



Analyzing Non-performing asset management in the Indian Banking sector: A comparative study of Major Banks

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Abstract

This paper explores the management of NPAs in Indian banks to provide insight into the challenges and suggestions to achieve effective resolution of NPAs. It discusses the preventive measures banks implement to mitigate the impact of non-performing assets. Analysis of NPAs across major Indian banks highlights diverse trends in the NPA ratio, as some banks display steady improvement while others display a combination of performance outcomes. HDFC Bank has consistently maintained low levels of NPAs, making it an excellent performer. SBI, on the other hand, has made significant reforms Throughout the years. PNB and Kotak Mahindra Bank show contradictory patterns in NPA management. It is of utmost importance for Indian banks to effectively manage non-performing assets to guarantee monetary stability and promote sustainable economic growth. The results of this study provide important insights and suggestions to policymakers, regulators, and banking institutions to effectively deal with the issue of non-performing assets.

Keywords: Non-performing assets, publics banks, privates bank, Indian economic

Introduction

Non-Performing Assets (NPAs) pose a significant challenge to the dependability and effectiveness of India's banking industry. NPAs refer to loans or advances where borrowers fail for a predetermined amount of time, to fulfill their payback responsibilities, typically 90 days. The management of NPAs is crucial for banks to maintain financial health, ensure adequate provisioning, and sustain profitability. In the Indian banking background, NPAs have garnered widespread attention due to their adverse effects on credit availability, capital adequacy, and investor confidence. The Reserve Bank of India (RBI), as the country's central banking authority, plays a crucial part in regulating NPAs through stringent guidelines, classification norms, and resolution mechanisms. When a term loan is involved, the banker has ninety days from the date of default to take necessary action and convince the borrower to pay the interest or installment that is due. For direct agricultural loans, the account is classified as non-performing asset (NPA) only after two crop seasons (from sowing to harvesting) from the due date in case of short-term loans and one crop season from the due date in case of long-term loans. In the regarding of cash credit accounts, the banker has 90 days to guarantee that the irregularity in the account is rectified.

NPA management in Indian banks, this paper aims to contribute to a better understanding of the issues at hand and provide recommendations for policymakers, regulators, and banking institutions to address the NPA problem effectively. Through proactive measures and concerted efforts, Indian banks can navigate the challenges posed by NPAs and foster a resilient and sustainable banking sector. It explores the challenges faced by banks in managing NPAs and examines the implications for the broader economy. Furthermore, the paper highlights the role of technology in enhancing NPA management practices, the importance of capacity building and skill development, and stakeholder collaboration. It also

discusses the preventive measures banks adopt to reduce NPA risks and promote a culture of prudent lending.

In recent years, NPAs have emerged as a significant concern for Indian banks, posing challenges to their viability and resilience. The Reserve Bank of India (RBI), as the country's central banking authority, has implemented various regulatory measures and frameworks to address the issue of NPAs and strengthen the banking sector's health. These measures include classification norms, provisioning requirements, and resolution mechanisms aimed at minimizing the adverse impact of NPAs on banks' balance sheets and fostering financial stability. The management of Non-Performing Assets (NPAs) in the banking sector is a imperative aspect of financial stability and economic development, particularly in emerging economies like India. NPAs, also known as bad loans, represent loans or advances that borrowers have not reimbursed within the allotted timeframe, typically 90 days. The presence of NPAs in banks' loan portfolios not only undermines their profitability and capital adequacy but also hampers their ability to extend credit to productive sectors of the economy.

Despite regulatory interventions, the problem of NPAs persists, necessitating a deeper understanding of the underlying factors contributing to NPA formation and effective strategies for their management. It will analyze the challenges faced by banks in managing NPAs, including structural issues, governance issues, and external economic factors. By critically evaluating the NPA management strategies employed by Indian banks and identifying best practices, this research paper aims to provide actionable recommendations for policymakers, regulators, and banking institutions to mitigate NPA risks effectively and foster a healthy and resilient banking sector. Ultimately, the findings of this study can contribute to the development of policy frameworks and institutional mechanisms to address the NPA challenge and promote sustainable economic growth in India.

Non-Performing Assets (NPAs): It is categorized based on the extent of default and the likelihood of recovery. In India, NPAs are classified into three categories: Substandard Assets, Doubtful Assets, and Loss Assets. Let's delve into each category:

1. Substandard Assets

- Substandard assets are those where the borrowers have defaulted on their payments for a period exceeding 90 days but less than 12 months.
- These assets have existing weaknesses that make their full recovery questionable but are not yet classified as doubtful.
- Banks are required to make a higher provision for substandard assets compared to performing assets to cover potential losses.

2. Doubtful Assets

- Doubtful assets are those where the default has persisted for more than 12 months.
- There is a significant risk associated with the recovery of doubtful assets, and their full repayment is uncertain.
- Banks need to make even higher provisions for doubtful assets compared to substandard assets due to the increased risk of loss.

3. Loss Assets

- Loss assets are those where the losses have been identified by the bank, internal or external auditors, or the RBI inspection but not yet written off.
- These assets have been identified as irrecoverable or unlikely to be recovered in full, and as such, they are fully written off against the bank's reserves or by reducing the book value of the asset.
- Loss assets represent the highest level of risk, and banks are required to write them off entirely to reflect their true financial position accurately.

These categories assist banks and regulators in assessing the quality of loan portfolios, determining provisioning requirements, and formulating strategies for NPA resolution. The classification of NPAs also enables stakeholders to understand the level of risk associated with a bank's assets and its overall financial health. Regulatory authorities like the Reserve Bank of India (RBI) mandate banks to adhere to these classifications and provisioning norms to ensure transparency and prudence in NPA management.

Literature Reviews

1. (Khanna & Maurya, 2017) ^[3]: LPG has transformed Indian banking since 1991. The increasing NPA gap remains. Indian banks finance to small and large enterprises. This benefited industry and society. But more NPAs have made banks more hesitant about lending. Increased NPA damages banks' profits and value. Pressure is on banks to achieve Capital Adequacy criteria. This affects their finances and careers. These conditions are difficult for banks, who must sacrifice their profitability zone. This rising NPA has hurt banks and the economy's finances. Thus,

structured credit management and fierce NPA targeting are necessary.

2. (Padmavathi, 2018) ^[6]: Commercial scheduled banks promote national development. Banks have increased their economic development participation in India through Jan Dhan, pension schemes etc. The current Indian Prime Minister wants to expand financial services, especially in the industrial sector, to promote economic growth under "Make in India". Banks matter. Removal of Rs 500 and Rs 1000 notes: After demonetization, banks made lending unnecessarily liberal by reducing interest rates. Bank lending creates "credit risk" or non-recovery of loans and advances. NPAs result from banks' credit risk management. Public sector banks are mainly responsible for this decline in asset quality. RBI's stringent norms and increasing efforts to label stressed assets NPA. In this, Indian bank NPA and public sector bank SBI were analyzed. Liberalization of lending rules has reduced loan and advance interest rates and replaced currency notes with bank money. Difficult to find good consumers to stop NPA.
3. (Gaur & Mohapatra, 2020) ^[1]: This paper examines NPA's effects on Indian banking, causes, and mitigation techniques. Indian banks lend to small and large businesses. Industry and society benefited. However, rising NPAs have reduced bank lending. NPA hurts banks' profitability and value. Capital Adequacy pressures banks. It affects them financially and professionally. These conditions are difficult for banks, reducing profitability. High NPA harms banks and the economy. Credit management and NPA targeting must be organized.
4. (Mishra *et al.*, 2020) ^[5]: NPAs in Indian banks are one of the largest financial threats to the economy. In March 2018, Indian banks' gross NPAs exceeded USD 150 billion, over four times their 2014 level. The causes are political, macroeconomic, and bank-specific. We use a panel dataset for 40 public and private Indian banks from March 2010 to June 2019 (quarterly-frequency) to explore NPA determinants. NPAs are influenced by macroeconomic variables as IIP, CPI, policy repo rate, and exchange rate. Gross loans and advances, provisions and contingencies, income on investments, and bank sector (public vs. private) are key NPA factors. We also find demonetization (2016) to have no effect on Indian bank NPAs. We conclude with policy recommendations and NPA solutions.
5. (Korde & Laghate, 2020) ^[4]: This study examined secondary data on Gross and Net Non-Performing Assets or Loans of select Indian banks from April 2007 to March 2018 from the Reserve Bank of India (RBI) and performed the ABC analysis as per cumulative (decreasing method) to assess their performance, management, and governance. Finally, the authors find that some of the selected Indian banks appear in Group A (Poor Performance), Group B (Satisfactory Performance), and Group C (Good Performance), which is concerning to the economy. Non-performing assets (NPAs) are a key indicator of Indian bank health.

The authors reviewed other researchers' non-performing asset literature reviews.

6. (Kaur *et al.*, 2023) ^[2]: Banking sector NPAs have wrecked global economies. NPA growth in India indicates industry and state health. This study examines how NPAs in India affect the profitability of eight public and private banks from 2009/2010 to 2017/2018: Punjab National Bank (PNB), Bank of India (BOI), UCO Bank, Punjab and Sind Bank (PSB), HDFC Bank, Axis Bank, ICICI Bank, of Yes Bank. Analysis and statistical testing reveal that public sector banks have more NPAs than private sector banks, and NPA losses affect profitability. The Mann–Whitney U test for private-public sector bank median comparison and the Kruskal–Wallis test for more than two banks median comparison. Two-tailed significance levels of $p \leq 0.01$ and $p \leq 0.05$ were defined for all statistical tests.

Objectives of the study

1. To analyze the impact of non-performing assets (NPAs) on the stability and profitability of Indian banks, focusing on key indicators such as Gross NPA and Net NPA ratios over a five-year period for State Bank of India (SBI), Punjab National Bank (PNB), HDFC Bank Ltd., and Kotak Mahindra Bank Ltd.
2. Evaluate the effectiveness of NPA management strategies and their consequences for the Indian banking sector and economy.

The parameters selected for “Reasons for NPA” are as follows

1. **Market Failure:** Market failure occurs when the invisible hand fails to allocate resources at their highest value. Each failure type has its symptoms and causes. Market failure occurs when a free-market economy allocates goods and services inefficiently, leading to a sub-optimal state of society. Externalities, when individuals or companies indirectly incur costs or benefit others, are a common market failure that causes the underproduction or overproduction of goods or services. The free-rider dilemma makes it difficult for private markets to efficiently offer public goods that are non-excludable and non-rival. Because monopolies and oligopolies give corporations undue market power, they can lead to allocative inefficiencies and huge losses, leading to market failure. Information asymmetries, inadequate markets, and wealth inequality distort incentives, distort resource allocation, and impair access to key goods and services, contributing to market failures. Governments regulate, tax, or provide public goods to correct market imperfections and improve society. Effective intervention must carefully consider the exact market failures and unintended consequences of policy.
2. **Willful Defaults:** Willful default refers to deliberate actions by borrowers who have the financial ability to repay their loans but choose not to do so. In other words, willful defaulters are borrowers who knowingly default on their loan obligations despite having the means to meet their repayment commitments. This is in contrast to cases of true financial distress, where borrowers may be unable to repay their loans due to

circumstances beyond their control, such as unemployment, business failure, or unexpected medical expenses. Willful defaults pose significant challenges to banks and require proactive measures, strong risk management practices, and effective legal remedies to address them. By strengthening governance, increasing transparency, and enforcing accountability, banks can deter willful defaulters and protect their financial interests while maintaining the of the lending process.

3. **Lack of Entrepreneurial:** The absence of entrepreneurial skills presents a significant challenge in fostering economic growth and development, especially in the light of emerging markets and small businesses. Entrepreneurship plays a essential role in driving innovation, creating employment opportunities, and stimulating economic activity. However, when individuals lack the necessary entrepreneurial skills, barriers to business creation and growth emerge, hindering the potential for wealth creation and economic prosperity. One of the primary consequences of the absence of entrepreneurial skills is the limited ability to identify and capitalize on business opportunities. Entrepreneurship requires a combination of creativity, strategic thinking, and risk-taking, enabling individuals to recognize market needs and develop innovative solutions. Without these skills, aspiring entrepreneurs may struggle to identify viable business ideas or navigate competitive markets effectively, resulting in a reluctance to pursue entrepreneurial ventures. Lack of entrepreneurial skills promotes risk aversion and fear of failure, discouraging entrepreneurs. Entrepreneurship requires resilience and adaptation to overcome uncertainties and disappointments. Without the confidence and ability to take risks and learn from failure, ambitious entrepreneurs may choose more traditional careers, impeding innovation and economic growth. Education, training, mentorship, and policy support are needed to address entrepreneurial skills. Entrepreneurship promotion should focus on giving people the knowledge, skills, and mindset to succeed in the fast-paced business world. Policymakers can unleash entrepreneurship's full potential as an economic driver by investing in entrepreneurship education, mentorship, and an enabling ecosystem for firm creation and growth.
4. **Poor Legal framework:** A poor legal framework within the realm of Non-Performing Assets (NPAs) refers to deficiencies or inadequacies in the legal systems governing debt recovery and insolvency proceedings. When faced with a poor legal framework, numerous challenges arise in the effective resolution of defaulted loan accounts. One major issue stem from lengthy and convoluted legal processes, including debt recovery tribunals, civil courts, or insolvency procedures. These prolonged legal proceedings delay NPA resolution, escalate litigation costs, and prolong financial strains for both borrowers and lenders. In addition to prolonged legal proceedings, poor legal frameworks often result in inefficient enforcement mechanisms. This inefficiency undermines creditors' ability to enforce their rights and recover outstanding

dues from defaulting borrowers. Weak enforcement of collateral security or recovery laws limits banks' ability to seize assets or foreclose on collateral, thereby reducing the efficacy of recovery efforts. Addressing the issues associated with a poor legal framework requires comprehensive legal reforms. Streamlining legal procedures, enhancing enforcement mechanisms, strengthening insolvency laws, and improving judicial capacity are essential steps in facilitating efficient NPA resolution. By establishing a robust legal framework that safeguards creditor rights, expedites NPA resolution, and fosters confidence in the legal system, policymakers can promote financial stability in the banking sector.

5. Poor follow-up and Supervision: In the reference of Non-Performing Assets (NPAs), poor follow-up and supervision refer to shortcomings in the monitoring and management of loan accounts once they show signs of stress or default. Early warning signs, quick remediation, and loan default prevention require effective follow-up and supervision. Poor NPA management follow-up and oversight might have detrimental effects. First, inadequate follow-up and supervision can delay NPA detection. Missed payments and financial decline may go unnoticed without regular monitoring and prompt intervention. Over time, NPAs may increase, causing bank losses. Second, inadequate follow-up and oversight might hinder NPA remediation. Without regular inspection, banks may not engage with borrowers to comprehend default or pursue restructuring or resolution options. This inaction can worsen debtors' financial problems and complicate loan recovery.

Lack of follow-up and supervision might also hinder NPA healing. Engaging failing borrowers, establishing repayment schedules, and pursuing legal remedies requires timely and persistent follow-up. Banks may struggle to recover unpaid dues without vigilant oversight, increasing provisioning and financial hardship.

6. Non-cooperation from Banks: Lack of NPA cooperation prevents banks from resolving loan defaults. Long and inadequate NPA management raises borrowers' and lenders' financial costs due to poor cooperation. For several reasons, banks lack NPA resolution teamwork.

First, banks may be reluctant to aggressively engage with defaulting borrowers, spreading ignorance of default causes and solutions. Inaction slows NPA resolution and increases defaults. Second, tight internal policies can hinder banks' borrower-specific settlement negotiations. Inflexibility slows resolution and recovery. Banks may also prefer legal asset recovery over other settlement methods due to risk aversion. This strategy to avoid losses might result in lengthy court battles, increased expenditures, and unpredictable outcomes for both sides.

Bank staff, knowledge, and technology deficits hinder cooperation. Loaner inquiries and NPA case processing are slowed by resource shortages. Law and regulation

affect bank non-cooperation. Banks may be unable to share information or negotiate with delinquent borrowers due to compliance, insolvency, and confidentiality constraints, impeding NPA resolution. Communication issues delay solutions by causing misconceptions and disputes. Addressing bank non-cooperation requires cooperation from banks, borrowers, regulators, and politicians. Communication, resources, and proactive participation are needed to resolve NPAs faster and overcome non-cooperation concerns. Cooperation and transparency can reduce NPAs and stabilize the banking sector. Communication and coordination issues between bank departments or external stakeholders like borrowers, legal advisors, and regulators also cause non-cooperation.

Preventive measures for Non-Performing Assets (NPAs) are essential for banks and financial institutions to minimize the risk of loan defaults and preserve the quality of their loan portfolios. Here are some preventive measures for NPA management:

- 1. Effective Credit Risk Assessment:** Prior to offering loans to borrowers, carry out in-depth credit risk evaluations. To reduce the chance of defaults, assess the borrower's creditworthiness, ability to repay, and stability. To guarantee responsible lending practices, put in place strict underwriting guidelines and thorough due diligence procedures.
- 2. Continuous Review and Improvement:** Based on new developments, lessons discovered, and industry best practices, continuously review and improve NPA management policies, procedures, and practices. Take a proactive approach to risk management by foreseeing obstacles in the future and modifying plans of action to successfully reduce risks that change over time.
- 3. Compliance and Regulatory Oversight:** Verify that asset classification, provisioning, and reveal prerequisites are met in accordance with legal requirements, prudential standards, and accounting standards. To preserve regulatory compliance and openness in NPA management, maintain strong internal controls, governance structures, and risk management procedures.
- 4. Portfolio Diversification:** To lower concentration risk, diversify loan portfolios among various industries, sectors, and geographical areas. To reduce the impact of sectoral or economic downturns on the portfolio as a whole, steer clear of overexposure to high-risk borrowers or sectors and use resources wisely
- 5. Monitoring and Early Warning Systems:** Put strong monitoring and early warning systems in place to spot any indications of declining borrower creditworthiness or trouble making payments. To spot possible non-performing assets (NPAs) early on and implement prompt remedial measures, keep an eye on critical performance metrics such payment patterns, cash flow trends, and financial ratios.

- 6. **Credit Risk Mitigation Strategies:** To lower the risk of loan defaults and improve the recoverability of past-due amounts, apply credit risk mitigation tactics such as credit insurance, guarantees, or collateral replacement. Investigate risk-sharing agreements with outside partners to efficiently diversify exposures to credit risk.
- 7. **Proactive Communication and Management of Relationships:** Keep in touch and be proactive in your interactions with borrowers to learn about their financial needs, keep an eye on the performance of your loans, and quickly resolve any issues or problems that may arise. Establish solid bonds of trust, openness, and understanding with borrowers in order to promote responsible borrowing practices.

Banks and other financial institutions must reduce non-performing assets (NPAs) in order to preserve their stability and financial health. Effective strategy implementation can improve asset quality, reduce the incidence of non-performing assets (NPAs) in loan portfolios, and manage credit risk. The following suggestions will help lower NPAs:

Tools For Recovering NPAs: Enabling the prompt recovery of unpaid debts via the use of a variety of legal framework-provided tools and methods is the process of recuperation Non-Performing Assets (NPAs) in India. The following are some of the most important tools for recovering NPAs in India:

- 1. **Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002:** The SARFAESI Act empowers banks and financial institutions to enforce security interests without the intervention of courts. Under this legislation, lenders can issue demand notices to defaulting borrowers, take possession of secured assets, and sell them through public auction to recover outstanding dues.
- 2. **Debt Recovery Tribunals (DRTs):** Debt Recovery Tribunals are specialized quasi-judicial bodies established to enable the quick adjudication and recovery of debt claims exceeding a predetermined threshold. Banks can file recovery applications with DRTs to recover outstanding dues from defaulting borrowers.
- 3. **Asset Reconstruction Companies (ARCs):** ARCs specialize in obtaining distressed assets from banks and financial institutions and resolving them through various resolution mechanisms. Banks can transfer NPAs to ARCs for resolution, including asset reconstruction, debt restructuring, or loan securitization.

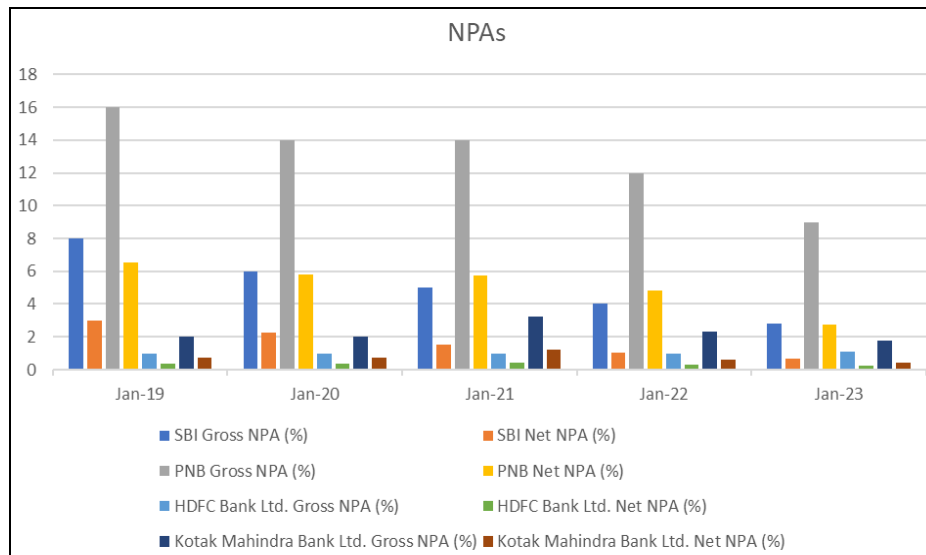
- 4. **Technology-enabled Solutions:** Leveraging technology-enabled solutions such as data analytics, artificial intelligence, and digital platforms can enhance efficiency and effectiveness in NPA recovery. Banks can use advanced analytics to prioritize recovery efforts, identify recovery prospects, and optimize resource allocation for maximum impact.
- 5. **Negotiated Settlements:** Banks can engage in negotiated settlements with defaulting borrowers to reach mutually acceptable repayment agreements. Negotiated settlements may involve waiving penalties, reducing interest rates, or restructuring repayment terms to facilitate loan recovery while accommodating borrower financial constraints.
- 6. **One-Time Settlement (OTS) Schemes:** Banks may offer OTS schemes to defaulting borrowers, permitting them to settle their outstanding obligations by paying a reduced lump-sum amount. OTS schemes provide borrowers with an opportunity to resolve their debts and avoid legal proceedings, while enabling banks to recover a portion of their dues.
- 7. **Corporate Insolvency Resolution Process (CIRP):** Under the Insolvency and Bankruptcy Code (IBC), 2016, defaulting corporate borrowers with NPAs exceeding a specified threshold are subject to insolvency proceedings. Banks can initiate the CIRP against defaulting corporate borrowers to resolve NPAs through a structured insolvency resolution process overseen by the National Company Law Tribunal (NCLT).

Impact of NPSs In Banks Profitability: In addition to decreasing banks' profitability through provisioning in the profit and loss account, an NPA account raises their carrying costs, which leads to unnecessary and excessive management attention. In addition, a high level of non-performing assets (NPA) strains a bank's net worth because banks have to maintain a certain level of capital adequacy and, in the absence of a comfortable profit margin, they eventually turn to their own internal financial strength to meet standards, which gradually reduces the net worth. However, businesses listed on these banks' books won't be in a position to benefit if private expenditure and corporate earnings growth slow down to make timely loan payments, and there's a good chance that more non-performing assets will be created. Additionally, he makes the argument that banks' treasury revenues have significantly decreased as a result of higher interest rates in the government bond market. As a result, banks won't have enough revenue to cover NPAs.

Analysis of the NPAs of two private and public banks

Table 1

| Company | | Mar-23 | Mar-22 | Mar-21 | Mar-20 | Mar-19 |
|--------------------------|---------------|--------|--------|--------|--------|--------|
| SBI | Gross NPA (%) | 2.78 | 4 | 5 | 6 | 8 |
| | Net NPA (%) | 0.67 | 1.02 | 1.5 | 2.23 | 3.01 |
| PNB | Gross NPA (%) | 9 | 12 | 14 | 14 | 16 |
| | Net NPA (%) | 2.72 | 4.8 | 5.73 | 5.78 | 6.56 |
| HDFC Bank Ltd. | Gross NPA (%) | 1.12 | 1 | 1 | 1 | 1 |
| | Net NPA (%) | 0.27 | 0.32 | 0.4 | 0.36 | 0.39 |
| Kotak Mahindra Bank Ltd. | Gross NPA (%) | 1.8 | 2.34 | 3.25 | 2 | 2 |
| | Net NPA (%) | 0.4 | 0.64 | 1.21 | 0.71 | 0.75 |



Based on the provided data on Gross Non-Performing Assets (NPAs) and Net NPAs for SBI, PNB, HDFC Bank Ltd., and Kotak Mahindra Bank Ltd. throughout the past five years, here's an analysis:

State Bank of India (SBI): SBI has shown a consistent improvement in both Gross and Net NPAs over the past five years. The Gross NPA has decreased from 8% in March 2019 to 2.78% in March 2023, indicating a significant reduction in non-performing assets. Similarly, the Net NPA has reduced from 3.01% in March 2019 to 0.67% in March 2023, reflecting effective management of bad loans.

Punjab National Bank (PNB): PNB has experienced a mixed trend in NPA ratios over the past five years. While there has been a slight reduction in Gross NPA from 16% in March 2019 to 9% in March 2023, it remains relatively high compared to peers like SBI. The Net NPA ratio has also decreased from 6.56% in March 2019 to 2.72% in March 2023, indicating some improvement, although there's room for further reduction.

HDFC Bank Ltd.: HDFC Bank has maintained exceptionally low levels of NPAs compared to other banks in the dataset. Both Gross and Net NPA ratios have remained consistently low at around 1% and below respectively, showcasing strong asset quality management.

Kotak Mahindra Bank Ltd.: Kotak Mahindra Bank has also demonstrated a relatively stable performance in managing NPAs. While there has been a slight increase in Gross NPA from 2% in March 2020 to 1.8% in March 2023, it remains relatively low compared to peers like PNB. The Net NPA ratio has fluctuated but has generally remained low, indicating effective control over bad loans. Overall, HDFC Bank stands out for its superior asset quality management, maintaining consistently low levels of NPAs. SBI has shown significant improvement in reducing NPAs over the years, while PNB and Kotak Mahindra Bank have demonstrated mixed trends but with varying degrees of success in managing NPAs.

Conclusion: The results highlight the significance of taking early actions and implementing efficient tactics to deal with Non-Performing Assets (NPAs). These actions include

rigorous evaluation of credit risk, ongoing supervision, adherence to regulatory standards, and utilization of technology-based solutions. Furthermore, implementing precautionary measures such as spreading investments across several portfolios, employing early warning systems, and utilizing tactics to reduce credit risk are essential in reducing the likelihood of loan defaults and maintaining the quality of assets. It is imperative for banks to prioritize NPA resolution efforts and leverage tools such as SARFAESI Act, Debt Recovery Tribunals and technology-enabled solutions to expedite recovery processes and reduce financial losses.

Managing non-performing assets (NPAs) in Indian banks is critical for financial stability and economic prosperity. Over the last five years, the NPAs of SBI, PNB, HDFC Bank Ltd and Kotak Mahindra Bank Ltd have shown different trends and performance levels. SBI has demonstrated dedication to good management and asset quality, reducing both gross and net NPAs. Punjab National Bank (PNB) has seen a slight decline in NPAs but is still struggling compared to SBI. HDFC Bank Ltd's lowest NPA reflects strong asset quality management. The NPA management of Kotak Mahindra Bank Limited has been stable with ups and downs from time to time.

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