis' by Chari, Jain, and Kulkarni 2019 stressed the emergence of Indian banks during the Global Financial Crisis. The ratio of NPAs rose between 2008 to 2018 which had a direct impact on the growth of the Indian economy. The paper discusses the SARFAESI Act and the Corporate Debt Reconstructing mechanism by the Reserve Bank of India to recover loans and reduce losses. During 2013, the proportion of NPAs was low due to 'Special Regulatory Treatment' where 'extend and pretend' was followed. Between 2013 and 2017, 'Asset Quality Review' (AQR) recognized various loans as NPAs. It further discusses the causes of rising NPAs in the Indian banks and the remedies implemented by the government to ensure a reduction in losses.

A paper titled 'A Study on Management of Non-Performing Assets in Priority Sector Reference to Indian Bank and Public Sector Banks (PSBs)' by Selvarajan and Vadivalagan 2013 (31-42) discusses the rise and fall in NPAs from 2001 to 2011. The study states that the management of NPA is better by the private sector banks as compared to the Public Sector Banks (PSBs). NPAs are one of the biggest hurdles to the socio-economic development of India. Challenges such as loss on market return on capital, loss of rate of interest on deposits, higher rate of interest to borrowers, and bad investment are faced by the economy. There has been a rise in lending to Priority sectors by the Indian Banks. It has been observed that there is a rise in NPAs from priority sectors and during 2009-11, NPAs rose at an alarming rate.

A paper titled 'Non-performing assets and its impact on Indian public sector banks' by Zafar, Maqbool, and Khalid 2013 (68-87) stresses the ratio of NPAs being highest in the public sector banks, followed by private banks and foreign banks. The problem of NPAs and the rising burden on banks in

India is due to multiple factors like political interference, mismanagement, delay in the completion of projects, changes in industrial policy, favoritism, and many more. With the implementation of strategies to reduce NPAs, the foreign bank's contribution to the Indian economy rose. The paper further discusses the causes of NPA in other countries like China, Japan, Korea, Pakistan, and Thailand. With the implementation of the SARFAESI Act, banks were able to reduce the NPAs.

A paper titled 'Efficiency of Indian banks with non-performing assets: evidence from two-stage network DEA' by Hafsal, Suvvari, and Durai 2020 (1-9) discusses the impact of NPAs on economic growth. It states how the functioning of banks gets affected and leads to a negative impact on the credit creation. A positive change might be seen with a reduction in the role of government in the public sector banks.

A paper titled 'A study on management of non-performing assets in the context of Indian banking system' by Garg, Ankit 2016 (15-25) emphasizes the factors responsible for NPAs, the impacts of NPAs, preventive measures, and the procedures to identify the NPAs. The ineffective working of the public sector banks is one of the major causes of NPAs. Some borrowers intentionally do not repay the installments of the loans. The major objective of giving loans by PSBs is social welfare but it needs to maintain a balance between social welfare and uniform economic growth. It is necessary to identify the borrowers who are serious with a commitment to reduce the loss of money.

In a paper titled 'Non-Performing Assets of Banks in India: Efficiency in Management' by Raju, Swati emphasizes trends related to savings as bank deposits and debentures between 1990 and 2015. There was a rise in bank credit as a percentage of GDP from 29% in 1990-91 to 57% in 2015-16. Aggressive lending strategies were adopted by banks during 2008-10 that led to a rise in NPAs and the problem of twin balance sheets in the future years.

A paper titled 'Non-Performing Assets (NPA) in Indian Banking: Causes, consequences, and Remedial Measures' by Agrawal and Magar discusses the causes of the NPAs along with the measures taken by the Reserve Bank of India to reduce the NPAs. The rise of NPAs leads to increased costs, a fall in interest margins, and a reduction in the profits of the banks.

There has been a rise in aggregate gross responses by PSBs from ₹18,19,074 crore as of 31.3.2008 to ₹52,15,920 crore as of 31.3.2014. The stressed assets increase due to multiple reasons like corruption, economic slowdown, wilful default, and aggressive lending. Stressed accounts were classified as NPAs in 2015 after the Asset Quality Review initiative. The government initiated a 4R strategy with a rise in NPAs during 2015 and 2018. The 4R strategy refers to the recognition, resolution, recapitalization, and reforms. There has been a decline in NPAs of PSBs by ₹1,06,032 crore during 2018-19 and had a record recovery of ₹1,27,987 crore during 2018-19.

This paper aims to analyze various strategies implemented by banks to manage and reduce non-performing assets. Further, there will be an analysis of whether the strategies implemented helped the banks to reduce the NPAs or not.

Strategies employed by banks to manage NPAs

1. **Lok Adalats**

   Lok Adalats were established to address NPAs with a balance of up to ₹20 lakhs. They took the responsibility of full recovery of the bad loans and they are not harsh on the defaulters. Moreover, lok adalats are not expensive as there is no court fee involved when any new case is filed. Lok Adalats play a crucial role in the settlement of the disputes. However, if no settlement is reached, the parties can continue with the proceeding of the civil court of DRT.

Year	Lok Adalat		
	Percentage of total amt involved	Percentage of total amt recovered	Amt recovered as per cent of amt involved
1	2	3	4
2003-04	5.1	3.3	13.5
2004-05	2.8	2.2	14.1
2005-06	6.5	2.7	20.3
2006-07	4.0	1.4	14.0
2007-08	14.1	2.3	8.2
2008-09	19.9	1.3	2.4
2009-10	23.1	1.5	1.5
2010-11	10.5	1.0	2.9
2011-12	2.8	1.4	11.8
2012-13	6.2	1.7	6.1
2013-14	13.3	4.4	6.0
2014-15	12.5	3.2	3.2
2015-16	32.5	14.0	4.4
2016-17	13.0	6.0	6.4
2017-18	16.9	4.5	4.0
2018-19	7.4	2.3	5.1
2019-20	9.1	2.4	6.2

Source: Report on Trend and Progress of Banking in India

   As compared to the percentage of the amount involved in NPAs, the amount recovered is small. Only a small sum of the entire NPAs is recovered under Lok Adalats which hurts the functioning of the banks. The number of stressed accounts that banks reported to Lok Adalats in 2021–2022 increased significantly across all channels.

2. **Debt Recovery Tribunals (DRT)**

Set up in 1993 after the recommendation of the Narasimham Committee, DRT was established for recovering the debts of the banks and financial institutions. The inauguration of the first DRT took place in Kolkata on April 27, 1994. It was divided into Debt Recovery Tribunals (DRT) and Debt Recovery Appellate Tribunals. Their main objective is to handle the disputes between lenders and borrowers along with the recovery of NPAs. They work under the guidelines of the RBI and their powers are restricted to try and settle cases of recovery of the advances to reduce NPAs. DRTs handled the cases of loans above ₹1,00,000. Before 1993, there were numerous cases of bad loans and NPAs. The list of cases in civil courts increased and they were lined up for years.

Year	DRTs		
	Percentage of total amt involved	Percentage of total amt recovered	Amt recovered as per cent of amt involved
1	5	6	7
2003-04	53.3	79.1	30.9
2004-05	50.5	51.8	18.8
2005-06	35.9	56.4	76.9
2006-07	48.3	47.3	37.8
2007-08	38.2	39.6	51.9
2008-09	20.4	45.1	81.1
2009-10	31.3	41.7	32.0
2010-11	28.2	25.1	27.9
2011-12	39.4	28.5	17.0
2012-13	29.3	18.9	14.2
2013-14	31.8	16.6	9.6
2014-15	24.3	13.6	7.0
2015-16	31.3	28.1	9.2
2016-17	36.2	26.8	10.2
2017-18	49.2	17.9	5.4
2018-19	37.0	8.9	3.9
2019-20	33.1	5.8	4.1

Source: Report on Trend and Progress of Banking in India

Up until March 2014, 1,50,503 cases were filed by scheduled commercial banks in DRTs amounting to approximately 2,601 billion. As of March 2014, 427 billion that is, 16.43% of the entire amount involved had been recovered. There were 66,971 cases involving around 1,415 billion that remained to be recovered.[7]

[7] RBI

The main aim behind setting up DRTs was to recover the bad loans however the expectations were not completely met. There were a lot of concerns such as the non-fulfillment of the set time frame, and any application which was not serious was filed by the parties and those were entertained even though they did not lie under the matter of the jurisdiction.

3. **Credit Information Bureau India Limited (CIBIL)**

Based on the recommendations of the RBI Siddiqui Committee, CIBIL was incorporated in 2000 to manage and reduce the rising NPAs. It maintains consumer credit information globally. With the rise in NPAs, CIBIL was launched to share all the credit information of the individual with the lenders. It made the lending process easy and satisfactory with less risk of loss of money from banks.

Individuals have a good credit score when they have proper financial planning and repay the loans or dues on credit cards on time. Individuals with good credit scores can get easy loans whereas the ones with low or bad credit scores face issues. The Credit Information Bureau India Limited (CIBIL) helps the banks to analyze the credit history of the individuals first. After review, banks either provide loans to people with good CIBIL scores or do not provide loans to people with bad credit histories. It, therefore, determines one's ability to take loans. An individual with a good CIBIL score can also negotiate for the interest rate of the loan.

4. **Compromise Settlements**

In a circular of RBI, dated 27 July 2000, it set out the guidelines for compromise settlements of chronic NPAs up to ₹5 crores. Under this, one more opportunity is given to the borrowers to settle their outstanding dues. This may lead to progress in the recovery of the bad loans. However, no cases of wilful defaults would be covered under compromise settlements and banks should recognize them and take action against them. Also, compromise settlement is not available to the borrower as a right but the decision depends on the lender according to the policies of the board and based on their commercial judgment. Regarding accounts classified as wilful defaulters, regulated entities may agree to compromise settlements or technical write-offs without affecting the ongoing criminal proceedings against the debtors. "In respect of compromise settlements, the policy shall inter alia contain provisions relating to permissible sacrifice for various categories of exposures while arriving at the settlement amount, after prudently reckoning the current realizable value of security/collateral, where available," according to the announcement.[8]

[8] The Economic Times

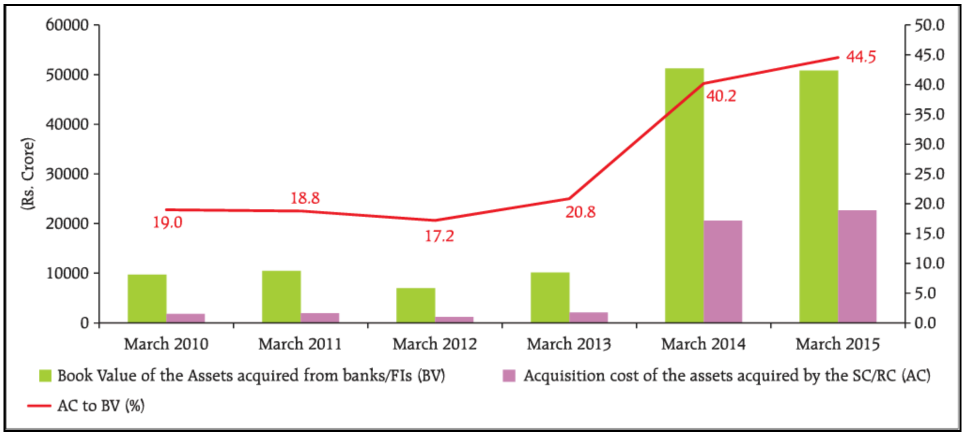
5. **Corporate Debt Reconstructing (CDR)**

   The objective of CDR is to ensure that the creditors face lower losses. The debts facing issues due to various factors are reconstructed by CDR by lowering the interest rates and giving more time to the corporate borrowers. Suppose out of 20 blocks of a company, only 1 became NPA then reconstruction is provided by the banks to the corporate firms so that the entire block of assets is saved from getting NPA. RBI initiated Corporate Debt Reconstructing to preserve deserving corporates which are now affected by internal or external factors. Through their reconstruction program and transparency, the losses of the creditors are reduced. The firms are saved from getting closed and the creditors do not lose their faith in the financial institutions.

   CDR involves CDR Standing Forum, CDR Empowered Group, and CDR Cell. CDR Standing Forum is responsible for framing the guidelines and policies for the reconstruction of the debts. CDR Cell is responsible for assisting the CDR Standing Forum and CDR Empowered Group. It scrutinizes the proposals received from borrowers and lenders within one month of receiving them and presents them to CDR Empowered Group. The CDR Cell makes the reconstruction plans based on the general guidelines and policies of the RBI and presents them to the CDR Empowered Group. The CDR Empowered Group makes the final decision. They can either approve the plan presented by CDR Cell or suggest modifications. It takes about 90 days for this process. Final decisions are taken by CDR Empowered Group. If the plan is found feasible then the company would be put into reconstruction mode, however, if the plan is not found feasible then creditors would be allowed to take necessary steps for the recovery of the money.

6. **Asset Reconstruction Companies (ARC)**

   The major objective of ARC is to help the banks continue their normal day-to-day activities by purchasing the NPAs or bad loans of the banks. It further helps the banks to focus on credit creation as their balance sheet is cleared. The ARC aims to recover the maximum value from NPAs and reduce the losses of the banks. After purchasing the NPAs at a discounted rate from the banks, ARC works towards the reconstruction of the debts. They develop a plan to revive the business by infusion of capital, debt reconstruction, or management changes. Professionals are hired by the ARC to manage the assets of the companies to maximize their values. They hold expertise in reducing NPAs effectively. The ARCs worked towards maximization of the value of the lost assets through a transparent and fair business practice. They worked for the development of the banking system and the economy by reducing its debts.



Source: RBI Bulletin[9]

As of March 2015, there were 15 Reconstruction Companies (RCs) registered out of which the top 3 companies acquired two-thirds of the total assets of RCs. The acquisition cost as a percentage of the book value of assets rose from 20.8% in March 2013 to 44.5% in March 2015. The rate at which RCs are purchasing NPAs from banks dropped significantly. The fall in the rate is due to (i) better ways created by the banks to recover NPAs; (ii) selling relatively new NPAs; (iii) outsourcing the valuation of NPAs; and (iv) competition between RCs when auctioning off NPAs. The recovery rate as of March 2015 of RCs was 31.0%.

Year	ARCs		
	Percentage of total amt involved	Percentage of total amt recovered	Amt recovered as per cent of amt involved
1	8	9	10
2003-04	41.5	17.6	8.9
2004-05	46.7	46.1	18.1
2005-06	57.6	41.0	34.8
2006-07	47.7	51.2	41.4
2007-08	47.7	58.1	61.0
2008-09	59.7	53.6	33.0
2009-10	45.6	56.8	30.0
2010-11	61.3	73.9	37.8
2011-12	57.8	70.1	28.6
2012-13	64.4	79.4	27.2
2013-14	54.8	79.1	26.5
2014-15	63.2	83.1	16.3
2015-16	36.2	57.9	16.5
2016-17	50.8	67.3	18.3
2017-18	30.3	65.4	32.2
2018-19	35.6	32.8	15.0
2019-20	26.5	30.5	26.7

Source: Report on Trend and Progress of Banking in India

[9] RBI Bulletin

The amount recovered in ARCs as a percentage of the total amount involved was much greater in the early years of their existence; except for a spike in 2017–18, it has fallen below 30% in the most recent years. However, they are an important channel for the recovery of bad loans and play a crucial role in the asset management field. There were several issues faced by Asset Reconstruction Companies such as to grow, RCs require regular capital in large amounts whereas the avenues relating to raising of capital are limited. While the stressed assets are valued in the lakhs of crores, the net worth of the 15 ARCs is approximately ₹4000 crore only. Due to the capital-intensive nature of the sector, RCs are finding it difficult to raise funds. A significant factor impacting the recovery of RCs is the delay in legal proceedings, whether they transpire through the SARFAESI Act or debt recovery tribunals. A prompt and efficient legal system is essential for successfully resolving non-performing assets.

7. **Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act (SARFAESI Act)**

Enforced in 2002, the SARFAESI Act aims to recover the NPAs of banks without the involvement of the court. The creditors are required to serve a 60-day notice on the borrower for demanding repayment of the due amount. They need to specify the borrower's asset over which the security interest would be enforced to recover the bad loans.

For performing the SARFAESI Act, the account of the borrower must be classified as a Non-Performing Asset and should have a balance of ₹1,00,000 or more. In case the creditors are unable to recover the whole amount of debt, they can approach DRT for the recovery of the whole amount.

The act provides the methods for the recovery of bad loans or assets.

a. The banks have the right to lease, assign, or sell the secured assets to recover bad loans.
b. The banks are allowed to handle the management of the business of the borrower till the NPAs are recovered.
c. The creditor can appoint a manager to manage the secured assets whose possession lies with the creditor.

Table IV.12: NPAs of SCBs Recovered through Various Channels

(Amount in ₹ crore)

Recovery Channel	2021-22				2022-23 (P)			
	No. of cases referred	Amount involved	Amount recovered*	Col. (4) as per cent of Col. (3)	No. of cases referred	Amount involved	Amount recovered*	Col. (8) as per cent of Col. (7)
1	2	3	4	5	6	7	8	9
Lok Adalats	85,06,741	1,19,006	2,778	2.3	1,42,49,462	1,88,527	3,831	2.0
DRTs	30,651	68,956	12,035	17.5	58,073	4,02,636	36,924	9.2
SARFAESI Act	2,49,645	1,21,718	27,349	22.5	1,85,397	1,11,805	30,864	27.6
IBC @#	891	1,97,959	47,409	23.9	1,261	1,33,930	53,968	40.3
Total	**87,87,928**	**5,07,639**	**89,571**	**17.6**	**1,44,94,193**	**8,36,898**	**1,25,587**	**15.0**

Notes: 1. P: Provisional.
2. *: Refers to the amount recovered during the given year, which could be with reference to the cases referred during the given year as well as during the earlier years.
3. @: Data in columns 2 and 6 are the cases admitted by National Company Law Tribunals (NCLTs) under IBC.
4. #: Data in columns 3 to 5 and 7 to 9 pertain to financial creditors. It covers 147 and 184 resolution plans approved during 2021-22 and 2022-23, respectively.

Source: Report on Trend and Progress of Banking in India

In 2021-22, only 25% of the total amount involved was recovered, and in 2022-23, only 27.6% of the total amount involved was recovered. Through the SARFAESI Act, there has been a recovery of ₹1,51,428 crore of SCBs during the last five fiscal years.[10]

8. Joint Lenders Forum (JLF)

Formed in 2014, the Joint Lenders Forum came into existence when the NPAs of most of the public sector banks increased. It is a body composed of banks that give loans to the concerned entities.

The banks are required to create three sub-categories under the Special Mention Account (SMA) when the loan seems to be stressed. It is done before the loan account turns to NPA. The three categories are SMA-0 (the principal or interest is not overdue for more than 30 days but the loan seems to be stressed), SMA-1 (principal or interest is overdue for 31-60 days), and SMA-2 (principal or the interest is overdue for 61 days to 90 days).

Central Repository of Information on Large Credits (CRILC) collects information on loans of ₹50 crores or more. The data is transferred to different banks. According to data from the Central Repository of Information on Large Credits (CRILC), as of 31.3.2023, the total funded amount outstanding of scheduled commercial banks (SCBs) to corporate company borrowers with amounts outstanding of at least Rs. 1,000 crore and classified as non-performing assets (NPA) was ₹1,03,975 crore. The Government and RBI have implemented extensive steps to collect and reduce NPAs, including those related to corporate businesses. As a result, SCBs have been able to recover an aggregate of ₹10,16,617 crore (RBI provisional figures for FY 2022-23) over the last nine fiscal years.[11] The main objective of JLF is

[10] The Hindu
[11] PIB

to revive accounts that have become stressed by taking corrective action plans. According to the guidelines of the RBI, JLF can take necessary steps when the account of ₹100 crores or more does not return the payment and comes in the category of Special Mention Account.

9. 5:25 Rule

In infrastructure projects, the economic life of a project is 20-25 years and the cash flows are beyond that, however the time set for repayment of loans was 10-15 years which led to the incapability of the borrowers to not repay the loans which then later on turned to NPAs. The 5:25 rule introduced in July 2014 allowed the banks to extend long-term loans of 20-25 years so that they could match the cash flows of the project, while they also refinanced them every 5-7 years. This initiative was taken to prevent the loans from turning into NPAs and make long-term infrastructure projects viable.

10. Strategic Debt Reconstructing (SDR)

Initiated by RBI, the Strategic Debt Reconstructing strategy allows the banks to convert part of the loan into a substantial shareholder equity in the company of the borrower. This step could be followed by the banks when the borrower is unable to repay the loan amount or agree to reconstruction. The Joint Lenders Forum can initiate SDR and they can decide whether they will be converting a portion of the bad loan into equity shares or the whole amount of the bad loan. Under JLF, the creditors can hold 51% of the equity shares of the company or more.

11. Asset Quality Review (AQR)

AQR is a random check done by the Reserve Bank of India. In 2015, RBI randomly checked the balance sheets of the selected banks. AQR is conducted to know the actual status of the NPAs of the banks as banks were reporting fewer NPAs than the actual amount. AQR was followed to inspect whether the banks followed the norms implemented by the central banks or not. AQR does not happen annually or frequently but it is done randomly to check over the bank's balance sheets. In 2015, when the RBI conducted AQR, actual NPAs were found to be more than the filed ones and revealed the extent of loss in the quality of the assets. The public sector banks were found to have higher NPAs, however, there was a high amount of NPAs from private sector banks also.

As of the end of March 2016, the Public Sector Banks led the strain with 14.5% of all stressed assets in Indian commercial banks, bringing the total to 11.5%. Because of this, until 2016, restructured assets made up more than 50% of all SCBs' stressed assets, hiding the true degree of loan portfolio deterioration. Because a large percentage of these assets were classified as NPAs after AQR, which reflects their actual condition, the outstanding balance of these assets fell sharply in 2016.[12]

12. Indradhanush

In 2015, the Ministry of Finance launched mission Indradhanush to tackle the issues faced by public sector banks. It aims to restructure the PSBs and make them more competitive with private sector banks by improving credit quality and reducing political interference in PSBs.
The need for Indradhanush arose because of disturbance in infrastructure financing, and delays in approval and land acquisition which resulted in the weakening of the projects, affected the profits of PSBs, and led to a rise in NPAs. Its components are Appointments, Bank Board Bureau, Capitalization, De-stressing the PSBs, Empowerment, Framework of Accountability, and Governance Reforms. All of these elements work together to improve the capitalization, accountability, governance, and operational effectiveness of public sector banks. This ensures that PSBs can remain competitive and support the expansion of the banking industry and the economy.

According to the December 2017 report of RBI, the government estimated the PSBs' capital requirements to be ₹1.8 trillion between 2015–16 and 2018–19 as part of the Indradhanush plan in August 2015. Of that amount, budgetary allocations made up ₹700 billion, and these banks were expected to raise the remaining ₹1.1 trillion from the market by selling off their non-core assets. As part of the Indradhanush initiative, the government so far has invested ₹519 billion in PSBs. When deciding whether to infuse capital into a bank, several factors are taken into consideration which include the bank's capital requirements, size, efficiency, performance in terms of growth, expansion of deposits and credit, and growth potential. Additionally, as of October 2017, PSBs had raised ₹ 213 billion from the market.[13]

13. Insolvency and Bankruptcy Code (IBC)

Passed in 2016, IBC is a time-bound resolution process. Its objective is to combine and reframe laws that are related to the insolvency resolution of corporate persons, partnerships, or individuals. It aims to promote entrepreneurship and the availability of credit in the economy.

---

12 N. S. Vishwanathan
13 RBI

Under IBC, all existing insolvency laws of India are brought together to simplify the proceedings of insolvency and bankruptcy. Creditors are provided relief and they can continue with the crest supply in the economy. It aims to promote entrepreneurship, facilitate a competitive market, timely resolution of cases, and balance the interests of all stakeholders.
When a bad loan occurs, the bank gets control of the assets of the borrower and they can make necessary decisions within 180 days to resolve insolvency. The insolvency professionals look at the assets of the borrowers and guide the creditors while helping them in the decision-making. The proceedings of the resolution are dealt with in the National Companies Law Tribunal (NCLT) for companies and the Debt Recovery Tribunal (DRT) for individuals. Recoveries of bank loans have historically ranged from 25–30%, but with the implementation of IBC, they have increased to 40–45%.[14]

2,001 corporate debtors are undergoing various stages of resolution out of the 7,058 corporate debtors that have been admitted into the CIRP since its founding, 5,057 of which have had cases closed. About 16% of the closed cases resulted in successful resolution plans; 19% were withdrawn under Section 12A of the IBC, primarily because the debtors consented to a full or partial settlement with the creditors; 21% were closed pending appeal or review; and 44% of the cases resulted in liquidation orders. When the 16% of cases with resolution plans that were successful and the 19% of cases where the CDs agreed to a settlement are combined, it can be stated that the IBC had a positive effect on 35% of all CIRP cases. Creditors' negotiating power has been reinforced by the credible "threat of insolvency" that the Code has created.[15]

A total of 6815 corporate debtors underwent the CIRP between its launch on December 1, 2016, and the end of June 20, 2023. 4742 of these cases were closed as a result of the resolution plans being approved, liquidation starting, or appeal, review, or withdrawal under section 12A of the Code. A total of 1260 new cases were admitted to CIRP during the fiscal year 2022–2023; 238 more new cases were admitted in the first quarter of the fiscal year 2023–2024. The large number of cases that are consistently admitted shows how successful the code is in resolving stressed assets.[16]

The problem IBC faces is the long recovery period and the loss of lenders. The recovery amount is so low that lenders get affected however the borrowers and the insolvency professionals remain wealthy. Also, the code requires completion of CIRP within 180 days,

---

14 Acharya and Rajan
15 RBI- Shaktikanta Das
16 Remodeling India's Corporate Banking Sector

and 90 90-day extension is provided for exceptional cases. However, it has been observed that the days cross the timeline and usually reach 270 days with the requirement of further time extension. In FY 2020-21 and FY 2021-22, the average time taken for the admission of a case was 468 and 650 days respectively. It is due to the changing body of case law concerning the Code, various strategies adopted by corporate debtors, lack of coordination among the creditors, and many more.

14. S4A

Launched in June 2016, the Scheme for Sustainable Structuring of Stressed Assets also known as the S4A scheme, is an initiative to raise the lender's capacity to handle stressed assets while addressing and resolving the corporate sector's debt problems.

Under the scheme, the debt of the corporate sector is divided into sustainable or unsustainable based on the cash flow of the project of the company. By enabling the bank's lender to purchase shares in the troubled project, the program seeks to enable financial restructuring for huge debt projects along with rebuilding the infrastructure and the flow of finance to vital industries. S4A also rectifies the problems that the real assets are facing by offering a way to change the financial structure. The program aids banks in managing their NPAs and expediting the process of recovering assets. The NPAs for the 2015–16 fiscal year exceeded ₹6 lakh crore so it became crucial for the RBI to take certain actions to reduce NPAs. Additionally, the S4A Scheme gives the borrowers another chance to modify the scheme's financial structure. Since the cash flow of many companies was insufficient to service even half of their loans, the RBI's S4A plan, which required that a defaulter's loan be sustainable for at least half of the loan to qualify for restructuring, could not help resolve the issue.

15. 4R strategy

To reduce the rising NPAs, the government introduced the 4R strategy. It involves Recognition (of NPAs transparently), Resolution and Recovery (of value from stressed accounts), Recapitalising (of PSBs), and Reforms (in PSBs and the wider financial ecosystem for responsible and clean systems). With the 4R strategy, the credit culture was affected. The control of the business was taken away from the owner of the default or wilful defaults. They were not allowed to raise capital from the market. PSBs were recapitalized to manage and reduce NPAs. Nearly ₹4 trillion has been invested in PSBs since 2010. The additional opportunity cost is estimated to be ₹2.5 to ₹3.5 trillion.[17] PSBs were asked to examine the

[17] Acharya and Rajan

accounts whose loans exceeded ₹50 crores and if NPA was classified, an immediate examination was to be done.

According to RBI data on global operations, gross NPAs of PSBs increased from ₹2,79,016 crore on 31.3.2015 to ₹6,84,732 crore on 31.3.2017 to ₹8,95,601 crore on 31.3.2018. The rise in NPAs was due to the transparent recognition of stressed assets as NPAs. Since then, as a result of the government's recognition, resolution, recapitalization, and reform strategy, NPAs have decreased by ₹1,06,032 crore that is, to ₹7,89,569 crore as of 31.3.2019.[18]

With the government contributing ₹2.46 lakh crore and the PSBs raising over ₹0.66 lakh crore, PSBs have been recapitalized to the amount of ₹3.12 lakh crore over the last four fiscal years. This has allowed PSBs to pursue prompt resolution of NPAs.[19]

16. Writing off loans

To manage its books, the banks wrote off the loans. After writing off the loan, it is no longer considered as an asset, and the tax liability of the banks gets reduced. Banks take the step of writing off the loan when there is a very low chance of the recovery of the bad loan. The blocked money can be used to lend loans to other people after writing off the bad loan. However, it does not mean that the bank can no longer accept the repayment of the bad loan. If the bank receives the repayment from the borrower then that amount is counted in the profit of the bank in that financial year.

It was observed that writing off loans as a percentage of GNPAs has been higher in private banks as compared to the public sector banks.[20]

Current status of loan write-offs in India-[21]

a) Total loan written-off: ₹14.56 lakh crores
b) Loans written off for large industries and services: ₹7,40,968 crores
c) Recovery in written-off loans by Scheduled Commercial Banks: ₹2,04,668 crores
d) Net written-off loans by public sector banks in FY 2023: 0.84 lakh crores
e) Net written-off loans by private sector banks in FY 2023: ₹73,803 crores

The following data shows that a huge amount of loans have become NPA and have lower chances of being recovered. The public sector banks have higher written-off loans as compared

[18] PIB
[19] PIB
[20] Indian Institute of Banking and Finance- Report (pg 33)
[21] Parcham Classes

to private sector banks and they need to strategize their lending so that it safeguards its activities and improves its profitability.

17. **Loan Repayment and Interest Rate**

During COVID-19, in March 2020, the RBI first declared a three-month loan repayment moratorium, which was later extended to six months in August 2020. This measure was taken to provide relief to the borrowers during the pandemic when most of the people faced financial burdens.

Also, RBI reduced the rate of interest to strengthen the functioning of the banks and boost the economy. Between March 2020 and May 2020, RBI reduced the repo rate to 4% and the reverse repo rate to 3.35%.[22]

Strategies Implemented: A Success or Fail?

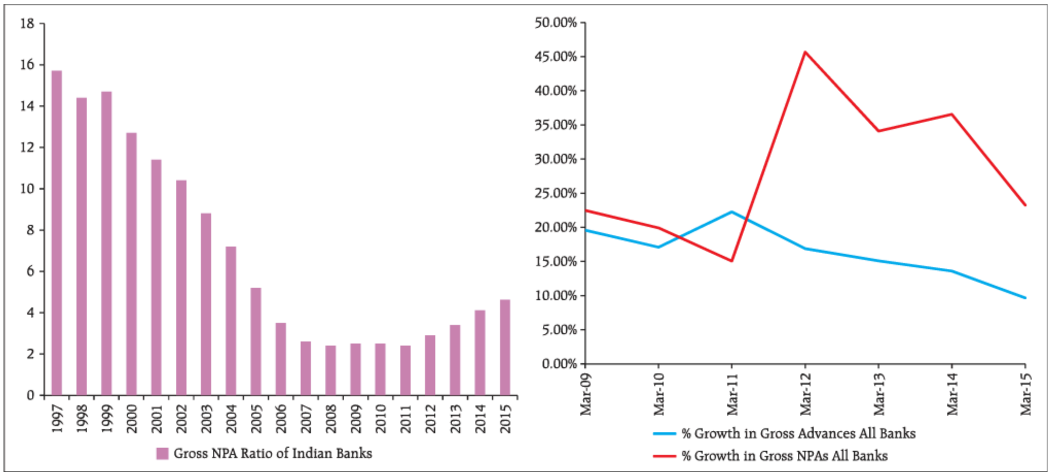
We are moving ahead but the path is wide and there is a lot to cover. Banks are flooding people with loans and lending beyond their capability. For example, if a person is worth ₹50,000, he/ she is granted a loan worth ₹1 lakh to ₹2 lakh. It raises the risks of banks and often reduces their profitability.

Tamal Bandyopadhyay in his conversation with Shekhar Tomar[23] mentioned numerous points related to NPAs, their evolution, and their recognition through government and RBI's measures. The period between 2007-08 was a golden period for the Indian economy as there was low inflation, high GDP growth, and high credit growth. Then the Lehman crisis came when banks were flooded with money and the government was pushing huge amounts of funds into infrastructure development. Banks were indeterminate in giving money and they were lending to anyone seeking loans. It created a huge problem post-Lehman crisis. When Raghuram Rajan became RBI governor, he recognized some corporations were not using the loan money they took, instead they were using it as debt as well as equity in some format. In 2015, banks were exposed through data released by CRILC. Then AQR started in the December quarter of 2015 and ended in the March quarter of 2017 wherein banks were given time to clean up. They accounted for 10% plus gross NPAs, and there was a drastic shift from corporate to retail loans. After this exposure, the government was convinced to announce ₹2 trillion-plus recapitalization. Within this timeframe, in 2016, IBC was implemented which acted as a turnaround of the banking system. Corporations had a fear of losing their firm, they no longer took banks for granted, and before the pandemic, a lot of resettlement of the bad loans took place.

---

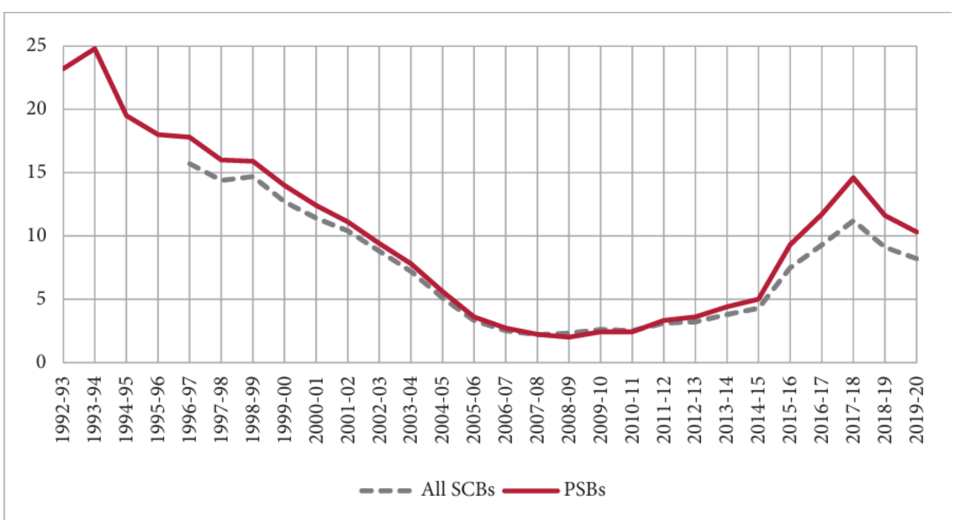
[22] Harvard

[23] Tamal Bandyopadhyay



Source: RBI Bulletini[24]

In recent times, there has been a surge in the bad assets in banking. However, a few years back the asset quality of Indian banks had improved with the implementation of a few reforms such as the SARFAESI Act and Credit Information Companies Act, 2002. The percentage of gross NPAs decreased steadily from 15.7% in 1996–1997 to 2.3% in 2010–2011. However there was a subsequent rise in the quantity of non-performing assets, and as of March 2015, it accounted for 4.62% of the banks' gross advances, compared to 2.36% of gross advances in March 2011. The ratio of restructured standard assets to gross advances increased from 5.87% as of March 2014 to 6.44% as of the end of March 2015. The total stressed assets (NPAs plus Restructured Assets) accounted for 11.06% of gross advances as of March 2015.



Source: (1) Trends and Progress of Banking in India, Reserve Bank of India; and (2) Database on the Indian Economy, Reserve Bank of India

[24] RBI Bulletin

The asset quality of banks saw significant improvements in a 12-year period that is from 1996–1997 to 2007–2008. Since the mid-1990s, NPAs as a percentage of overall loans and assets have steadily and significantly decreased as banks became conservative and started to maintain a good amount of inventories of government securities. There was a fall in the absolute amount of NPAs since the initiation of reforms in 2002-03, and it was observed that in some cases, the net NPAs of public sector banks were better than private sector banks. Along with that, the period was marked by the start of various measures like special mention accounts, lok adalats, settlement advisory committees, the SARFAESI Act, and CDR. This period experienced a rise in domestic and foreign investment, high growth of businesses, and rules of fiscal responsibility, which led to improvement in the condition of the banks and lowered the NPAs.[25]

From 2009 to 2018, the percentage of NPAs increased gradually at first, but nearly exponentially after 2014–15. The crisis was a result of the Lehman crisis and a huge amount of capital outflow from the country. During the early part of the period, the true amount of non-performing assets (NPAs) was hidden, leading to the building of false confidence in the integrity of banks' balance sheets. The exact degree of the decline in asset quality with several of the inspected banks was made clear by the asset quality review (AQR) that the RBI implemented in 2015. This clarifies the abrupt rise in NPA ratios between 2014 and 2015. It was then various regulatory forbearance schemes were withdrawn by RBI, but SDR, S4A, and Flexible Structuring of Project Loans continued for some more time. It was when CRILC was formed which captured all the exposures of banks above Rs 50 million, and it was followed by IBC.[26]

As the economic reforms were initiated, the Indian economy started to integrate with the global economy and grow its activities. In the initial years of NAFC, with the help of monetary and fiscal policy, the Indian economy experienced growth but the growth slowed down after 2011-12 and this led to the rise of NPAs. There was a sharp decline in commodity prices worldwide since the NAFC has been a key factor in the accumulation of NPAs in metals-related enterprises. Not only this, this period experienced a large amount of current account deficit, a fall in private corporate investment, a rise in the inflation rate, a rise in the real exchange rate, corruption, and issues related to corporate governance which further exaggerated the situation.

The RBI has set its priorities on early detection of financial stress and bank advance fraud, as well as prompt corrective action. As of June 2023, write-offs, better corporate financials, and several recovery

[25] CSEP
[26] CSEP

strategies have led to low NPA levels. The total scheduled bank write-offs over the last five years, ending in FY 2022, was ₹10-lakh crore.[27]

India is the top country among the BRICS and is ranked fifth out of 39 countries with the highest levels of non-performing assets.[28] Even after the implementation of various strategies by the RBI, there is a continued rise in NPAs which is an outcome of a decline in demand, policy hurdles, delay in decision-making, bureaucratic red tape, financial fraud, and disturbance in corporate governance. The falling demand was an outcome of stagflation, which is a situation when there is rising inflation and rising unemployment. During COVID-19, it was observed that various sectors like real estate, automobiles, hotels, and tourism had a negative effect and saw a sharp fall in demand. This fall in demand created a disturbance in the repayment of loans and affected the banks. There is a need to emphasize inadequate bank credit appraisal capabilities, particularly project appraisal as they are among the basic problems impeding NPA management. Therefore, banks' technical capacities must be strengthened immediately to carry out project evaluations and post-sanction monitoring, among other tasks.

Along with this, strict policy actions need to be taken for the wilful defaulters as huge defaults affect the regular functioning of the banks and further reduce their lending capacity. Also, the involvement of political parties in the functioning of PSBs needs to be reduced as favorable decision-making raises the inequality problem in the economy, and lending loans with a major motive to earn profits leads to a downfall in the development of small industries and hurts infrastructure development. Delays in dispute resolution are causing delays in case settlement, which in turn is hurting the developer's capacity to pay off debt. Furthermore, the financial feasibility of the projects is being impacted by exponential cost escalations caused by delays in the acquisition of land and the granting of permissions.

These reasons impact the functioning of the industrial units, lower their profitability, and leave them incapable of meeting their loan repayments. As the economy is modernizing and there is more usage of advanced technologies, the Indian banking sector needs to make a change in its operations by using modern technologies such as Artificial Intelligence (AI) or Machine Learning (ML). Large volumes of data can be analyzed by AI and ML algorithms to enhance credit scoring models. Analyzing the trends and abnormalities in transaction data can be used to identify fraudulent activity and stop instances of fraud that could lead to NPAs, as said by PR Sundar.[29]

---

[27] Businessline
[28] PR Sundar Finfluencer- DNA India
[29] DNA India

Recommendations

India can bring down the amount of NPAs by a good percentage but still, it has to write off bad loans to clear its balance sheets. The following are the issues that need to be addressed and here are some recommendations for the same-

1. **Price stability or extension of repayment period during the downfall**
   The prices of goods and services in India fluctuate which sometimes leads to profits for the firms and losses at the other times. Suppose, an enterprise takes a loan of ₹1 crore in April 2023 to expand its business. The firm invested a full amount in the business but in May 2023, the demand for the goods fell. The firm's stock increased because supply is more but demand is low. It waited 2 months for the demand to go up and maintain the earlier price level. However, the firm has to reduce the prices of its goods to get sales in July 2023. In a similar market condition, the firm can sell its goods at a price where it can cover its costs only, sometimes incurring loss, or sometimes being left with the stock at a low price. In this case, the firm won't be able to repay the loan as it would have earned the income to cover its cost only. However, the prices are determined by market forces of demand and supply, but during instability in the price level, the central bank can help the firms by extending the timeline to repay the loans or providing some relief rather than letting it turn into a bad loan.

2. **Strong monitoring of wilful defaults**
   There is a need to do a proper checking on the allocation of funds. Funds, once allocated after knowing about the borrower's history, are not enough. There have been various cases where individuals or firms took money stating an issue but allocated the funds at a different place. Like there may be a case where an individual took money for education purposes but he is allocating most of his funds in his start-up. In such a case he won't be able to return the money if he faces failure and it would eventually lead to a bad loan due to wilful defaults as the bank won't know what he is doing with the fund. Therefore, regular check on the borrowers is required so that the person can't misallocate the funds.

3. **Realistic plan for repayment of loans**
   The terms and conditions of loan repayment should not be the same for every borrower of different or the same industry. Every person taking a loan has different requirements and ability to repay the loan. Banks need to properly analyze the background of the person seeking a loan before lending. Also, various other conditions should be considered like floods, storms, drought, or any other unforeseen situation that may reduce the capability of the borrower to repay the loan amount.

4. **Regularity in supervision and follow-ups of loans**
   Banks need to do regular follow-ups of the loans and regularly do personal visit to the borrower. This would help them to analyze the condition of the business, and how the loan amount is utilized. Further, if there is a downfall in the business, banks could help the borrowers and supervise them with ways to regain the business either through expertise or by refinancing if they see that the business could grow.

5. **Quick recognition of defaults**
   The analyses have shown the delay in recognition of bad loans that leads to the piling up of NPAs, raises the impossibility of loan recovery, and reduces the chances of success of any strategy to reduce NPAs. If banks analyze the defaults on time, it could help to take timely policy actions and raise the chances of a loan turning into a bad loan.

Conclusion

Non-performing assets are the reason behind the banking sector crisis and the poor functioning of banks. Due to the nationalization of the banks, the banking sector of India experienced a downfall which had long-term effects on the public as well as private sector banks. When an economy experiences GDP growth, the borrowers tend to repay the loan amount and the interest but when there is a slowdown in the economy, it impacts the inflation rate, unemployment, and interest rates which leads to a rise in NPAs. The central bank and the government of India took various measures to control the rise in NPAs in the Indian economy and reduce the amount of loan defaults. A major positive influence was seen after the implementation of Asset Quality Review (AQR) and Insolvency and Bankruptcy Code (IBC). After years of efforts, the strategies implemented by the central bank led to a positive impact on the Indian economy and its banking system. The quality of the assets and the capital and liquidity positions improved. There was a positive response even during the pandemic due to the achievement in fiscal and monetary measures taken up like credit guarantee schemes for MSMEs, extension in days for loan repayment, and emergency liquidity measures.

References

1. Reserve Bank of India
2. Chari, Anusha, Lakshita Jain, and Nirupama Kulkarni. *The Origins of India's NPA Crisis*. No. 2019-04. Working Paper, 2019.

3. Selvarajan, B., and G. Vadivalagan. "A study on management of non performing assets in priority sector reference to Indian bank and public sector banks (PSBs)." *International Journal of Finance & Banking Studies (2147-4486)* 2, no. 1 (2013): 31-42.
4. Zafar, SM Tariq, Adeel Maqbool, and S. M. Khalid. "Non-performing assets and its impact on Indian public sector banks." *International Journal of Marketing, Financial Services & Management Research* 3, no. 2 (2013): 68-87.
5. Hafsal, K., Anandarao Suvvari, and S. Raja Sethu Durai. "Efficiency of Indian banks with non-performing assets: evidence from two-stage network DEA." *Future Business Journal* 6 (2020): 1-9.
6. Garg, Ankit. "A study on management of non-performing assets in context of Indian banking system." *International journal of engineering technologies and management research* 11 (2016): 15-25.
7. Agrawal, Vineeta. "Non-Performing Assets (NPA) in Indian Banking: Causes, consequences, and remedial measures."
8. Press Information Bureau. "Comprehensive steps taken by the Central Government under the 4R's strategy to reduce NPAs of Public Sector Banks." Accessed July 16, 2019. Comprehensive steps taken by the Central Government under the 4R's strategy to reduce NPAs of Public Sector Banks (pib.gov.in)
9. Das, Santosh Kumar. "Two Phases of NPAs in India's Banks." (2021).
10. CIBIL
11. Press Information Bureau. "Performance of PSBs significantly improved as a result of implementation of reforms by the Government." Accessed March 20, 2023. Press Information Bureau (pib.gov.in)
12. Abhirami, A., and T. Rahul. "On the Effectiveness of Insolvency and Bankruptcy Code, 2016: Empirical Evidence From India." *Law and Business* 2, no. 1: 20-34.
13. The Quint. "Decoding Indira Gandhi's Bank Nationalisation of 1969." Accessed July 19,2023. Bank Nationalisation Day Anniversary: Decoding Indira Gandhi's Bank Nationalisation of 1969 (thequint.com)
14. The politics of bank nationalization, 1969-76. suhit.pdf (mcrg.ac.in)
15. Kumar, Abhishek, Rakesh Mohan, and Divya Srinivasan. *Commodity Price Shocks and Non-performing Assets in the Indian Banking Sector*. Centre for Social and Economic Progress, 2022.
16. Das, J. K., and Surojit Dey. "Non-Performing Assets of Public and Private Sector Banks in India: An Empirical Study." *Business Studies* 100 (2017).

17. Das, Santosh Kumar. "NPAs in India's banks: trends and determinants." *Journal of Money and Business* 3, no. 2 (2023): 147-158.
18. Mohan, Rakesh, and Partha Ray. *The Roller Coaster Ride of Non-performing Assets in Indian Banking*. Centre for Social and Economic Progress, 2022.
19. Raju, Swati. "Non-Performing Assets of Banks in India: Efficiency in Management."
20. Mukhopadhyay, A. B. H. I. J. I. T. "Finding innovative solutions to India's NPA woes." *ORF (Observer Research Foundation) Issue* 246 (2018).
21. Acharya, Viral V., and Raghuram Rajan. "Indian banks: A time to reform." *University of Chicago Booth School of Business Working Paper* (2020).