NON-PERFORMING ASSETS IN INDIA: A CRITICAL ANALYSIS OF PUBLIC AND PRIVATE SECTOR BANKS

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Abstract

The paper identifies and analyzes the causes that affect non-performing assets (NPAs), hinder its effective observance, and recommends appropriate measures to ensure their effective monitoring and control. The banks selected for this research work are having higher NPAs and are top banks in their sector. As per the Global Financial Stability Report of International Monetary Fund (IMF, 2009), identifying and dealing with distressed assets, and recapitalizing weak but viable institutions and resolving failed institutions are stated as the two of the three important priorities which directly relate to NPAs. This research work finds the reasons for non-performing loans by considering a set of 50 variables and provides the necessary measures. Statistical tool SPSS was used to run the factor analysis test. Sectoral disparities in the NPA ratio to advances in public and private sector banks were the main source of motivation to analyze and compare factors affecting non-performing assets (NPAs) of public and private sector banks in India. Some of the reasons for NPA are lack of frequent interaction or follow-up with borrowers, manipulation of income or financial statement by borrowers, industrial problem and death of earning member of the family.

Keywords: Non-Performing Assets, Profitability, Banks, Public Sector, Private Sector, Bank Credit

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1. INTRODUCTION

Non-performing resources of banks have turned into a noteworthy worry in India, with a relatively general periodical event of extensive esteem credit defaults/cheats adding to the already humongous levels of NPAs in banks (particularly public sector banks). They are an immediate reflection on the execution of banks. An abnormal state of NPAs influences the gainfulness, total assets, and liquidity of banks, notwithstanding posturing risk on the nature of the benefit and pushing them to the verge of indebtedness. Banks have to make mandatory reserve, which reduces the overall profits and ultimately the market value of shares. The public sector banks provide financial supports and advances to various sectors in the without considering the pros and cons and the possibility of getting back the money advanced and without taking collateral as security. Management of non-performing assets is essential for the stability and development of the banking sector in India. Reserve Bank of India (RBI) noted an improvement in the NPA management process, as banks managed their NPA despite the adoption of credit time standards for 90 days. Management of NPA is crucial for the long-term sustainable growth of the banking sector with RBI and the Government of India. The steps for controlling NPA could be initiatives such as The Securitization and Reconstruction of Financial Assets and Enforcement of Securities Interest (SARFASEI) Act, 2002 (empowering banks to auction the residential or commercial properties of the defaulters to recover the loans), Capital Adequacy under Basel III Norms and Insolvency and Bankruptcy Code. RBI recommended the financial institutions to strengthen their credit standards, credit appraisal and follow up procedures of loan

monitoring to minimize the risks of NPAs. "To manage NPA effectively, both proactive and curative measures are required. Proactive measures imply efficient loan appraisal and its management, while curative measures focus on realizing NPA accounts using minimum possible efforts. At the pre-disbursement stage, appraisal techniques of the bank need to be sharpened. All technical, economic, commercial, organizational and financial aspects of the project need to be assessed realistically. Bankers should satisfy themselves that the project is technically and commercially feasible with reference to technical know-how, the scale of production, land acquisition, etc. Some projects are born sick because of unrealistic planning, inadequate appraisal, and faulty implementation".

In the case of the Greek bank, Louzis, Vouldis, and Metaxas (2012) argue that larger banks enjoy relatively risky activities, leading to a higher burden of NPAs, rather than diversification. The bank's profit performance can also play an important role in the impact of its NPAs. With the advent of the Insolvency and Bankruptcy Code, 2016, there have been unprecedented changes in the landscape of insolvency laws in India, most importantly the inclusion of the concept of the corporate insolvency resolution process. With the advent of this new approach, the focus was somewhat shifted to balance the needs of both the company as well as the 'operational creditor' (a new term crafted to represent the erstwhile secured creditors, employees, and unsecured creditors all within the fold of a single term), rather than bluntly liquidating and distributing the remains of a debt-ridden company among its creditors in order of priority. This new approach sought to curate the debt itself in such a way to minimize the risk of all the parties involved in the situation.

The rest of the article goes as follows. Section 2 discusses the existing literature on the non-performing loans and their determinants followed by the research problem and objective of study. In Section 3, the data and methodology used for this paper are discussed. Section 4 discusses the banks in India and the various steps taken by Regulator Reserve Bank of India to control non-performing assets, it shows a comparison between public and private sector NPAs based on secondary data, Section 5 shows the empirical results are analyzed based on primary data and Section 6 concludes the paper. Section 7 shows the scope for future research and the next two sections show the practical and managerial implications.

2. REVIEW OF LITERATURE

Researchers have felt the importance of effective management of non-performing assets and credit standards or policies as a field of study. Researchers have tried to carry out empirical research on the management of non-performing assets of banks both in India and abroad. The research findings of some research works are discussed as follows.

Pestova and Mamonov (2013) had studied the Russian banks' credit risk through macroeconomic and bank-specific parameters by the use of single-equation panel data models and noted that the macroeconomic factors, the rise in interest rates accelerate the growth of bad assets. Sontakke and Tiwari (2013) highlighted that NPA is catching the attention as a big problem for the Indian banks after the reform in financial sectors. NPA affects the profitability because banks cannot generate income from these and it increases the provisions and funding costs. Poor management of NPA can badly affect the economy. They had suggested the appropriate measures to control or decrease NPAs. Manab, Theng, and Md-Rus (2015) had studied the earnings management and credit default forecast of Malaysia and established the result that the liquidity ratios, productivity ratio, and profitability ratio are significant factors in determining credit risk. Laveena and Kumar (2016) concluded that India's NPA level of the banking system remains high compared to international standards. Bardhan and Mukherjee (2016) observed that the capital adequacy ratio is a prudential indicator for NPAs of banks and larger size banks are more prone to default than smaller banks. Further, the reduction in NPAs is possible with an increase in the profits of banks.

"Practice of restructuring of standard advances creates a moral hazard problem and gives leeway to borrowers to state that projects have failed due to extraneous events. The official NPAs figures (gross NPAs to gross advances) undermines the high loan delinquencies in banks" (Samantaraya, 2016). This research paper aims at analyzing the relationship between non-performing loans and GDP growth rate and is structured on Kenya's macro-economic environment during 1980-2015. The researcher concludes by stating that the macroeconomic environment and its support play a significant role in the effective monitoring of non-performing loans. (Muthami, 2016) Meher (2017) in the post-demonetization period looks into the impact of the government's notebandi decision on the NPA of Indian Banks. The researcher finds both positives and negatives of the event in the banking industry.

Sengupta and Vardhan (2017) have compared the two banking crisis episodes post-liberalization-one that took place in the late 1990s and the other that commenced after the 2008 global financial crisis that raised the issue of NPAs. The authors are of the view that strong governance, proactive banking regulations and a strong legal framework for resolution of NPAs would assist in solving the problem of NPAs. On the other hand, regulatory forbearance would adversely affect the banking crisis. Mishra and Pawaskar (2017) have recommended that banks should have a good credit appraisal system to avoid NPAs. They point out that the problem of NPAs can be solved if there is a proper legal structure to support the banks in the recovery of debt. Sahni and Seth (2017) study the different causes responsible for rising NPAs and the impact it has on the operation of banks. The authors have mentioned several preventive and curative measures to control the NPAs. They have suggested that proper assessment regarding the credit-worthiness of the borrower should be done to ensure the speedy recovery of loans. Mittal and Suneja (2017) have analyzed the level of NPAs in the banking sector in India and the causes that have led to the rise in NPAs. They have proposed that though the government has taken a number of steps to reduce the problem of NPAs, bankers should also be proactive in adopting well-structured policies to manage NPAs. The loan should be sanctioned after considering the return on investment of a proposed project and the credit-worthiness of the customers. Banerjee, Verma, and Jaiswal (2018) have examined the status of gross NPAs and net NPAs in private sector banks and public sector banks to study their

effect on the asset quality of the banks. Deliberate loan defaults, poor credit management policies, sanctioning of loans without analyzing the risk-bearing capacity of the borrowers are the main reasons for the piling up of NPAs. The banks should stress on better strategy formulation and its proper execution as well. Stringent provisions by the government could help in reducing the level of NPAs. Mukhopadhyay (2018), in his paper, has discussed finding solutions to India's NPA woes. He has suggested that to resolve the problems of NPAs the RBI should not abide by a single model; instead, an innovative and flexible approach is needed for each affected bank, which should differ on a case-by-case basis.

Kumar, Subba Rao, and Kusuma (2018) make an interesting study to find out the main reasons behind accumulating NPAs. They find the main reasons to be industrial sickness, change in government policies, poor credit appraisal system, willful defaults and defect in the lending process. Dey (2018) in a very recent research paper looks at the recovery aspect of recovery of poor loans of the Indian commercial banks. The author finds the role of DRTs to be much better compared to the recovery through Lok Adalats and SARFASEI Act.

Sharma, Rathore, and Prasad (2019) highlighted "the role played by a banking system is lending to business or a borrower who wants to invest or expand. Lending to business sustains a Credit Risk, which ensures or arises from the failure of the borrower to fulfill its contractual obligations either during transactions or on future obligations". The failure of the banking sector has an adverse impact on another sector also. After reviewing research papers, we felt a strong need for research work on causes leading to NPA using primary and empirical work and to recommend measures for credit risk management in India. NPAs cannot be eliminated but steps like Bankruptcy Code could be taken to reduce and recover bad loans through effective implementation. Agarwala, V. and Agarwala, N. (2019) after assessing the Indian banking scenario reveals that the growth rate of NPAs is low as compared to the nationalized banks, as well as the SBI and its associates. The nationalized banks and the associate banks of SBI failed to handle the issue of poor loans effectively due to which the growth in such loans has been phenomenally high.

2.1. Research problem

The flow of credit to various sectors of the economy is increasing. The main sectors are infrastructure, agriculture, services, and industry. In most of the research papers, they are discussing issues like NPAs in public sector banks and private sector banks, the reasons behind NPAs and how to solve the NPA problem. There was no study conducted to analyze how much deployment of gross bank credit by major sectors and the amount of NPAs created by each sector. We can also analyze the reasons behind the NPA in each sector and how to solve the problem sector-wise. It helps us to find the most problematic sector and take remedial actions accordingly.

2.2. Objectives of the study

The objectives of the study are as below:

- to identify and analyze the factors responsible for NPA;
- to suggest various remedial measures for NPA management;
- to evaluate the financial performance of the selected public sector banks and private sector banks in India on a comparative basis with the help of relevant ratios using the CAMEL model from 2008 to 2018.

3. RESEARCH METHODOLOGY

This study focuses on the comparison of factors effecting non-performing assets of banks in India. The branches of banks selected for the study are having higher NPA. The banks selected for the study are State Bank of India (SBI), Union Bank of India, Indian Overseas Bank, Oriental Bank of Commerce, UCO Bank, Canara Bank, Punjab National Bank (PNB), HDFC Bank, Axis Bank, ICICI Bank, IndusInd Bank, ING Vysya Bank Ltd., Kotak Mahindra Bank Ltd, and Yes Bank Ltd. For this research work, primary data was collected through questionnaires and personal interactions with bank officers. Judgement sampling was used to collect the data from the middle-level managers. For the study, secondary data were collected from the Reserve Bank of India's annual report, statistical tables related to the banks in India and currency and finance reports. NPA articles and papers published in various business journals, magazines, newspapers, periodicals have been studied and information has been used on the internet and other sources. An attempt is made through this research work to find the causes of non-performing loans by considering a set of 50 variables and provide the necessary measures for NPA management.

All the data collected through questionnaires was tabulated. For data analysis, statistical software SPSS 17 was used. This software helps to run statistical tests. Once we run a statistical test, all associated outputs are displayed in the data output file. In this research work, factor analysis is used as it helps to reduce the number of variables and groups variables having similar characteristics. For Analyzing the NPA through the CAMEL model the information for the selected banking companies for the period 2008 to 2018 has been collected from secondary sources and RBI database. For analyzing the information, the technique of ratio analysis using the CAMEL model, rank analysis and statistical techniques have been applied. The financial institutions selected for the study have higher NPA and are top banks in their sector.

The questionnaires were filled up by 350 middle-level managers of selected banks from northern states of India. This study was conducted by collecting responses personally, telephonically and through email. In drafting, questionnaires suggestions from bank officers were also incorporated. The responses from questionnaires were collected by visiting 115 branches and 10 regional offices of banks.

4. BANKS IN INDIA

The Indian banking system consists of 27 public sector banks, 21 private sector banks, 49 foreign banks, 56 rural regional banks, 1562 municipal cooperative banks, and 94,384 rural cooperative banks, in addition to credit institutions. Towards the end of the second quarter of 2012, the total credit

extended by commercial banks reached 90,579.89 billion rupees ($ 1,290.68 billion), and deposits rose to $ 118,501.82 billion. The assets of public sector banks amounted to 1 557.04 billion. Indian banks are increasingly focusing on adopting an integrated approach to risk management. Banks have already adopted the Basel II International Banking Supervision Agreement, and most banks are now in compliance with Basel III capital requirements, which expire on March 31, 2019. The Reserve Bank of India (RBI) has decided to create a public credit register (PCR), a comprehensive credit information database available to all stakeholders. The Ordinance on the Insolvency and Bankruptcy Code (amendment), a draft law for 2017 has been adopted and is expected to strengthen the banking sector.

4.1. Basel norms

Banks lend different types of borrowers and everyone at their own risk. They lend from the public deposits, as well as money raised from the market – equity and debt. The mediation activity exposes the bank to various risks. Cases of major bank collapse due to their inability to maintain risk exposures are readily available. Therefore, banks must keep aside a certain percentage of the capital as collateral against the risk of non-recovery. The Basel Committee has drafted norms called Basel norms for banking to deal with risk.

Basel is a city in Switzerland. It is the headquarters of the BIS, which promotes cooperation between central banks with a common goal of financial stability and common banking regulations. Every two months the BIS hosts a meeting of the governor and senior officials of the central banks of the member states.

The Basel guidelines refer to broad supervisory standards formulated by these groups of central banks – the Basel Committee on Banking Supervision (BCBS). The set of the BCBS Agreement, which focuses mainly on the risks to banks and the financial system, is called the Basel/Basel norm. The purpose of the agreement is to ensure that financial institutions have sufficient capital at the expense of the liabilities and incur unexpected losses. India has adopted the Basel Banking Rules. In fact, according to several parameters, the RBI has set stringent norms compared to the norms prescribed by the BCBS.

Basel I:

In 1988 BCBS introduced a capital measurement system called the Basel Capital Accord, also called Basel I. It focuses almost entirely on credit risk. It defines the capital and the structure of risk weights for banks. The minimum capital requirement is fixed at 8% of risk-weighted assets (RWA). RWA means assets with different risk profiles.

Assets of banks were classified and grouped into five categories according to credit risk, carrying risk weights of:

- 0% (for example cash, a home country debt like treasuries);
- 20% (securitizations such as MBS rated AAA);
- 50%;
- 100%;
- some assets are given no rating.

Basel II:

In 2004 Basel II guidelines from the BCBS were published, which were considered as improved and reformed versions of the Basel Agreement. The guidelines were based on three parameters:

1. Banks should maintain a minimum capital adequacy requirement of 8% of risky assets.
2. It is necessary for banks to develop and use better risk management techniques in monitoring and managing all three types of risks.
3. Banks must necessarily disclose their exposure to risk, and so on of the central bank.

Basel III:

Basel III published in December 2010, is the third in the Basel series of agreements. These guidelines were introduced in response to the 2008 financial crisis. These agreements address the risk management aspects of the banking sector. In short, we can say that Basel III is the global regulatory standard for banks' capital adequacy, stress tests, and market liquidity risk. It improves the ability of the banking sector to absorb shocks arising from financial and economic stress, regardless of source; improves risk management and governance; strengthens bank transparency and disclosure.

4.2. The Insolvency and Bankruptcy Code

The Insolvency and Bankruptcy Code (IBC), 2016 is the Indian bankruptcy law, which seeks to consolidate the existing framework by creating a single insolvency and insolvency law. The Bankruptcy Code is a decision to suspend bankruptcy, which is currently a long process and does not offer an economically viable agreement. Strong insolvency framework in which the costs and timing that are made is minimized in India. The Code will be able to protect the interests of small investors and make the process of doing business a less cumbersome process. Bankruptcy is a legal status that is usually imposed by a court, a firm or a natural person unable to meet debt obligations. The new bankruptcy bill of India is trying to create a formal insolvency resolution process (IRP) for businesses either by creating a viable survival mechanism or by ensuring their quick liquidation. When the IRP is included, creditors' requests are frozen for 180 days, during which they will hear suggestions for revival and decide on their future course of action. Within these 180 days, 75% of creditors have to agree to a revival plan. If this minimum threshold is not met, the company automatically goes into liquidation. If three-quarters of the creditors decide that the case is complicated and cannot be dealt with within 180 days, the judge may grant a one-time extension of up to 90 days to the trial.

Table 1. Public sector banks

Year	*Gross advances*	*Gross NPAs*
2013	40559	1559
2014	45904.5838	2167.3919
2015	48452.69	2627.45
2016	50821.56	5020.68
2017	51422.24	6410.56

Note: Amount in billion.

Figure 1. Public sector banks (2013-2017)

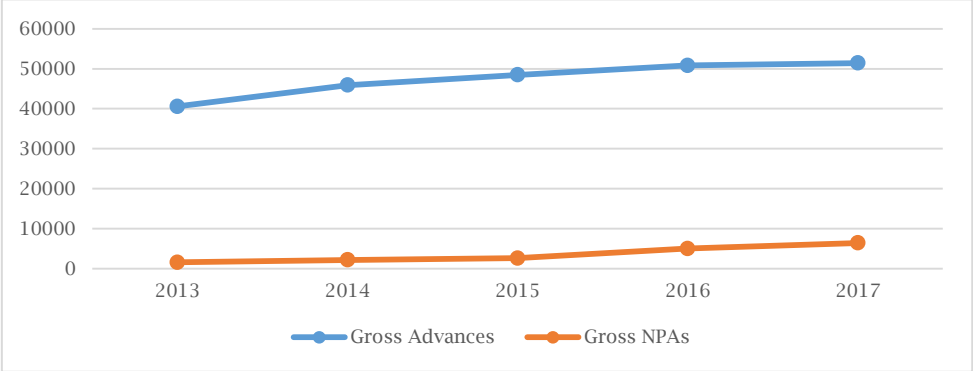


Figure 1 is related to the gross advance and gross NPAs of public sector banks from the year 2013 to 2017. In the year 2013, the gross advance was 40559 billion and gross NPA was 1559 billion. The gross NPA was 3.8% of the gross advance. In the year 2017, the gross advance was increased to 51422.24 billion and the gross NPA also increased to 6410.56 billion. The gross NPA was 12.46% of the gross advance. When we analyze the whole data we can find out an increase in gross NPA percentage every year. The current trend of increasing NPA is not good for public banks.

Table 2. Private sector banks

Year	*Gross advances*	*Gross NPAs*
2013	10466	200
2014	12117.31	227.4386
2015	14373.39	315.76
2016	17916.81	483.8
2017	21048.8	738.42

Note: Amount in billion.

Figure 2. Private sector banks (2013-2017)

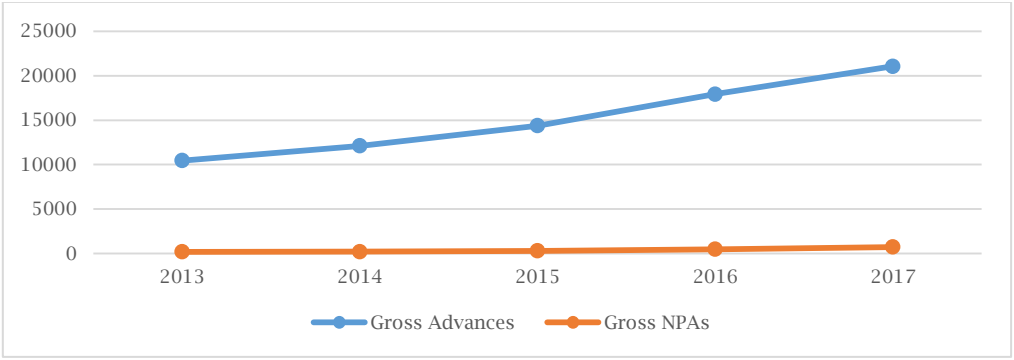
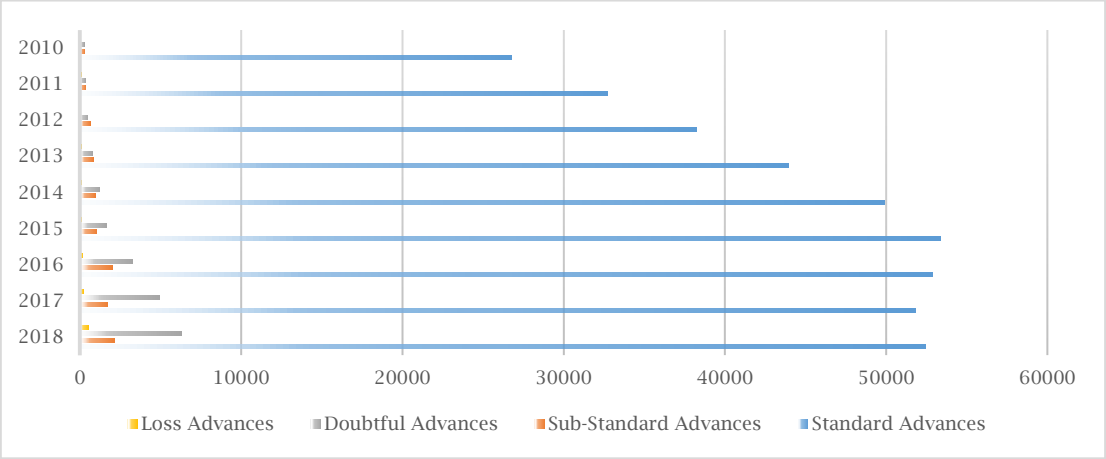


Figure 2 is related to the gross advance and the gross NPAs of the private sector banks from the year 2013 to 2017. In the year 2013, the gross advance was 10466 billion and gross NPA was 200 billion. The gross NPA was 1.91% of the gross advance. In the year 2017, the gross advance was 21048.8 billion and the gross NPA was 738.42 billion. The gross NPA was 3.50% of the gross advance. From the given data we can see a small increase in NPA every year. For now, there is no big problem for the private sector banks but if we can control the slow increase in NPA then it will be beneficial for the banks.

The data is related to the advances given by banks and the amount of gross NPA occurred from the amount. For easy analysis, the banks are classified into mainly four heads and those four heads are public sector banks, private sector banks, foreign banks and scheduled commercial banks.

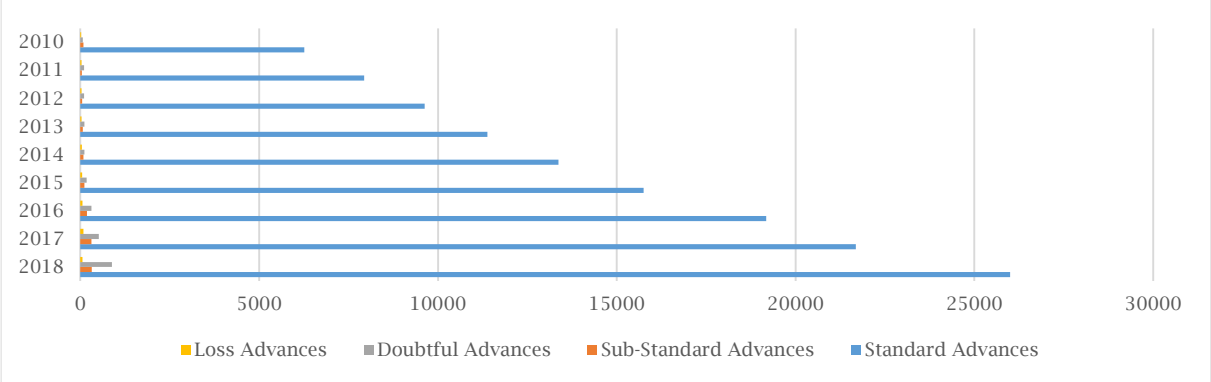
In Figure 3, it shows the amount of advance given by the public sector banks under different heads. The data which has taken for this is from 2010 to 2018. The advance is divided into mainly four heads. They are standard advances, sub-standard advances, doubtful advances, and loss advances. In the year 2010, the standard advance was 26735 billion and it contains the highest amount of advance with a percentage of 94.65. The advance of sub-standard and doubtful was 288 billion and 254 billion. The loss advance was had a 58 billion advance in 2010. The total advance for the public sector bank in the year was 8856 billion. From the 8856 billion the gross NPA was 476 billion which 5.4% of total advance. In 2018, the total advance of public sector banks was 61417 billion and the standard advance was 52461 billion with a 85.4% of total advance. The sub-standard advance and the doubtful advance were 2146 billion and 6277 billion. The loss advance was only 0.9% of total advance with an amount of 533 billion. From the total advance, 14.6% were gross NPA. The percentage of gross NPA in total advance was increasing every year.

Figure 3. Public sector banks (2010-2018)



In Figure 4, the advances related to private sector banks are given. The data from 2010 to 2018 were taken into consideration. The total advances were divided into four based on the standard advance, sub-standard advance, doubtful advance and loss advance. In the year 2010, the standard advance was having a higher amount of advance with 6265 billion. It was 97.3% of the total advance. The sub-standard and doubtful advances were 89 billion and 66 billion. The least amount of advance was 22 billion by loss advance. From the total advance of 6442 billion 176 billion were gross NPA with a percentage of 2.7%. In the year 2018, the standard advance was increased to 26000.28 billion with 95.4% on total advance. The sub-standard advance and doubtful advance were 3118.31 billion and 885.86 billion. The loss advance was having the least contribution with 54.46 billion. From the total advance of 27259 billion, 1259 billion were converted into gross NPA. The percentage of NPA in 2018 was 4.6%. The data is showing an increasing trend of gross NPA.

Figure 4. Private sector banks (2010-2018)



5. DATA ANALYSIS AND INTERPRETATION

The study shows that there is remarkable progress in both the selected major public and private sector banks during the study period. In terms of overall group performance and performance consistency based on CAMEL's ratings, it is observed that as a whole the selected public sector banks performed better in comparison to private sector banks. Public sector banks in India should be efficient in their overall asset management policy, employee performance, cost control and more customer-friendly banking operations to keep pace with India's challenging private sector bank performance and compete with global players. Some of the variables that may affect non-performing assets are kind of advance, the credit value of borrowers, collateral security, the absence of legitimate observing, inadequacy in credit assessment standard, the death of earning member of family and business disappointment/absence of entrepreneurial information on borrower's side. The present system of processing requests for loans by high net worth individuals/corporate houses is fraught with loopholes, which are easily exploited by unscrupulous companies in collusion with corrupt bank officials. The banks have not correctly implemented the relevant information technology tools facilitating the Basel II/III norms for risk management, thus leading to regulatory failures.

The first result obtained with the help of the statistical method is a table of descriptive analysis for all the variables under observation. Looking at the Mean Column given in Table 3 it can be concluded that the possibility of the loan resulting in non-performing assets (NPA) is more in case of personal loan (1.1) as this is rated on a scale of 1 to 5 with 1 rank being highly important. The personal loan is followed by housing loan (4.2) and education loan (4.3).

Table 3. Descriptive statistics

	Mean	*Std. deviation*	*Analysis N*
Personal loan	1.1037	.30528	328
Vehicle loan	4.6738	.49491	328
Housing loan	4.2470	.68847	328
Agriculture loan	4.7348	.44214	328
Business loan	4.5549	.49774	328
Education loan	4.3872	.48785	328
NRI loan	4.7866	.41034	328
Loan to SSI	4.7073	.45569	328
Equipment loan	4.7591	.42825	328
Borrowers total income	4.7439	.51428	328
Borrowers creditworthiness	4.5610	.61773	328
Borrowers credit needs	4.0396	.73880	328
Borrowers line of economic activity	4.0610	.74764	328
Borrowers family background	3.1098	.89519	328
Previous credit record	4.3811	.60921	328
Educational background of Borrower	3.2622	.87691	328
Experience & knowledge of borrower/entrepreneur	4.2530	.55850	328
Growth of the business sector of borrower	3.6280	.48406	328
Willful default by Borrower	2.3445	.57488	328
Lack of supervision and follow up of advances	3.7470	1.04924	328
Lack of proper policy of appraisal	3.8659	.75439	328
Lack of legal support	3.7957	.46700	328
Natural calamities	3.2134	.85503	328
Change of government policies	2.7409	.89677	328
Business failure/lack	2.7195	.84266	328
Death of a key person	3.8598	.89091	328
Economic downturn	3.6402	.72851	328
Effect on sales due to product obsolescence	3.7470	1.00457	328
Inefficient management	3.6128	.62031	328
Political intervention	3.2957	.89223	328
Wrong economic decision by a borrower	2.9116	.93265	328
Manipulation by the borrower	4.2134	.65679	328
Lack of frequent interactions with the borrower	4.3110	.71737	328
Industrial problem	3.9726	.89980	328
Lack of logistics	3.5183	.62047	328
Lack of focus of the top management	3.3354	.96595	328
Managers have a lack of motivation	3.3506	1.18693	328
Lack of manpower	3.0915	1.11325	328
Effort to reduce cost	3.8780	1.01837	328
Lack of effort on the part of managers	3.6189	.88370	328
Work diversification	3.7896	1.07300	328
Work load	3.7043	1.20437	328
Constant dialogue with borrower	4.2835	.99330	328
Borrower to made more accountable	3.7530	.82580	328
Lok adalat	3.3780	.87633	328
Governance in corporate	3.1463	1.05357	328
Debt recovery	3.8201	.83937	328
Tribunal	3.6341	.55877	328
Compromise settlement	4.1098	.92212	328
Securitization of assets	4.7470	.43542	328

The next 4 questions were rated on a scale of 1 to 5 with rank 1 being not important.

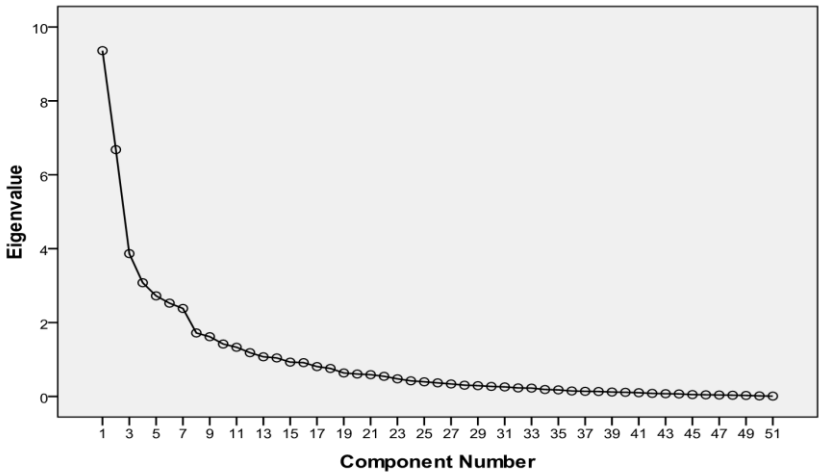
After analyzing the results obtained it can be concluded that borrowers' total income (4.74), borrowers' creditworthiness (4.56) and previous credit records of the borrower (4.38) are important factors that are taken into consideration while approving a loan. After analyzing the results of a question used in questionnaire it was identified that lack of frequent interaction with borrowers (4.3), manipulation by the borrowers (4.2) industrial problem (3.9) and death of the key person (3.8) could be the possible cause of non-performing assets. It was concluded from results obtained from a question asked that efforts to reduce cost (3.9), work diversification (3.8) and workload (3.7) came up as the main reasons which hinder the monitoring of non-performing loans. To reduce NPAs in public and private sector banks in India, the possible measures are securitization of assets (4.74), constant dialogue with the borrower (4.3) and compromise settlement (4.1). This was interpreted with the help of result obtained from a question.

Table 4. KMO and Bartlett's test

KMO measure		.614
Bartlett's test of sphericity	Approx. Chi-Square	16189.274
	Df	1275
	Sig.	.000

KMO and Bartlett's test measures the sampling adequacy. For satisfactory factor analysis, the value of the KMO test should be greater than 0.50. The result obtained from Table 4 shows that the KMO measure is 0.614. The result shows that the factor analysis investigation is satisfactory. Bartlett's test is another step of measuring the quality of the relationship among various variables or factors. From Table 4 it can be analyzed that Bartlett's trial of sphericity is critical and have a likelihood of under 0.05. From Figure 5 it can be analyzed that the curve begins to flatten between factors 13 and 15. Considering the fact that factor 15 has an eigenvalue of less than 1 only 13 factors have been selected.

Figure 5. Scree plot



6. CONCLUSION

The study shows that there is remarkable progress in both the selected major public and private sector banks during the study period. In terms of overall group performance and performance consistency based on CAMEL's ratings, it is observed that as a whole the selected public sector banks performed better than selected private sector banks. PSBs in India should be more efficient in their overall asset management policy, employee performance, cost control and should have more customer-friendly banking operations to keep pace with the challenging performance of the private sector banks in India as well as to compete with the global players. Some of the variables that may affect non-performing assets are kind of advance, the credit value of borrowers, collateral security, absence of legitimate observing, inadequacy in credit assessment standard, death of earning member of family and business disappointment/absence of entrepreneurial information on borrower's side. The present system of processing requests for loans by high net worth individuals/corporate houses is fraught with loopholes, which are easily exploited by unscrupulous companies in collusion with corrupt bank officials. The banks have not correctly implemented the relevant information technology tools facilitating the Basel II/III norms for risk management, thus leading to regulatory failures. The loan having a higher possibility of non-performing assets is personal loans, housing loans, and education loans. The factors like borrowers' total income, creditworthiness, and previous credit records or loan settlement history should be taken into consideration while sanctioning a loan. Some of the reasons for NPA are lack of frequent interaction or follow-up with borrowers, manipulation of income or financial statement by borrowers, industrial problem and death of earning member of the family. Factors like reducing employees to cut costs, work diversification, increased workload and lack of efforts on the part of credit managers or branch managers are the factors that could hinder the effective sanction and monitoring of loans. Important measures for reducing NPAs are a constant dialogue with borrowers, lok adalat, compromise settlements and securitization of assets.

7. RESEARCH LIMITATIONS

The analysis predominantly focuses on northern India and selected a limited number of banks in this area. The result may change if the investigation is reached out to different areas of India.

The paper is an endeavor to recognize if there exists any noteworthy dissimilarity in the variables influencing NPAs public and private sector banks in India and will help in framing up a model for powerful administration of NPAs by Indian banks.

The paper is an endeavor to recognize if there exists any noteworthy dissimilarity in the variables influencing NPAs in financial institutions in India and will help in framing up a model for powerful administration of NPAs by Indian banks.

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