CHAPTER-2
LITERATURE REVIEW

2.1 Non-Performing Assets

The non-performing assets (NPAs) attracted the consideration of academicians in the late 1980’s, when a need to change the banking sector in a drastic way was sensed in Indian economy for its overall development. The research carried during this period emphasised the weaknesses in the operations and functioning of the Indian banking sector and which leads to stress the requisite to incorporate practical rules, regulations and standards for income acknowledgement, asset categorization and provisioning. This type of analysis and the results have helped researcher to a greater extent in exploring the various stages of development in NPA management.

2.1.1 Meaning of NPA

Non-Performing Assets are abbreviated as NPA. In the commercial banks there are different types of assets. All those assets which produce periodical income are called as Performing Assets (PA). While all those assets which do not produce periodical income are called as Non-Performing Assets (NPA). If the borrower fails to repay the principal amount and interest for a certain duration of time in such situation the loans become non-performing assets (NPA). In simple non-performing assets are generally nonperforming loans. In developing country like India, the time duration given for categorizing the asset as NPA is 180 days as compared to the international rules and forms which is 45 days to 90 days.

2.1.2 Definitions of Non-Performing Assets

- It is defined as an asset, which includes a leased asset, it becomes non-performing when it terminates to produce income for the bank.
• A non-performing asset (NPA) is also consist of the loan or an advance where;
  
  o interest and/ or repayment of principal amount remain overdue for a duration of more than 90 days with respect to a term loan,
  
  o The account remains closed for more than 90 days with respect of an Overdraft, Cash or Credit (OD/CC);
  
  o the bill remains unpaid for a duration of more than 90 days in the circumstance of bills procured and discounted,
  
  o the repayment of principal or interest remains unpaid for two crop seasons with shorter duration crops,
  
  o the repayment of principal or interest remains unpaid for one crop season for long period of crops,
  
  o the repayment of principal or interest for liquidity facility remains outstanding for more than 90 days, with respect of a securitization deal commenced in terms of mentioned guidelines on securitization which is given in the article dated February 1, 2006.
  
  o with respect of derivative dealings, the unpaid on receivables representing provides a positive mark-to market value of a unoriginal contract, if these remain overdue for a duration of 90 days from the given due date for payment.

2. With respect to the interest payments, its recommend that banks should, categorized the account as NPA only if the interest due and charged during any quarter is not serviced fully within 90 days from the end of the quarter.

From the various studies it was found that the Non-Performing Assets are also called as Non-Performing Loans. The different bank or finance institution on which repayments or interest
payments are not done at time. Loan is defined as an important asset for a bank as the interest payments and the repayment of the principal amount create a transaction of the cash flows. From the interest payments and repayment banks makes its profits. Banks major consider assets as non-performing if the service is stopped for a period of time. If payments are delayed for a short duration, then a loan is categorized based on the past due and once a payment is further delayed late more than 90 days than the loan is categorized as non-performing. A high level of nonperforming assets when compared to similar investor leads to different problems.

2.2 Types of NPAs
The NPAs basically classified into (i) Gross NPAs, (ii) Net NPAs.

- **Gross NPAs** is defined as the summation of total of all loan assets that are categorized by the NPAs as per RBI polices as on the date of the balance sheet date. It displays the quality of loans made by banks.
  
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  \text{Gross NPAs Ratio} = \frac{\text{Gross NPAs}}{\text{Gross Advances}}.
  \]

- **Net NPAs** are categorized as the NPAs in which the banks subtract the provisions made available for the borrower regarding NPAs.
  
  It illustrates the actual load of banks (Net NPAs = Gross NPAs - Provision/Gross Advances - Provisions).

2.3 Factors for rise in NPAs
The banking sector in India has been going through various challenges of increasing in the NPAs. The challenges are predominant in public sector banks as compared to private sector and foreign banks. The NPAs are increasing due to external and internal factors.

2.3.1 External factors

1. Ineffective recovery - The government of India has numbers of recovery panels, which designated for recovery of loans and advances. Because of the panel’s carelessness and
ineffectiveness in the work the bank face the consequence of non-recovery, which results in the reduction of profitability and liquidity.

2. Wilful defaults - There are nonpayers who are can pay back loans in the given time but are deliberately withdrawing the loan. These groups of borrower need to be identified and appropriate measures should be taken in order to get back the loan prolonged to them in the form of advances and loans.

3. Natural calamities – The most important factor, which is creating shocking conditions in NPAs of the PSBs. India is majorly hit by the natural calamities on frequent bases which leads to the borrowers fails to repay their loans. In such cases the bank has to arrange large amount of provisions so that the loans can be compensated which leads to the fiscal with a minimum profit.

4. Industrial sickness–Inappropriate project controlling and handling, unprofessional management, lack of required resources, and deficiency of advance technology, frequently changing government regulation leads to the industrial sickness. Hence the institution who finance those industries result in ending up with a less recovery of the loans which ultimately reduces their profit and liquidity.

5. Lack of demand–Businesspersons in India could not predict their product demand in market and begins with production which leads to the loads up their product in the warehouse which ultimately results in failing to repay the borrowed money to control the various required activities. In case cases the banks recover the loan by selling of their assets, which covers a minimum label. The banks keep details of the non-recovered section as NPAs and has to prepare suitable action for it.
6. Change on government regulations – the government regulations keep changing with the new government, in such scenario banking sector gets new policies for its operation and management. Thus it has to manage with the changing rules and policies for the regulation of the increasing of NPAs.

7. Directed loans system - The commercial banks are requisite to supply 40% percentage of their credit to priority sectors. Most important sources of NPAs are directed loans which is supplied to the — micro sector as this sector are the most challenging of recoveries especially when some of its units declared as sick or weak.

2.3.2 Internal factors

1. Defective lending process – In this process there are total three cardinal principles of bank dealing with lending, which is followed by the commercial banks from many years firstly principle of safety than principle of liquidity and lastly principle of profitability.

2. Inappropriate technology – because of deficient in technology and management of information system, the decision making on market driven on real time basis are difficult. Appropriate MIS and financial accounting system is not installed in the banks, which results in were poor credit collection, which leads to NPAs. Its recommend that all the branches of the bank should be computerized.

3. Inappropriate swot analysis – The inappropriate strength, weakness, opportunity and threat analysis is one of the different reason for increase in NPAs. Inappropriate swot analysis leads to providing unsecured loans as the banks depend more on the goodness, truthfulness, reliability and financial wellness and credit value of the borrower.

4. Improper credit appraisal system - Improper credit appraisal system for banks is important factor for the increase in NPAs. Because to poor credit appraisal system the
bank give advance loan to those who are incapable in repaying. Its recommend to use appropriate credit appraisal system to decrease the NPAs.

5. Managerial deficiencies – There should be proper scrutinizing process used by the banker to select the borrower, it’s appropriate to considered solid assets to be deposited as the security. In terms of accepting securities banks should consider the: 1. Marketability 2. Acceptability 3. Safety 4. Transferability

6. The banker should follow the principle of diversification of risk based on the famous maxim do not keep all the eggs in one basket, it means that the banker should not grant advances to a few big farms only or to concentrate them in few industries or in a few cities. If a new big customer meets misfortune or certain traders or industries affected adversely, the overall position of the bank will not be affected.

7. Absence of regular industrial visit - The irregularities in spot visit also increases the NPAs. Absence of regularly visit of bank officials to the customer point decreases the collection of interest and principals on the loan. The NPAs due to wilful defaulters can be collected by regular visits.

8. Faulty credit management - Like defective credit in recovery mechanism, lack of professionalism in the work force.

2.4 Impact of NPA on Profitability

The effectiveness of a bank is not reflected only by the size of its balance sheet but also the level of return on its assets. The NPAs do not generate interest income for banks but at the same time banks are required to provide provisions for NPAs from their current profits (Zafar, et al. 2013). The public sector banks are faced with bulging NPAs which results in lower income and higher provisioning for doubtful debts and it will make a dent in their profit margin. In this context of crippling effect on banks operation the slew asset quality is placed as one of the most
important parameters (Vijaya Kumar, 2012) in the measurement of banks performance under the Camel’s supervisory rating system of RBI:

2.4.1 Profitability

NPA means booking of money in terms of bad asset, which occurred due to wrong choice of client. Because of the money getting blocked the prodigality of bank decreases not only by the amount of NPA but NPA lead to opportunity cost also as that much of profit invested in some return earning project/asset. So NPA doesn’t affect current profit but also future stream of profit, which may lead to loss of some long-term beneficial opportunity. Another impact of reduction in profitability is low ROI (return on investment), which adversely affect current earning of bank.

2.4.2 Liquidity

Money is getting blocked, decreased profit lead to lack of enough cash at hand which lead to borrowing money for shortest period of time which lead to additional cost to the company. Difficulty in operating the functions of bank is another cause of NPA due to lack of money.

2.4.3 Involvement of Management

Time and efforts of management is another indirect cost which bank has to bear due to NPA. Time and efforts of management in handling and managing NPA would have diverted to some fruitful activities, which would have given good returns. Now a day’s banks have special employees to deal and handle NPAs, which is additional cost to the bank.

2.4.4 Credit Loss

Bank is facing problem of NPA then it adversely affect the value of bank in terms of market credit. It will lose its goodwill and brand image and credit which have negative impact to the people who are putting their money in the banks.
The most important business implication of the NPAs is that it leads to the credit risk management assuming priority over other aspects of banks functioning. The bank’s whole machinery would thus be pre-occupied with recovery procedures rather than concentrating on expanding business.

    RBI, through various circulars, stipulated guidelines to manage NPA. Thus NPA impact the performance and profitability of banks. The most notable impact of NPA is change in banker’s sentiments which may hinder credit expansion to productive purpose. Banks may incline towards more risk-free investments to avoid and reduce riskiness, which is not conducive for the growth of economy.

NPA results in harmful impact on the return on assets. It happens in the following ways:

1. The interest income of banks will fall and it is to be accounted only on receipt basis.
2. Banks profitability is affected adversely because of the provision of doubtful debts and consequent write off as bad debts.
3. Return on Investment (ROI) is reduced.
4. The cost of capital or Interest on Loan will go up.

    The health of a bank is reflected not only by the size of its balance sheet but also the return on its assets. NPAs generate no interest income for the bank; the bank is required by law to provide for future loan losses arising from its bad assets (at a coverage of 70%), out of current profits. Banks can no longer account the interest on NPA loans as income unless and until it is actually paid by the borrower. This not only affects profitability but also liquidity because now, the bank has fewer funds to lend out or recycle.

    The failure of banks to recover interest and principal payments from NPAs could have some disastrous effects, which are listed below:
1. Owners of banks will not receive a market return on their capital. In the worst case scenario, if the bank fails, owners lose their assets. In modern times, this could affect a broad pool of shareholders.

2. Depositors will not receive a market return on savings. In the worst case scenario, if the bank fails, depositors lose their assets or uninsured balance. Banks will also redistribute losses to other borrowers by charging higher interest rates. Lower deposit rates and higher lending rates repress savings and financial markets, which hampers economic growth.

3. Non-performing loans represent bad investments. NPAs misallocate credit from good projects, which do not receive funding, to failed projects. Bad investments end up in misallocation of capital and, by extension, labour and natural resources. The economy performs below its production potential.

4. Non-performing loans may spill over the banking system and contract the money stock, which may lead to a financial crisis. This can happen if:
   
   4.1. Many debtors fail to pay debts and the banks begin to realize liquidity deficiencies. These deficiencies can block payments across the nation.

   4.2. Due to illiquidity, banks are unable to pay depositors—for example, cash their pay cheques. This will lead to financial panic.

   4.3. Under-capitalised banks exceed the bank’s capital base.

NPA impact the performance and profitability of banks. The most notable impact of NPA is change in banker’s sentiments which may hinder credit expansion to productive purpose. Banks may incline towards more risk-free investments to avoid and reduce riskiness, which is not conducive for the growth of economy. If the level of NPAs is not controlled timely they will:
1. Reduce the earning capacity of assets and badly affect the ROI.
2. The cost of capital will go up.
3. The assets and liability mismatch will widen.
4. Higher provisioning requirement on mounting NPAs adversely affect capital adequacy ratio and banks profitability.
5. The economic value additions (EVA) by banks get upset because EVA is equal to the net operating profit minus cost of capital.
6. NPAs causes to decrease the value of share sometimes even below their book value in the capital market.
7. NPAs affect the risk facing ability of banks.
8. The assets and liability mismatch will widen.

   High NPAs degrade a bank’s credit rating, lowering its credibility as well as its ability to raise fresh capital. Today, the incidence of high NPAs in the Indian banking industry points to a deteriorating credit market. As per law, every bank must maintain a Capital Adequacy Ratio (CAR), which is the ratio of total capital to risk weighted assets, of 9% (10% for new Private Banks) or higher. As NPAs go up, so do the aggregated risk weighted assets, forcing the bank to allocate further capital in order to maintain the ratio. Today, commercial banks in India are struggling to meet CAR norms.

2.5 Measures for Overcoming NPA

   It is proved beyond doubt that NPAs in bank ought to be kept at the lowest level. Two pronged approaches viz., (i) Preventive management and (ii) Curative management would be necessary for controlling NPAs.

2.5.1 Preventive Management

   - Credit Appraisal and Risk Management Mechanism
A lasting solution to the problem of NPAs can be achieved only with proper credit assessment and risk management mechanism (Chakraborty, 2012). The documentation of credit policy and credit audit immediately after the sanction is necessary to upgrade the quality of credit appraisal in banks. In a situation of liquidity overhang the enthusiasm of the banking system is to increase lending with compromise on asset quality, raising concern about adverse selection and potential danger of addition to the NPAs stock. It is necessary that the banking system is equipped with prudential norms to minimize if not completely avoid the problem of credit risk.

- **Organizational Reformation**

  With regard to internal factors leading to NPAs the onus for containing the same rest with the bank themselves. These will necessities organizational restructuring improvement in the managerial efficiency, skill up gradation for proper assessment of credit worthiness and a change in the attitude of the banks towards legal action, which is traditionally viewed as a measure of the last resort.

- **Reduce Dependence on Interest**

  The Indian banks are largely depending upon lending and investments. The banks in the developed countries do not depend upon this income whereas 86 percent of income of Indian banks is accounted from interest and the rest of the income is fee based (Balasubramaniam, 2012). The banker can earn sufficient net margin by investing in safer securities though not at high rate of interest. It facilitates for limiting of high level of NPAs gradually. It is possible that average yield on loans and advances net default provisions and services costs do not exceed the average yield on safety securities because of the absence of risk and service cost.

- **Potential and Borderline NPA’s under Check**
The potential and borderline accounts require quick diagnosis and remedial measures so that they do not step into NPAs categories. The auditors of the banking companies must monitor all outstanding accounts in respect of accounts enjoying credit limits beyond cut-off points, so that new sub-standard assets can be kept under check.

- **Restorative Management**

  The curative measures are designed to maximize recoveries so that banks funds locked up in NPAs are released for recycling. The Central government and RBI have taken steps for arresting incidence of fresh NPAs and creating legal and regulatory environment to facilitate the recovery of existing NPAs of banks. They are: Debt Recovery Tribunals (DRT): In order to expedite speedy disposal of high value claims of banks Debt Recovery Tribunals were setup. The Central Government has amended the recovery of debts due to banks and financial institutions Act in January 2000 for enhancing the effectiveness of DRTs. The provisions for placement of more than one recovery officer, power to attach dependents property before judgment, penal provision for disobedience of Tribunals order and appointment of receiver with powers of realization, management, protection and preservation of property are expected to provide necessary teeth to the DRTs and speed up the recovery of NPAs in times to come.

- **Lok Adalats**

  The Lok adalats institutions help banks to settle disputes involving accounts in doubtful and loss categories. These are proved to be an effective institution for settlement of dues in respect of smaller loans. The Lok adalats and Debt Recovery Tribunals have been empowered to organize Lok adalats to decide for NPAs of Rs. 10 lakhs and above.

- **Asset Reconstruction Company (ARC)**
The Narasimham Committee on financial system (1991) has recommended for setting up of Asset Reconstruction Funds (ARF). The following concerns were expressed by the committee:

- It was felt that centralized all India fund will severely handicap in its recovery efforts by lack of widespread geographical reach which individual bank possess and.
- Given the large fiscal deficits, there will be a problem of financing the ARF. Subsequently, the Narasimham committee on banking sector reforms has recommended for transfer of sticky assets of banks to the ARC. Thereafter the Verma committee on restructuring weak public sector banks has also viewed the separation of NPAs and its transfer thereafter to the ARF is an important element in a comprehensive restructuring strategy for weak banks. In recognition of the same ARC Bill was passed to regulate Securitization and Reconstruction of financial assets and enforcement of security interest.

The ICICI BANK has promoted the country’s first Asset Reconstruction Company. The company is specialized in recovery and liquidation of assets. The NPAs can be assigned to ARC by banks at a discounted price. The objective of ARC is floating of bonds and making necessary steps for recovery of NPAs from the borrowers directly. This enables a onetime clearing of balance sheet of banks by sticky loans.

- **Corporate Debt Restructuring (CDR)**

  The corporate debt restructuring is one of the methods suggested for the reduction of NPAs. Its objective is to ensure a timely and transparent mechanism for restructure of corporate debts of viable corporate entities affected by the contributing factors outside the purview of BIFR, DRT and other legal proceedings for the benefit of concerned. The CDR has three tier structure viz., a. CDR standing forum b. CDR empowered group and
c. CDR cell. The Mechanism of the CDR: It is a voluntary system based on debtors and creditors agreement. It will not apply to accounts involving one financial institution or one bank instead it covers multiple banking accounts, syndication, consortium accounts with outstanding exposure of Rs. 20 crores and above by banks and institutions. The CDR system is applicable to standard and sub-standard accounts with potential cases of NPAs getting a priority. In addition to the steps taken by the RBI and Government of India for arresting the incidence of new NPAs and creating legal and regulatory environment to facilitate for the recovery of existing NPAs of banks, the following measures were initiated for reduction of NPAs. Circulation of Information of Defaulters: The RBI has put in place a system for periodical circulation of details of willful defaulters of banks and financial institutions. The RBI also publishes a list of borrowers (with outstanding aggregate rupees one crore and above) against whom banks and financial institutions in recovery of funds have filed suits as on 31st March every year. It will serve as a caution list while considering a request for new or additional credit limits from defaulting borrowing units and also from the directors, proprietors and partners of these entities.

- **Recovery Action against Large NPAs**

  The RBI has directed the PSBs to examine all cases of wilful default of Rs. One crore and above and file criminal cases against wilful defaulters. The board of directors are requested to review NPAs accounts of one crore and above with special reference to fix staff accountability in individually.

- **Credit Information Bureau**
The institutionalization of information sharing arrangement is now possible through the newly formed Credit Information Bureau of India Limited (CIBIL) it was set up in January 2001, by SBI, HDFC, and two foreign technology partners. This will prevent those who take advantage of lack of system of information sharing amongst leading institutions to borrow large amount against same assets and property, which has in no measures contributed to the incremental of NPAs of banks.

Today, NPAs are a major drag on a bank’s profitability. The reduction of NPAs to a significantly low level can strengthen the profitability of banks. A few suggestions that could help banks to do so are listed below:

1. Recovery of loans should be linked with employees’ performance appraisal; every bank as well as each branch must choose its own way to implement this.

2. Organisation of loan recovery camps with the help of local revenue authorities and Gram Panchayats can yield results.

3. A special recovery cell with committed staff and extra incentives on the basis of recovery performance should be set up.

4. Strengthening the Debt Recovery Tribunals (DRTs) with adequate staff and legal support can be considered. Borrowers that have small loans for recovery do not come under the DRTs at present. These tribunals should deal with all types of loans, and their geographical coverage should be extended.

5. Only those banks that are strongly committed to productivity and profitability should be transferred to the Asset Reconstruction Fund. Such banks may be allowed to write off a large volume of NPAs in a phased manner. The government should provide this benefit to such banks.
6. Banks should get some amount of operational freedom for lending. The stipulation of ‘priority sector’ lending can be relaxed on a case-to-case basis.

7. To improve the quality of lending, the design of lending schemes and the appraisal technique procedure for disbursement of loans should be based on applied research.

8. Frequent exchange of information within and amongst banks in each region and across the regions should be encouraged.

9. An increase in the non-performing assets is not healthy for any bank. RBI has taken many steps to minimise the NPAs in India. For example, it has ordered banks to collect the interest on jewel loans once in three months. Banks must monitor their lending activities closely to minimise NPAs. They must use their funds optimally and follow innovative methods for debt collection.

2.6 Various Committee Reports on NPA

The following section discusses in brief on the various committees that have been formed and the findings of the committees.

2.6.1 Narsimhan Committee – Reform I (1991)

The development of the financial sector is a major achievement and it has contributed significantly to the increase in our savings rate, especially of the household sector. The terms of reference were to examine the existing structure of the financial system and its various components and to make recommendations for improving the efficiency and effectiveness of the system with particular reference to the economy of operations, accountability and profitability of the commercial banks and financial institutions.
2.6.2 **Narasimhan Committee – Reform II (1998):**

Reform of the Indian banking sector is now under way following the recommendations of the Committee on Financial System (CFS), which reported in 1991. The second generation of reform could be conveniently looked at in terms of 3 broad interrelated issues and actions that need to be taken to strengthen the foundation of the banking system and structural changes in the system suggested capital adequacy, asset quality, prudential norms, systems and methods in banks.

2.6.3 **Khan Committee on Financial Reforms (1997)**

Keeping in view the need for evolving an efficient and competitive financial system. RBI had constituted a 7 member Working Group in 1997 under the Chairmanship of Shri S.H. Khan, Chairman and Managing Director of IDBI with the terms of reference were to review the Role, Structure and Operations of DFIs and Commercial Banks in the emerging operating environment and suggest changes and to examine whether DFIs could be given increased access to short term funds and the regulatory framework needed for the purpose.

2.6.4 **Tarapore Committee on Capital A/c Convertibility (1997)**

The Union Finance Minister, Shri P. Chidambaram, in his Budget Speech for 1997-98 had indicated that the regulations governing foreign exchange transactions need to be modernized and replaced by a new law consistent with the objective of progressively liberalizing capital account transactions. Committee on Capital Account Convertibility under the Chairmanship of Shri S.S. Tarapore was appointed. The terms of reference were to review the international experience in relation to Capital Account Convertibility and to indicate the preconditions for introduction of full Capital Account Convertibility and to specify the consequences and time frame in which such measures are to be taken.
2.6.5 **Pannirselvam Committee on NPA (1998)**

Banking Division constituted a 3 Member Committee under the chairmanship of Shri A.T. Pannirselvam, Chairman, IBA and Chairman and Managing Director, Union Bank of India. The terms of reference assigned to the above Committee were Causes of NPAs, factors for slump in recovery of loans; measures to be taken for effective recovery of bank dues and reduction of NPAs and banks wise study on factors responsible for the NPAs and banks specific suggestions for recovery.

2.6.6 **RBI Panel on DRT’s (1998)**

The RBI had set up Working Group in the month of March 1998 to review the functioning of Debt Recovery Tribunals under the Chairmanship of Shri N.V. Deshpande. The objectives of the panel were to look into various issues and problems confronting the functioning of DRTs in expeditious recovery of banks dues and to examine the existing statutory provisions and suggest necessary amendments to the Recovery of Debts due to Banks and Financial Institutions Act, 1993 and Rules framed there under with a view to improving efficacy of legal machinery.

2.6.7 **Special Report on NPA by RBI (July 1999)**

In order to study issues relating to NPAs in Commercial Banks, RBI has prepared a report in the Department of Banking Supervision. Shri A.Q. Siddiqui, Chief General Manager, was incharge of this project whereas, Shri A.S. Rao and R.M. Thakkar, both Deputy General Managers, assisted this project. This study has been carried out using the RBI inspection reports on Banks, information / data obtained from public sector banks and 6 private sectors banks and those collected from the files on borrowable accounts maintained in banks for assessing comparative position on NPAs and their recoveries in banks. The causes for sickness /weak
performance and consequently the account turning NPA in respect of Public sector banks and private sector banks.

2.7 Management of NPA

“Management of non-performing assets (NPAs) by banks remains an area of concern, particularly, due to the likelihood of deterioration in the quality of restructured advances,” (RBI Annual currency report March 31, 2010). Nonperforming assets are an unavoidable burden for each banking industry. The success of banks depends upon methods of managing NPAs and keeping them within tolerance level. Hence, to change the curve of NPAs, there is only one technique that an effective monitoring and control policy should be planned and executed which is aided by proper legal reforms. The problem of NPAs has been studied over the years to bring insight into the problem of NPAs, its cause and solution. There are numerous empirical studies conducted on the issue of Non-performing Assets of commercial banks in India as well as abroad. Swamy (2001) premeditated the comparative performance of different bank groups since 1995-96 to 1999-2000 taking parameters like NPAs and capital adequacy norms. The risk of erosion in asset value due to simple default or non-payment of dues by the borrowers is called as credit risk or default risk (Sarma, 1996). The loss of income from NPAs not only brings down the level of income of the banks but also hampers them from quoting finer Prime Lending Rates (PLR) (Jain and Balachandran, 1997). Banking business is exposed to various risks such as interest risk, market risk, credit risk, operational risk, liquidity risk and management risk. Iyer (1999) examined NPAs in India in Global context, the similarities, dissimilarities and remedial measure, but credit risk stands out as the most unfavourable of them all. Mohan (2003) indicted lazy banking while critically reflecting on banks investment portfolio and lending policy. A measured view is that banks’ lending policy could have crucial influence on nonperforming loans and crucial issues pertaining to credit of Indian banks (Reddy, 2004). Sathya (2005)
examined the effect of privatization of banks on performance and efficiency. Jimenez and Saurina (2006) observed the Spanish banking sector from 1984 to 2003, they provided evidence that NPLs are determined by GDP growth, high real interest rates and relaxed credit terms. This study attributes the latter to disaster myopia, herd behaviour and agency problems that may attract bank managers to lend excessively during boom periods. Banking crisis exists in a country if the level of NPAs strokes 10 percent of GDP (Khan and Bishnoi, 2001). Though the banking reforms organized by the Narasimham Committee have been proceeding in a phased manner in the country, the high level of NPAs creates a serious obstacle for pushing through the reforms. Velayudham, (2001) and Malyadri (2011) examined the state of affairs of the Non-performing assets of public sector banks and private sector banks in India with special reference to the weaker sections.

Most studies are based on PSBs and NPA/NPL which also confirmed the conversing impact of non-performing assets (NPAs) or non-performing loans (NPLs) on the productivity of public sector banks, for example, Ranjan R. and Dhal S. (2003) and Misra B. and Dhal S. (2009). These studies supported the usage of panel regression Model to the relation between profitability and echelon of non-performing assets.

RBI (2010) in its annual report pointed that “management of NPA remains an area of concern, particularly, due to the likelihood of deterioration of the quality of restructured advances”. Murinde, V and Yaseen, H (2004) proposed the age old tactics to control and regulate the banks are not favourable for effective management of NPA. These strategies supported the view that the presence of regulation on capital adequacy acts as a critical facilitator for long-term financing and solvency position of the concerned banks. This helps the banks, not to face bankruptcies and their adverse externalities on the financial system. The capital or net-worth
works as a cushion holding losses and failure. Instead of coming out with measure to fight the NPA issues, the traditional practices pushes to protect the benefits of deposits through holding an adequate capital. The adopted practices have affected the availability of capital for industrious purpose, as the banks were required to keep the funds as reserves and not able to lend them.

Measures to soften the risk of credit risk usually comprises of well specified policies. These policies captures the credit risk management viewpoints of the banks and the variables within which the credit risk is to be organised. Preferably an initiating point for enhancing the effectiveness of monitoring and controlling the banking system in the province must comprise the identification of credit shortage.

The strengthening of the financial system has been one of the key concerns in the evolving and developing countries. The reason for this is that an all-encompassing financial structure serves as an important conduit for realising economic development. This is possible through deployment of financial savings in industrious use and reducing numerous threats. Borbora, RR (2007) highlighted that the vital constituents of an effective NPA management system are i) speedy identification of NPA, ii) their suppression at a lowest level and iii) guaranting minimum effect of NPA on the financials.

**Panta, R** (2007) observed that lending of all types encompasses three phases where preferences needs to be exercised (a) Appraisal and evaluation of the proposal (b) Judicious monitoring and evaluation and (c) Appropriate assessment of withdrawal choice and modality.

Various researchers have highlighted that the need to apply rational thinking during lending activity. Panta R (2007) stated that most of the banks implement regulated methodology that supports subjectivity. The same has made the banks to act too liberal on all proposals
asserting on collaterals, without taking into account any other capabilities of the proposal and the entrepreneur’s competence.

**Brownbridge** (1998) found that most of the bank failures were caused by non-performing loans. Arrears affecting more than half the loan portfolios were typical of the failed banks. Many of the bad debts were attributable to moral hazard: the adverse incentives on bank owners to adopt imprudent lending strategies, in particular insider lending and lending at high interest rates to borrowers in the most risky segments of the credit markets.

**Bloem and Gorter** (2001) suggested that a more or less predictable level of non-performing loans, though it may vary slightly from year to year, is caused by an inevitable number of ‘wrong economic decisions by individuals and plain bad luck (inclement weather, unexpected price changes for certain products, etc.). Under such circumstances, the holders of loans can make an allowance for a normal share of non-performance in the form of bad loan provisions, or they may spread the risk by taking out insurance. Enterprises may well be able to pass a large portion of these costs to customers in the form of higher prices. For instance, the interest margin applied by financial institutions will include a premium for the risk of non-performance on granted loans. At this time, banks non-performing loans increase, profits decline and substantial losses to capital may become apparent. Eventually, the economy reaches a trough and turns towards a new expansionary phase, as a result the risk of future losses reaches a low point, even though banks may still appear relatively unhealthy at this stage in the cycle.

**According to Gorter and Bloem** (2002) non-performing loans are mainly caused by an inevitable number of wrong economic decisions by individuals and plain bad luck (inclement weather, unexpected price changes for certain products, etc.). Under such circumstances, the
holders of loans can make an allowance for a normal share of non-performance in the form of bad loan provisions, or they may spread the risk by taking out insurance.

**Petya Koeva** (2003), his study on the Performance of Indian Banks states that new empirical evidence on the impact of financial liberalization on the performance of Indian commercial banks. The analysis focuses on examining the behavior and determinants of bank intermediation costs and profitability during the liberalization period. The empirical results suggest that ownership type has a significant effect on some performance indicators and that the observed increase in competition during financial liberalization has been associated with lower intermediation costs and profitability of the Indian banks.

**Das and Ghosh** (2003) empirically examined non-performing loans of India’s public sector banks in terms of various indicators such as asset size, credit growth and macroeconomic condition, and operating efficiency indicators. Sergio (1996) in a study of non-performing loans in Italy found evidence that, an increase in the riskiness of loan assets is rooted in a bank’s lending policy adducing to relatively unselective and inadequate assessment of sectoral prospects.

**Vradi et.al** (2006), his study on Measurement of efficiency of bank in India concluded that in modern world performance of banking is more important to stable the economy in order to see the efficiency of Indian banks we have seen the fore indicators i.e. profitability, productivity, assets, quality and financial management for all banks includes public sector, private sector banks in India for the period 2000 and 1999 to 2002-2003. For measuring efficiency of banks we have adopted development envelopment analysis and found that public sectors banks are more efficient than other banks in India.
Brijesh K. Saho et.al (2007), attempts to examine, the performance trends of the Indian commercial banks for the period: 1997-98 - 2004-05. Our broad empirical findings are indicative in many ways. First, the increasing average annual trends in technical efficiency for all ownership groups indicate an affirmative gesture about the effect of the reform process on the performance of the Indian banking sector. Second, the higher cost efficiency accrual of private banks over nationalized banks indicate that nationalized banks, though old, do not reflect their learning experience in their cost minimizing behavior due to -inefficiency factors arising from government ownership. This finding also highlights the possible stronger disciplining role played by the capital market indicating a strong link between market for corporate control and efficiency of private enterprise assumed by property right hypothesis. And, finally, concerning the scale elasticity behavior, the technology and market-based results differ significantly supporting the empirical distinction between returns to scale and economies of scale, often used interchangeably in the literature.

Roma Mitra et.al (2008) proposed a model and evaluated the efficiency of 50 Indian banks. The Inefficiency can be analysed and quantified for every evaluated unit. The aim of this paper is to estimate and compare efficiency of the banking sector in India. The analysis is supposed to verify or reject the hypothesis whether the banking sector fulfils its intermediation function sufficiently to compete with the global players. The results are insightful to the financial policy planner as it identifies priority areas for different banks, which can improve the performance.

B. Satish Kumar (2008), states that private sector banks play an important role in development of Indian economy. After liberalization the banking industry underwent major changes. The economic reforms totally have changed the banking sector. RBI permitted new
banks to be started in the private sector as per the recommendation of Narashiman committee. The Indian banking industry was dominated by public sector banks. But now the situations have changed new generation banks with used of technology and professional management has gained a reasonable position in the banking industry.

**Karunakar et.al** (2008), studied the important aspect of norms and guidelines for making the whole sector vibrant and competitive. The problem of losses and lower profitability of NPA and liability mismatch in Banks and financial sector depend on how various risks are managed in their business. Besides capital to risk Weightage assets ratio of public sector banks, management of credit risk and measures to control the menace of NPAs are also discussed. The lasting solution to the problem of NPAs can be achieved only with proper credit assessment and risk management mechanism. It is better to avoid NPAs at the market stage of credit consolidation by putting in place of rigorous and appropriate credit appraisal mechanisms.

**Nelson et.al** (2009), studies that many financial institutions that collapsed in Kenya since 1986 failed due to non-performing loans, this study investigated the causes of nonperforming loans, the actions that bank managers have taken to mitigate that problem and the level of success of such actions. Using a sample of 30 managers selected from the ten largest banks the study found that national economic downturn was perceived as the most important external factor. Customer failure to disclose vital information during the loan application process was considered to be the main customer specific factor. The study further found that lack of an aggressive debt collection policy was perceived as the main bank specific factor, contributing to the non performing debt problem in Kenya.

**Kevin Greenidge et.al** (2010), studied the evaluation of non-performing loans is of great importance given its association with bank failure and financial crises, and it should therefore be
of interest to developing countries. The purpose of this paper was to build a multivariate model, incorporating macroeconomic and bank-specific variables, to forecast non-performing loans in the banking sector of Barbados. On an aggregate level, our model outperforms a simple random walk model on all forecast horizons, while for individual banks; these forecasts tend to be more accurate for longer prediction periods only.

Bidani (2002) stated that banks are concerned with their heavy NPA portfolio which was impairing their profitability and are taking all possible steps to contain the same. Banks have achieved a reasonable degree of success to bring down their existing NPAs but due to heavy slippage of standard accounts to NPA category the overall position continued to deteriorate. The main reasons responsible for such a situation include - slow economic and industrial growth, slump in capital market, financial indiscipline, wilful defaults by the borrowers, overburdened and slow judiciary, competition faced by local industries from the multi-nationals, lack of support to the borrowers from the banks at the time of the need, etc. In this book, the author has made an effort to deal with the practical aspects of the problem of management of NPAs right from identification stage till recovery of the dues including other aspects connected with the subject like asset classification, assessment of provision, pre-sanction appraisal and post-sanction appraisal and post sanction supervision, monitoring system for existing and likely NPAs, capital adequacy, reduction of NPAs, rehabilitation of sick non-performing units etc.

Rajput (2003) stated that decade of nineties in last century brought revolution in Indian banking sector. Banks were made free from the clutches of hefty regulations and allowed to decide their own fate. Author suggested that Indian banks especially public sector banks will have to learn to live up with competitive environment. They must make persistent efforts to improve their profitability. On the revenue side, they should increase non-interest income by
diversifying their operation into Para banking activities on the lines of new private banks. On the expenditure side, they must bring efficiency in their operations to minimize cost and strive hard to control the booming NPAs.

**Kumar** (2014) discussed in detail the need, process, summary, positive as well as negative aspects of the Act. He analysed that this Act empowered banks and financial institutions to directly enforce the security interest which was pledged to them at the time of sanctioning the loan without going through the judicial process of DRT or Civil Courts.

**Misra** (2003) said that the profitability of the financial institutions largely depended upon the level of income generated through optimum use of the assets after paying the cost of fund for acquiring them and other administrative costs involved therein. Redefined objective of managing NPAs through profit maximization approach and risk management approach were suggested. The author further concluded that the high rise in gross and net NPAs of the banking sector in the recent past was at an exponential rate giving an indication that present ongoing recession was taking a heavy toll on corporate credit discipline.

**Reddy** (2003) confirmed that financial stability is an essential prerequisite for sustainable long-term economic growth of any country. Banking system being the largest component of financial system should take care to immunize itself from the macro economic shocks through maintaining optimal and quality asset portfolios to achieve the objective of smooth flow of funds into the most economic channels. The non-performing assets were posing a serious threat to this objective of the banking system. The authors concluded that macro and micro level reforms and adherence to cleaner practices on the part of banks, regulator, borrowers and government will enable the system to get rid of the NPAs overhang and let financial system be an essential adjunct for economic growth.
Khan and Singh (2005) evaluated the performance of DRTs in recovery of bank dues during the years 1996 to 2004. They have highlighted major defects in DRT system and also gave recommendations to overcome them. They have concluded that the DRTs were effective in recovery of banks' dues to a certain extent and would become more effective, provided the given suggestions were implemented in letter and spirit.

Saggar (2005) highlighted that it has been found over the years that the performance of banking sector has been a mixed one i.e. strong in widening the business coverage but weak in terms of sustainability and viability. Overtime, the viability particularly of a number of public sector banks has become a matter of great concern. According to author, profitability of banks is influenced by a combination of factors such as quality of asset-liability management, productivity levels, operating costs, organisational culture and most critical issue in present context, i.e., the non-performing assets (NPAs). She concluded that the public sector banks should move from deposit orientation to profit orientation. Profit plans should be developed to help them in recasting their cost estimates for their activities.

Khasnobis (2005) studied that the Indian banking sector has played a commendable role in fuelling and sustaining growth in the economy. In the recent past a large part of the banking sectors growth has been on the back of financing consumption, as reflected in the growth of retail banking. While the progress on this front is likely to continue, sustaining this growth in the coming years may require focus on the supply side capacity building. A growth driver in this phase would involve financing the emerging Small and Medium Enterprises (SMEs) sector of the economy.

Kumar (2005) observed that the Indian banking sector faced a serious problem of NPAs. The extent of NPAs has comparatively higher in public sectors banks. To improve the efficiency
and profitability, the NPAs have to be scheduled. Various steps have been taken by government to reduce the NPAs. It is highly impossible to have zero percentage NPAs. But at least Indian banks can try competing with foreign banks to maintain international standard.

Chugh (2005) attempted to investigate whether new private sector banks were serving properly to different segments of the economic sectors of India specially to economically weaker sector of the society or not and were the employees of these banks satisfied. Some other important parameters such as assets size, level of NPAs, interest and other incomes etc. were selected to make comparison between new private sector banks and public sector banks. Impact of economic reforms on banking sector has also been examined in the study. He concluded that public sector banks were coming up fastly to meet the challenges of open competition in financial markets in India. They were adopting latest banking technologies day by day and providing quality services to their respective customers at lower cost.

Harpreet (2004) highlighted the problem of non-performing assets in public sector banks. Various developments in the banking sector in India have been analysed by studying the growth of banking sector in Pre-and Post - Independence era. The study has covered the prudential norms given by RBI and also analysed the NPA management policies of public sector banks. Viewpoints of the managers regarding problem of NPAs have also been studied by selecting 120 managers from various branches of public sector banks in Punjab. Perceptions of borrowers contributing to NPAs have also been studied by selecting 100 defaulters from public sector banks in Punjab. Author suggested that for effective handling of NPAs, there is an urgent need for creating proper awareness about the adverse impact of NPAs on profitability amongst bank staff, particularly the field functionaries. Bankers should have frequent interactions and meeting with the borrowers for creating better understanding and mutual trust.
Kumar (2006) observed that the performance of the banks both in the public and private sectors has become more market driven with growing emphasis on better performance. Author has explored the broad structure of banking system in India, analysed the overall efficiency of the system in terms of financial parameters into two components: technical efficiency and allocation efficiency. He concluded that the much-publicized fact that public sector banks are inefficient is based on a piecemeal analysis in the form of simple, static, partial and isolated ratios having some hidden and often misconceived assumptions about the structure. The study concluded that there was an urgent need of the time to go in for this kind of system wide analysis to explore the intricacies of the complex system.

Gopalakrishnan, T.V. (2004), explained the harshness of NPA on bank’s existence and development based on the assessment of the performance of public sector banks in India during the period 1993-2001. It is evident that a noteworthy association between NPA and the different macroeconomic indicators like GDP, Inflation, Index of industrial and Agricultural Production existed. The author argues that NPA posed a substantial threat on the balance sheets and profitability of the banks. It was observed that the banks’ balance sheets faced threats of stability, viability and soundness due to high level of NPAs.

Jain (2007) investigated that in the early phases, the NPA was mostly backed by directed lending and substantial government interference. The movement of the NPA was also evaluated analytically and a trend was developed based on the data during 1997-2003. It was concluded from the study that the main contributing factor for the NPA was inadequate credit risk management system.
Pathak (2009) in a descriptive research, discussed the importance of asset quality in financial well-being of banks. He estimated the NPA as 9.8% of GDP based on 2005 data and suggested that NPA acts as a serious threat to the India’s economy.

Ghosh and Sagar (1998) evaluated the narrow banking system and practices in India and asserted that an increased presence of NPA forced banks to select tactics to reduce risk by investing in safe and liquid assets. This study also highlights that few banks use the tactic of narrow banking as part of their asset-liability management practices. He also brings to the notice that the narrow banking practices may expose the banks with weak structure to enormous market and interest rate risks, making them susceptible to different types of risks rising from these macro-economic blows.

Deolalkar, G.H. (1998) compared the NPAs of Indian Banks with that of the worldwide markets. He found that the NPA started receiving more focus after 1991. The same has affected the risk-taking abilities of the banks. The political and economic factors of different countries influenced the NPA management practices in those countries. He argued that Indian banks maintained higher levels of NPA than its counterparts in the global markets.

Rajaraman, et al (1999) examined the existence of NPA bank advances and the high level of variances among banks. They conducted tests for studying the effect of region the banks operated during 1996-97. The research established that the environment in which the bank operates is an important dimension of bank performance. They also confirmed that no sustainable improvement in the performing efficiency of domestic banks is possible without prior improvement in the enforcement environment in difficult regions of the country.

Rajaraman, I. and Vasishtha, G. (2002) examined the presence of variations in NPA, based on a five year NPA data from 27 Public sector banks. Panel regression model was used.
The study concluded that operational restructuring in banks where there exists residual problem, operational restructuring is not recommended for management of NPA.

Dong, H. (2002) found that the quality of credit is low in public sector banks and development finance institutions (DFIs). Based on a comparative study the study recommends the incorporation of ARCs as a major tactic for managing NPA. He recommended foreclosure laws for speeding up the seizure of assets and exclusion of legislation that inclines to guard the loan evading companies for effective NPA management. They also recommended more operational independence for ARC.

Batra (2003) also compared NPA in Asian markets and noted a noteworthy observation on high NPA levels in Indian banks. The key inference drawn from the study is that the banks with high level of NPAs tends to focus more on credit risk management neglecting or paying less attention on other aspects of banking. The bank’s entire machinery in such cases are engaged on loan recovery measures instead of planning and working for business growth. The researcher determinedly confirms that NPA in banks cannot be removed completely but can be only controlled. They suggest that the same should not be done at a high rate of provisioning and increasing the credit portfolio.

The study by Mohan and Rajesh (2004) recommended for solidification of the Debt Recovery Tribunals (DRTs) to control the defaulters persistently. The study mainly highlighted on firming the regulatory measures for effective management of NPA in Indian banks.

Das et al (2005) scrutinised the effectiveness of Indian Banks during the years 1997-2003. Data Envelopment Analysis (DEA) was used for the purpose. This research emphasized that the banks in India are not much distinguished when compared on the basis of technical effectiveness and cost effectiveness.
Vassiliou (2004) based on a descriptive study assessed the NPL techniques adopted in Asian countries. This study confirmed that most countries used AMCs, Corporate Debt Restructuring (CDR) Committee and Securitization to control the increasing levels of NPAs.

Naidu, B.R. and Naidu, A.P.S. (2004) explored the influence of NPA on the profitability of Public Sector Banks. This study recognised the diversion of funds as the main reason for the NPAs. The study emphasised that NPA in Public Banks is around 16% of the credit portfolio, which as per the international standards is very high.

Rao, K. (2004) in study on management of the NPA in commercial banks, emphasized the need for more proactive measures to manage NPA of banks. The research used the financial results relating to NPA from 1998-99 to 2001-02. The study recognized that the alarming level of NPA deteriorated the bank’s profitability. It also reviewed the initiatives taken by RBI such as DRTs, ARCs, CDR and ARF those influenced the level of NPA to some extent. Even though the curative measures could able to manage the NPA to some extent, the research strongly suggests that the key to successful NPA management is the presence of a sound credit appraisal system to ensure the quality of the loan portfolio.

Kakker, R. (2005) stressed the need for management of the NPA by stating that a high level of NPAs severely affects the economy in many ways. The research concluded by stating that ARC’s with statutory/ regulatory powers are likely to emerge as nodal resolution agencies coexisting with CDR mechanisms for management of NPA.

Biswas and Deb (2005) studied the determinants of the NPAs and examined the random and non-random reasons for NPA in PSBs during 1995-2004. The research underlined the shortfalls of existing system and the existence of a high degree of arbitrariness in defining NPA. A highlight of this study is its conceptualization of random reasons for default in a simplified
framework of a Poisson process. The research identified that while one set of policies granting greater autonomy to the PSB are proved quite effective in restricting formation fresh NPA, the other set of policies designed to recover loans, after default, has failed to deliver the goods.

**Basu, P.** (2005) in an exploratory study examined India’s banking system with specific focus on a distress is India’s Banking System during the period 2001-2004. The research indicated that the banking system distress in India is considerable, both in absolute terms and when compared with the distress faced by many of the East African countries on the eve of their crisis. The research also reiterated the significant linkage between asset quality and level of NPAs to financial vulnerability in the banking sector and recommended various banking reforms, integration of best practices from abroad and the development of capital market to counteract the threat of financial distress.

**Choksi** (2006) viewed that the prudential norms are formulated on the basis of objective criterion rather than on any subjective criterion, to provide a more transparent and vibrant banking sector in the post liberalization era. The research mainly focused on the various guidelines of RBI on asset classification, prudential norms on income recognition and provision of advances.

**Shiralashetu and Akash** (2006) in an analytical study on NPA, investigated the bank-wise and sector-wise NPA during 2003-04. The research identified that the priority sector, in particular the SSI sector contributed NPA significantly. The research highlighted that PSBs accounts for 91.07% and private sector banks account for 8.93% of the total NPA of priority sector and recommended improvements in recovery management and credit management to deal with NPAs in the banking sector.
Chakrabarti, R. (2006) in a descriptive study on reforms and reorganization of banking in India discussed the major contemporary issues affecting the banking sector in India. In particular, the research identified on the nature and effects of interest rate deregulation, public sector bank performance, the nature and management of NPAs, and the new competitive market structure of commercial banking. The research concluded that Indian banking sector is suffering from considerable NPAs in their asset portfolio. The research also recommended more transparency in PSBs decisions and subjecting these banks to competitive pressures to accomplish the improvements in their performance rather than selling them lock stock and barrel to private parties.

Noronha (2006) also highlighted the need for managing NPAs for a robust banking system. This research used statistical information available on NPA and classification of loan assets, the impact of various measures such as One-time settlement scheme, SARFAESI Act, Lok Adalats, Debt Recovery Tribunals, etc. The research asserted that NPA is unavoidable in the banking sector and proper management would lead to curbing them and in turn lead to a healthy growth of the financial sector.

Reddy. B.K., et al (2006) analysed trends in NPAs of PSB, its sectoral composition, asset quality diagnosis and the scenario of NPAs at the bank level. The analysis highlighted the gross and net NPA has reduced from 23.2% and 14.5% in 1993-94 to 7.8% and 3.0% respectively during 2003-04 and using this analysis, it is concluded that the quality of the portfolio of the PSB has improved quite impressively due to the effectiveness of various measures initiated by the RBI. However the limitation of the research is that is relied heavily on NPA ratios to generate inferences.
Michael, et al (2006) studied on the effect of the NPA in cooperative banks and the research has explained the importance of central co-operative banks in rural development and financial inclusion. The research indentified the threat posed by alarming level of NPA for cooperative banks. This research focused on a theoretical assessment of the effect of NPA on the operational efficiency of Central Co-operative Banks in India suggested the need for effective recovery strategy and prompt, preventive and curative measures to curb the menace of NPA.

John, K. and Philip Thomas (2006) examined the NPA in Indian Banking Sector with a focus on recovery through Debt Recovery Tribunals. The research commented that the prudential norms introduced into the banking sector helped in reducing the volume of the NPA in the balance sheets of the banks based on data between periods of 1996 to 2005. The research analysis revealed only a small recovery through the speedy process of DRT. The research concluded that the bulk of the NPA in the banking sector remains as an economic cost to the nation.

Chipalkatti and Rishi (2007) in an exploratory research on NPA examined the behavior of Indian banks in the context of tighter regulatory standards that became effective after 1999. Based on the analysis, the authors observed that “weak” Indian banks - defined by low profitability and low capital ratios camouflaged the magnitude of their gross NPAs in the post-1999 period. The research revealed a disturbing fact; that the true nature of India's bad loan problem is more serious than explained the prior research studies.

Vallabh, et al (2007) examined the fundamental factors which impact NPA of banks using an extended Altman model. The model consisted macroeconomic factors and bank-specific parameters. The macroeconomic factors of the model are GDP growth rate and excise duty, and the bank specific parameters are Credit Deposit Ratio (CDR), loan exposure to priority sectors,
Capital Adequacy Ratio (CAR), and liquidity risk. The research commented that the NPA movement can be explained well by the factors considered in the model for the public and private sector banks. The other major observation is that the banks' exposure to priority sector lending reduces the NPA. Even though some of the observations of this research are questionable the research provided an insight on a few analytical tools that can be widely used in analyzing the asset quality of banks.

Rajendar, K. and Suresh, S. (2007) investigated the effectiveness of the reform process on the basis of the recommendations of the Narasimham Committee, using statistical data on banks for the period 2000-01 to 2005-06. Ration analysis based study showed a reduction in NPA during the period. The research concluded that the better management of the NPA is the result of good recovery and sufficient provisioning for doubtful debts and write-off bad debts.

Aravanam and Vijayakumar (2007) discussed at length on the impact of NPA on the performance of banks using statistical data for the period 2000-01 to 2005-06. The research observed that the level of the NPA is a critical indicator for assessing banks' credit risk, asset quality and efficiency in allocation of resources to productive sectors recommended improvements in credit appraisal systems of banks.

Rajendran, K. and Karthikeyan, K. (2007) explained how the high level of NPA not only affects the overall quality of the loan portfolio but also puts a burden on the income statement of banks in the form of higher provisions. The research reviewed recovery of NPA through various mechanisms like OTS, DRTs, ARCs, SARFAESI Act. The conclusions revealed a considerable improvement in the management of NPA through the various mechanisms mentioned above suggested the need to consider ‘reduction of NPA’ in the banking sector as a national priority item.
Istrate, et al (2007) evaluated three major aspects of the NPA: the degree of the NPA problem, its causes and the solutions adopted to address the issue on a descriptive study on NPA in India and China from a public policy perspective. The research provided an insight by classifying the causes for NPA into systematic and situational causes. This research provided classification of NPA and its contribution by providing a mix of short-term and long-term remedial measures in dealing with NPA.

Ramu, N. (2008) examined the management of the NPA in Urban Cooperative Banks (UCBs) with special reference to 5 UCBs in Tamil Nadu and this research stated that even though the banks played an important role in credit deployment its NPA stood alarming as seen from their gross NPA and net NPA ratios at 23.4% and 12.5% respectively in 2005. The research recommended improvements in the credit management through removing existing deficiencies in the credit appraisal, monitoring and improving the overall lending policies.

Rajeev (2008) used various econometric models and analysed the level of NPA and its relationship with key performance indicators in Indian banking and this work was on NPA in commercial banks with special reference to small scale sector. The research concluded that rural branches contribute more NPA in SSI sector and also the analysis revealed that PSBs have improved their efficiency during 1997-2005 compared to private and foreign banks. Regarding the generation of the NPA, the research indicated that inadequate funds and higher amounts of accumulated NPAs resulted in the creation of the more NPA in SSI.

Shanker, D., et al (2009) compared the operative performances of the banking institutions, considering the institutional differences in the banking sectors of these two economies i.e. India and China. The research utilized non-parametric technique, to assess the efficiency of the banks between 2002 and 2005. Conclusions were drawn based on analysis
showed a decline in efficiency of restructured Chinese banks. The findings revealed that two Indian banks, SBI and ICICI, have consistently been shown to be the most efficient banks.

**Jayakumar, A. and Amutha, R.** (2009) examined some of the core dimensions in the NPA of PSBs using financial data during 2000 and 2007. An important observation in this research is that even though statistical data showed a decline in NPA ratio, there has been a constant increase in NPA of PSBs. And the incidence of NPAs is marginally greater in the old private sector banks than PSBs. The research briefed the various reasons and measures to curtail NPA and cautioned that the banks have be more vigilant and incorporate various preventive measures to curtail the ever increasing level of NPA.

**Basak, A.** (2009) on performance appraisal of urban cooperative banks (UCBs) examined the devastating role of NPA on the operational efficiency of UCBs in India. The research focus was with a special reference to Contai Cooperative Bank Limited in West Bengal for the period 1995-96 to 2006-07. The research strongly recommended that the banks should take proactive measures in tackling the alarming level of NPA through an efficient system of credit appraisal and like.

**Uppal, R.K.** (2009) examined the priority sector advances of the public, private and foreign bank groups. The research used parameters that include lending to priority sector and targets achieved while lending to priority sector during 2006-07. The research explained that the NPA is significant in PSBs while it was least in foreign bank groups and it was also observed that NPA of PSBs has increased because of high priority sector advances. The research provided better insights into the issues on priority sector lending and suggested various strategies to sort out these issues.
Rajendar, K. (2009) examined the management of the NPA in PSBs in India using statistics available for 1999-00 to 2006-07. Findings based on analysis showed a decrease in NPA evidenced by net NPA ratios. The findings support various reform measures particularly SARFAESI Act 2002, ARCs, Lok Adalats, One Time Settlement (OTS) and DRTs.

Dash, M.K. and Kabra, G. (2010) examined the determinants of NPA in the Indian Commercial Banks with particular emphasis on the sensitivity of NPA to macroeconomic and bank specific factors in India using regression analysis and a panel data set covering 10 years (1998-99 to 2008-09). The research explained that both bank specific and macroeconomic factors has impacted the loan portfolio of commercial banks in India. The study concluded that the commercial banks that are aggressive and charge relatively higher interest rates incurred greater NPAs.

Debarshi Ghosh, D. and Ghosh, S. (2011) examined the composition, trend and management of NPAs in PSBs. The results of this research indicated an increased CRAR and NPA level during 2009-10. The analysis shared the general view that NPA is still a significant threat that has be managed to improve the efficiency of Indian banking sector.

Misra, B.M. and Dhal, S. (2010) examined the pro-cyclical movement of NPA in PSBs using pooled data regression analysis using 27 banks during 1996-2008. The research observed that three major sets of factors, i.e., terms of credit, bank specific indicators relating to asset size, credit orientation, financial innovations (non-interest income), and regulatory capital requirement and the business cycle shocks influence NPAs. The research concluded that the terms of credit variables such as interest rate, maturity, collateral and bank specific variables have a significant effect on the banks' NPAs in the presence of macroeconomic shocks. The conclusions of this research are significant for policy decision makers as they provide useful
insights into the various indicators that should be properly managed to curtail the menace of NPAs.

**Thiagarajan, S. and Ramachandran, A.** (2011) analysed the credit risk component of the Indian Banking sector using financial data for the period 2001-2010. The research examined the use of key credit risk ratios to measure the credit risk. Conclusions are drawn based on ratio analysis highlighted a gradual decrease in the ratio of NPA to total loans for both public and private sector banks from 2001 to 2008 and gradual increase from 2009 to 2010 and these are consistent with the findings that although a similarity exists in movement of selected ratios, the sector wise comparison showed significant differences among different bank groups.

**Chaudhary, K. and Sharma, M.** (2011) examined the loan portfolio of Indian PSBs and private sector banks with specific focus on the classification of advances, priority sector and non-priority sector advances, etc. The research primarily concentrated on the structural differences between PSBs and private sector banks and recommended integration of modern statistical tools like Value-at-risk analysis and Markov Chain analysis to improve the quality of risk assessment practices. The research also recommended to incorporate information sharing among the bankers about the credit history of the borrower.

**Prasad and Veena, D.** (2011) examined the trends and issues relating to the NPA in Indian Banking Sector. Conclusions based on analysis indicated that the impact of increased recovery on NPA, decline in fresh slippage, sharp increase in gross loans, setting up of ARC, etc helped to present better NPA ratio’s. PSBs problems are mainly due to excessive manpower, excessive NPA while private sector banks consolidated themselves through the adoption of latest technology and systems. The research recommended revitalizing the PSBs and incorporating the best practices in operations, technology and management to improve financial performance.
Malyadri, P. and Sirisha, S. (2011) examined the nature of NPAs in PSBs and private sector banks in India and this study was limited to the analysis of NPAs pertaining to only weaker sections during the period 2004-2010. The inference based on analysis revealed that asset quality of PSBs and private sector banks improved consistently during the study period as reflected in the decline in the ratios such as NPAs as percentage of advances to weaker sections.

Jayasree, M. and Radhika, R. (2011) examined the sector wise comparison of NPA for the period 2004-05 to 2008-09. The conclusions highlighted that higher levels of NPA in new private sector banks and foreign banks. The research supported the findings that the NPA had a negative impact on net-profit and prudential norms and RBI guidelines, securitizations and changes in law have a positive impact on asset quality of banks.

Siraj, K.K. and Pillai, P.S. (2011) studied the impact of global financial crisis on NPA of the banking sector. The research measured the annual average growth rate (AAG) of NPA indicators, before and during the financial crisis. The research confirmed the susceptibility of Indian banking sector to financial crisis citing higher operating expenses, higher provisions, higher additions to the NPA, a reduced CD ratio and deterioration in the asset quality and recommendations include improvements in the management of the loan portfolio to withhold the impact created by the financial crisis.

Poongavanam, S. (2011) investigated issues, causes and remedial solution to manage NPA in Indian banking sector. The research explained the significant changes in Indian banking during the liberalization period and indicated the need to further enhance measures to manage the NPA and concluded the study stating the need to provide more importance to NPA management and proper remedial solutions.
Based on empirical study Thiagarajan, S., et al (2011) examined the determinants of credit risk in the Indian banks by using econometric models on a panel data at the bank level for 22 PSBs and 15 private sector banks in India for the period 2001-2010. The research discussed the lagged NPAs had a strong and statistically significant positive influence on the current NPAs and there is a significant inverse relationship between the GDP and the credit risk for both public and private sector banks. The study revealed that both macroeconomic and bank-specific factors played crucial role in determining the credit risk of the commercial banking sector.

Yadav, M.S. (2011) examined various micro variables affecting productivity and efficiency of banks by using simple linear regression analysis on financial data between 1994-95 to 2005-06. The research highlighted that the level of the NPAs of PSBs affected fifty percent profitability of the banks and its impact has increased at very large extent with other strategic banking variables and also the high coefficient value explained a high degree of variability in productivity and efficiency of PSBs in terms of business per employee and operating profit per employee.

Chaudhary, S. and Singh, S. (2012) studied the impact of post liberalization banking sector reforms on asset quality of SCBs in India. This research primarily was focussed on to analyze the impact the reforms on group-wise/year-wise asset quality of public, private and foreign banks in India based on secondary data on NPA, classification of assets etc for the period 1996-07 to 2009-10 by using statistical tools such as ratio analysis and ANOVA technique. The analysis concluded that asset quality has shown a significant improvement over the years in all the groups of the banks. The results of the study supported the role of banking reforms in transforming banks into a strong, stable, profitable and prosperous organisations.
Sriraj, K.K. and Pillai, P.S. (2012) examined the performance of NPA in Indian banking during post-millennium period by using bank-group wise performance statistics during post-millennium period up to the period ended 31st December 2011. The research used statistical tools such as AAG rate, correlation and regression study, it was identified that NPA remains a major threat and the incremental component explained through additions to NPA poses a great question mark on the efficiency of credit risk management practices of banks in India.

Murali and Krishna (2006) observed that there has been a spirit in the lending activity of banks, in the recent past. This is due to two factors, viz. availability of huge surplus funds with the banks and the losses suffered by the banks in investment and treasury activities. While credit growth is needed for survival, it is imperative to ensure that the credit growth does not result in non-performing advances later. For this banks have to resort to effective pre-disbursement as well as post-disbursement monitoring. The authors concluded that negligence in monitoring a loan was less excusable than an error at the appraisal stage.

Bhatia (2007) explored an empirical approach to the analysis of Non-Performing Assets (NPAs) of public, private, and foreign sector banks in India. The NPAs are considered as an important parameter to judge the performance and financial health of banks. The level of NPAs is one of the drivers of financial stability and growth of the banking sector. This paper aims to find the fundamental factors which impact NPAs of banks. A model consisting of two types of factors, viz., macroeconomic factors and bank-specific parameters, is developed and the behavior of NPAs of the three categories of banks is observed.

Sharma (2009) observed that the public sector banks have emerged strong across all key indicators as the global financial turmoil and slowing domestic economy put the banking sector on a test. The public banks have not only reduced the lending rates but have also managed to
record higher average net profit and lower NPAs level than their private sector counterparts. According to the study the public sector banks (PSBs) have shown impressive performance across all the significant banking parameters. While they have reduced their prime lending rates, by private banks, their credit growth has far surpassed the latter registered by private banks. Despite lower lending rates, the net interest income growth of the PSBs was much higher than the private banks which fuelled the bottom line growth of public banks. Progressing upon bringing a significant shift in their conventional image, the public sector banks have considerably improved their quality of assets. The rise in Net NPAs of the private banks was far higher than the public sector banks.

As observed in the above sections it can be said that NPA is a burning topic for the banking sector and many authors tried to study the reasons of NPA, the problems created by NPA and the impact of NPA on the banking sector, and moreover came to a solution or remedies of the growing problem of NPA. The table below further presents important relevant research studies in summarised form addressing the various issues of NPA.
<table>
<thead>
<tr>
<th>Year</th>
<th>Author(s)</th>
<th>Literature</th>
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<tbody>
<tr>
<td>2014</td>
<td>Dutta. A</td>
<td>This paper studied the growth of NPA in the public and private sector banks in India, and analysed sector wise non-performing assets of the commercial banks. For the purpose of the study data has been collected from secondary sources such as report on Trend and Progress of Banking in India, RBI, Report on Currency and Finance, RBI Economic Surveys of India.</td>
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<tr>
<td>2014</td>
<td>Joseph, A. L.</td>
<td>This paper basically deals with the trends of NPA in banking industry, the internal, external and other factors that mainly contribute to NPA rising in the banking industry and also provides some suggestions for overcoming the burden of NPA.</td>
</tr>
<tr>
<td>2014</td>
<td>Arora, N., Ostwal, N.</td>
<td>The present paper analyses the classification and comparison of loan assets of public and private sector banks. The study concluded that NPAs are still a threat for the banks and financial institutions and public sector banks have higher level of NPAs in comparison to Private sector banks.</td>
</tr>
<tr>
<td>2014</td>
<td>Ibrahim, M.S., Thangavelu, R.</td>
<td>In this paper, the author has analysed the concept of NPAs, components of loan assets in public sector, private sector and other foreign banks, by an exploratory</td>
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</table>
and diagnostic approach with the help of secondary data

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<tr>
<th>Year</th>
<th>Author(s)</th>
<th>Description</th>
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<tbody>
<tr>
<td>2014</td>
<td>Yadav, S.</td>
<td>With the help of secondary data, the author in the present paper has tried to show the recent trends and its preventive measures to control NPAs in Indian banking industry.</td>
</tr>
<tr>
<td>2014</td>
<td>Satpal</td>
<td>An attempt has been made in this paper to find out the actual definition of NPA and the factors contributing to the formation NPAs, reasons for high NPAs and their impact on Indian banking operations.</td>
</tr>
<tr>
<td>2014</td>
<td>Tripathi, L. K., Parashar, A., Mishra, S.</td>
<td>The present study, with the help of multiple regression model attempts to investigate the impact of priority sector advances, unsecured advances and advances made to sensitive sectors by banks like SBI group and other nationalised banks on Gross NPAs of banks.</td>
</tr>
<tr>
<td>2013</td>
<td>Srinivas, K.T.</td>
<td>The present paper undertakes to study the reasons for loans and advances becoming NPA in the Indian Commercial banking Sector and give a suitable solution to overcome the mentioned problem.</td>
</tr>
<tr>
<td>2013</td>
<td>Kamra, S. D.</td>
<td>This paper analyses the position of NPAs in the selected nationalised banks namely State Bank of India (SBI), Punjab National Bank (PNB) and Central Bank of India (CBI). It also focuses on the policies pursued by the banks to manage the NPAs and suggests a strategy for</td>
</tr>
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</table>
2013 | Ahmad, Z., Jegadeeshwaran, M. | The current paper is written on the NPA, and causes for NPA. Secondary data was collected for a period of five years and analysed by mean, CAGR, ANOVA and ranking banks. The banks were ranked as per their performance in managing the NPA’s. The efficiency in managing the NPA by the nationalised banks was tested. |
<p>| Ranjan, R., Dhal, S.C. | This paper explores an empirical approach to the analysis of the Indian commercial banks' nonperforming loans by regression analysis. The empirical analysis evaluates as to how the NPLs are influenced by three major sets of economic and financial factors, i.e., terms of credit, bank size induced risk preferences and macroeconomic shocks. |
| Bhatia, B.S., Waraich, S., Gautam, V. | This study was made on District Central Cooperative Bank of Punjab, the study tried to analyse the impact of some new product lines on non performing advances in cooperative banks and trends in NPA against loan schemes. Lastly a comparative analysis was made between bank wise and component wise to find out the lacunas and suggest measures for improvement in managing NPA. |
| Ganesan, D. | In this paper, an effort has been made to evaluate the speedy recovery of NPAs. |</p>
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<tr>
<th>Year</th>
<th>Author(s)</th>
<th>Description</th>
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<tbody>
<tr>
<td>2013</td>
<td>Stuti, Bansal, S.</td>
<td>In this paper, an effort has been made to evaluate the operational performance of the Public Sector Banks and Private sector bank in India with the help of secondary data between 2003-04 and 2007-09, on NPAs Trends and issues. This paper analyses how efficiently Public and Private sector banks have been managing NPA.</td>
</tr>
<tr>
<td>2013</td>
<td>Selvarajana, B., Vadivalagan, G.</td>
<td>The present study has been designed to illustrate the necessity and the nature of the non-performing assets in Indian Bank, Tamil Nadu. The study was done on the priority sector loan.</td>
</tr>
<tr>
<td>2012</td>
<td>Rakshit, D., Chakrabarti, S.</td>
<td>The paper deals with understanding the extent of NPAs in cooperative bank and the major causes behind an account becoming non-performing in cooperative banks.</td>
</tr>
<tr>
<td>2012</td>
<td>Kumar, M., Singh, G.</td>
<td>The paper focuses on the most significant factors, which contribute towards the non-performing assets problem from the view point of the top bankers of public sector banks and, some foreign banks in India and the measures required for managing the NPAs.</td>
</tr>
<tr>
<td>2012</td>
<td>Patidar, S., Kataria, A.</td>
<td>The study analyzed the percentage share of NPA as components of priority sector lending, the comparative study was conducted between SBI and Associates, Old</td>
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</table>
Private Banks and New Private Banks and Nationalized Banks of the benchmark category, to find out the significant difference of the NPA and also find out the significant impact of Priority Sector Lending on the Total NPA of Banks using statistical tools like regression analysis and ratio analysis.

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<tr>
<th>Year</th>
<th>Author(s)</th>
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<tbody>
<tr>
<td>2012</td>
<td>Rai, K.</td>
<td>The paper made an effort to evaluate the operational performance of the selected commercial banks, and the NPA Trends and issues, also the measures taken for managing the NPAs like reformulation of banks” credit appraisal techniques, establishment of monitoring department, etc.</td>
</tr>
<tr>
<td>2012</td>
<td>Gupta, J., Jain, S.</td>
<td>The present study deals with performance and the lending practices of some successful cooperative banks of Delhi, whose customers have taken more than one type of loans from the bank.</td>
</tr>
<tr>
<td>2012</td>
<td>Pradhan, T.K.</td>
<td>The present study is on Odisha, and depends on the mismanagement or diversion of fund, which are one of the main causes of NPA. The study is based on primary data which has been analyzed by percentage method. The data was collected from 50 bank officials through a structured questionnaire.</td>
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<tr>
<td>2012</td>
<td>Rajput, N., Arora,</td>
<td>This study focuses on management of non-performing</td>
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<td>Year</td>
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<td>Description</td>
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<tr>
<td>2012</td>
<td>A.P., Kaur, B.</td>
<td>assets of the public sector banks under stringent asset classification norms. The study tried to trace the movement of the nonperforming assets present in Indian public sector banks and also analysed the performance of the banks in managing the NPA.</td>
</tr>
<tr>
<td>2012</td>
<td>Gupta, B. and Jain, S.</td>
<td>In this paper, study has been made on SBI and Associates, and public sector banks, an effort has been made to understand the concept of NPAs, its magnitude and major causes for increasing NPA and also evaluate the operational performance in managing NPA.</td>
</tr>
<tr>
<td>2012</td>
<td>Rajput, N., Gupta, M., Chauhan, A.K.</td>
<td>This paper provides an empirical approach to the analysis of profitability indicators on NPA, it also discusses the factors which contribute towards NPA, and also analyses the solution for the same. All empirical findings were done by using statistical tools like correlation, regression and data representation techniques and DEA.</td>
</tr>
<tr>
<td>2012</td>
<td>Patnaik, B.C.M., Satpathy, I.</td>
<td>The present paper made an attempt to analyse the causes of NPAs in working capital loans of Urban Co-operative banks. For the study purpose borrowers were surveyed through questionnaires, causes were analyzed and suggestions made to overcome the problem.</td>
</tr>
<tr>
<td>2011</td>
<td>Patnaik, B.C.M.,</td>
<td>The present paper tries to analyze the quantitative trend</td>
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<td>Description</td>
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<tr>
<td>2012</td>
<td>Satpathy, I.</td>
<td>and pattern in growth of NPA with reference to the education loan scheme, in Odisha. An effort was made to find the cause, by questionnaire survey of the defaulters, who are students of different colleges, suggestions to overcome this problem was also given by the author.</td>
</tr>
<tr>
<td>2012</td>
<td>Rajput, N., Arora, A.P., Kaur, B.</td>
<td>This study attempts to trace the movement of the NPAs presence in public sector banks of India, by analysing the financial performance in managing NPA.</td>
</tr>
<tr>
<td>2011</td>
<td>Kaur, H., Saddy, N.K.</td>
<td>An attempt was made in the paper to know about NPA, the factors responsible for the contribution towards NPAs, the magnitude and reasons for high NPAs and their impact on Indian banking operations.</td>
</tr>
<tr>
<td>2011</td>
<td>Chaudhary, K., Sharma, M.</td>
<td>This paper has made an attempt to analyze how efficiently Public and Private sector banks have been managing NPA. A statistical tool for projection of trend was used for analysis.</td>
</tr>
<tr>
<td>2010</td>
<td>Das, S.</td>
<td>In this paper the author has tried to analyse the parameters which are actually the reasons of NPAs, and those are, market failure, wilful defaults, poor follow-up and supervision, non-cooperation from banks, poor Legal framework, lack of entrepreneurial skills, and diversion of funds</td>
</tr>
<tr>
<td>2010</td>
<td>Rajeev, M.</td>
<td>This exploratory paper examines the Indian trends of</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Summary</td>
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<td>Mahesh, H.P.</td>
<td>NPAs from various dimensions and explains how recognition of the problem continuous monitoring, can reduce it to a greater extent. The paper also discusses the functions of the joint liability groups or self-help groups in enhancing the loan recovery rate.</td>
<td></td>
</tr>
<tr>
<td>2010 Satpathy, I, Patnaik, B.C.M.</td>
<td>The present paper attempted to examine the causes of NPAs in home loans of commercial banks. For this borrowers of the loans were surveyed through questionnaires made for the purpose, and ultimately suggestions given to overcome the problem.</td>
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</tbody>
</table>