Chapter 3

Review of Related Literature and Research Methodology
Chapter 3

Section 1

Review of Related Literature

A healthy banking system is essential for any economy striving to achieve good growth and yet remain stable in an increasingly global business environment. The Indian banking system, with one of the largest banking networks in the world, has witnessed a series of reforms over the past few years like the deregulation of interest rates, dilution of the government stake in public sector banks (PSBs), and the increased participation of private sector banks. The growth of the retail financial services sector has been a key development on the market front. Indian banks (both public and private) have not only been keen to tap the domestic market but also to compete in the global market place. New foreign banks have been equally keen to gain a foothold in the Indian market (BREP, 2005). 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 (Vallabh et al, 2007). Evidence from across the world suggests that a sound and evolved banking system is required for sustained economic development. India has a better banking system in place vis-a-vis other developing countries, but there are several issues that need to be tacked out (Kaul, 2005). Among these, Non Performing Assets is biggest issue of concern (Vittal, 2002). Study made by the Reserve Bank of India states that, compared to other Asian countries and the US, the gross non-performing asset figures in India seem more alarming than the net NPA figure (Narshimam, 1999). In the banking literature, the problem of NPLs has been revisited in several theoretical and empirical studies. A synoptic review of the literature brings to the fore insights into the determinants of NPA across countries. A considered view is that banks’ lending policy could have crucial influence on non-performing loans (Reddy, 2004). Reddy (2004) critically examined various issues pertaining to terms of credit of Indian banks. In this context, it was viewed that ‘the element of power has no bearing on the illegal activity. A default is not entirely an irrational decision. Rather a defaulter takes into account probabilistic assessment of various costs and benefits of his decision’. Mohan (2003) conceptualized ‘lazy banking’ while critically reflecting on banks’
investment portfolio and lending policy. In a study of institutional finance structure and implications for industrial growth, Mohan (2004) emphasized on key lending terms of credit, such as maturity and interest-terms of loans to corporate sector. The Indian viewpoint alluding to the concepts of ‘credit culture’ owing to Reddy (2004) and ‘lazy banking’ owing to Mohan (2003) has an international perspective since several studies in the banking literature agree that banks’ lending policy is a major driver of non-performing loans (McGoven, 1993, Christine 1995, Sergio, 1996, Bloem and Gorters, 2001). In the seminal study on ‘Credit Policy, Systems, and Culture’, Reddy (2004) raised various critical issues pertaining to credit delivery mechanism of the Indian banking sector. The study focused on the terms of credit such as interest rate charged to various productive activities and borrowers, the approach to risk management, and portfolio management in general. There are three pillars on which India’s credit system was based in the past; fixing of prices of credit or interest rate as well as quantum of credit linked with purpose; insisting on collateral; and prescribing the end-use of credit. Interest rate prescription and fixing quantum has, however, been significantly reduced in the recent period. The study also highlighted the issues in security-based or collateralized lending, which need careful examination in the context of growing services sector. Given the fungibility of resources, multiple sources of flow of resources, as well as application of funds, the relevance and feasibility of end-use restrictions on credit need a critical review. The link between formal and informal sectors shows that significant divergence in lending terms between the two sectors still persists, despite the fact that the interest rate in informal markets is far higher than that of the formal sectors- the banking sector. The convergence between formal and informal sectors could be achieved by pushing the supply of credit in the formal sector following a supply leading approach to reduce the price or interest rate. Furthermore, in the context of NPAs on account of priority sector lending, it was pointed out that the statistics may or may not confirm this. There may be only a marginal difference in the NPAs of banks’ lending to priority sector and the banks lending to private corporate sector. Against this background, the study suggested that given the deficiencies in these areas, it is imperative that banks need to be guided by fairness based on economic and financial decisions rather than system of conventions, if reform has to serve the meaningful purpose. Experience shows that policies of
liberalization, deregulation and enabling environment of comfortable liquidity at a reasonable price do not automatically translate themselves into enhanced credit flow. Although public sector banks have recorded improvements in profitability, efficiency (in terms of intermediation costs) and asset quality in the 1990s, they continue to have higher interest rate spreads but at the same time earn lower rates of return, reflecting higher operating costs (Mohan, 2004). Consequently, asset quality is weaker so that loan loss provisions continue to be higher. This suggests that, whereas, there is greater scope for enhancing the asset quality of banks, in general, public sector banks, in particular, need to reduce the operating costs further. The tenure of funds provided by banks either as loans or investments depends critically on the overall asset-liability position. An inherent difficulty in this regard is that since deposit liabilities of banks often tend to be of relatively shorter maturity, long-term lending could induce the problem of asset-liability mismatches. The maturity profile of commercial bank deposits shows that less than one fifth is of a tenor of more than three years. On the asset side, nearly 40 per cent has already been invested in assets of over three year maturity. Banks also have some capacity to invest in longer term assets, but this capacity will remain highly limited until the fiscal deficit remains as high as it is and the Government demand for investment in long dated bonds remains high. Some enhancement of their capacity to invest in infrastructure, industry and agriculture in longer gestation projects can be achieved by allowing a limited recourse to longer term bond issues. In an another study, Mohan (2003) observed that lending rates of banks have not come down as much as deposit rates and interest rates on Government bonds. While banks have reduced their prime lending rates (PLRs) to some extent and are also extending sub-PLR loans, effective lending rates continue to remain high. This development has adverse systemic implications, especially in a country like India where interest cost as a proportion of sales of corporate are much higher as compared to many emerging economies.

Munippan (2002) explained that the high level of NPAs in banks and financial institutions has been a matter of grave concern to the public as bank credit is the catalyst to the economic growth of the country and any bottleneck in the smooth flow of credit, one cause for which is the mounting NPAs, is bound to create adverse repercussions in the economy. Further study of Bhati (2006) revealed that the poor performance of public
sector banks, which accounted for about 90 per cent of all commercial banking, was rapidly becoming an area of concern. The continuous escalation in non performing assets in the portfolio of banks posed a significant threat to the very stability of the financial system. Further study of Rishi (2002) found that it is not surprising that public sector banks have traditionally had higher levels of NPAs than private banks and foreign banks. In recent years, however, they appear to have managed their NPAs well, steadily reducing them to levels comparable to those of private banks. On the other hand, the new private sector banks have witnessed an increase in the share of NPAs in their portfolio. RBI (2005) report explained that a closer look at the cross sectional distribution of NPAs among the different banks, suggest that as a group, public sector banks have a tighter distribution than other categories, particularly foreign banks which show considerably larger skewness in the ratio of net NPAs to net advances. There is however skepticism in some quarters about the definition and measurement of NPAs in Indian banks. Banerjee et al (2004) and Topalova (2004) for instance, argue that banks indulge in creative accounting and loan rollovers—“evergreening”—to keep the NPAs figure artificially low. Topalove (2004) find that the share of “potential NPAs” defined as firms whose reported interest expense is greater than their EBITDA (Earning before, Interest, Tax, Depreciation and Amortization) has risen considerably in the period since 1989, suggesting that it is largely “evergreening” of their loans that keeps the NPAs at their reported levels. She also find that the banks face a considerable interest rate risk in that a 2 per cent rise in lending rates could cause a 4 percentage point increase in the share of NPAs.

Research and analysis of the NPA accounts have resulted in some insights about the nature of and reasons behind these NPAs. Study of Jappeli and Pagano (2002) revealed that the most important reason for the generation of NPAs was diversion and tunneling of funds by borrowers. Internal business failures came second followed by adverse change in external conditions. Study of Talwar (2001) found that willful default and tunneling of funds being the most important causes of NPAs for banks, it became essential to arm the banks with greater power to attach a borrower’s assets and realize it at least part of its outstanding credit or at least use it as a viable threat in negotiations. Further the study of Sanjeev (2007) revealed that non performing assets have been found to be influenced by
both endogenous and exogenous factors to the bank. The study of Biswas and Deb (2004) analyzed the process leading to formation and perpetuation of high levels of NPAs in Indian Public Sector Banks (PSBs). It distinguishes between random and non-random reasons of NPA formation in PSBs. It points out that a high degree of arbitrariness is involved in defining NPAs as it fails to capture diversity in terms of the seasonal and cyclical nature of the economic activities in India. The study conceptualizes random reasons for default in a simplified framework of a Poisson process. It then argues that the non-random reasons go beyond the conventional paradigm of interim, ex-ante and ex-post information asymmetries and incomplete contracts. It points out that the financial notion of NPA as a mere risk phenomenon is inadequate, because a number of reasons leading to non-random generation of NPA are related to the dimension of uncertainty. It highlighted that the use of a secondary asset market may take care of NPA problem, but it requires a number of conditions for its use, which hardly exist in India. The study observes a number of reasons for generation of NPAs which are important and peculiar to India. This is followed by a critical evaluation of the series of policy measures that have been adopted to improve the NPA scenario since liberalization. While one set of policies granting greater autonomy to the PSBs are proved to be quite effective in restricting formation of fresh NPAs, the other set of policies designed to recover loans, after default, have failed to deliver the goods. Finally, it concludes by making an assessment of the existing institutions and highlights the fact that the incidence of NPA is as much due to the malfunctioning of the banking institutions as due to the external institutional environment. The problem of NPAs is related to several internal and external factors confronting the borrowers (Muniappan, 2002). The internal factors are diversion of funds for expansion/diversification/modernization, taking up new projects, helping/promoting associate concerns, time/cost overruns during the project implementation stage, business (product, marketing, etc.) failure, inefficient management, strained labour relations, inappropriate technology/technical problems, product obsolescence, etc., while external factors are recession, non-payment in other countries, inputs/power shortage, price escalation, accidents and natural calamities. Sergio (1996) in a study of non-performing loans in Italy found 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. Interestingly, this study refuted that business cycle could be a primary reason for banks’ NPLs. The study emphasized that increase in bad debts as a consequence of recession alone is not empirically demonstrated. It was viewed that the bank-firm relationship will thus; prove effective not so much because it overcomes informational asymmetry but because it recoups certain canons of appraisal. Fuentes and Maquieira (1998) undertook an in-depth analysis of loan losses due to the composition of lending by type of contract, volume of lending, cost of credit and default rates in the Chilean credit market. Their empirical analysis examined different variables which may affect loan repayment: (a) limitations on the access to credit; (b) macroeconomic stability; (c) collection technology; (d) bankruptcy code; (e) information sharing; (f) the judicial system; (g) prescreening techniques; and (h) major changes in financial market regulation. They concluded that a satisfactory performance of the Chilean credit market, in terms of loan repayments hinges on a good information sharing system, an advanced collection technology, macroeconomic performance and major changes in the financial market regulation. In another study of Chile, Fuentes and Maquieira (2003) analysed the effect of legal reforms and institutional changes on credit market development and the low level of unpaid debt in the Chilean banking sector. Using time series data on yearly basis (1960-1997), they concluded that both information sharing and deep financial market liberalisation were positively related to the credit market development. They also reported less dependence of unpaid loans with respect to the business cycle compared to interest rate of the Chilean economy.

In the Indian context, Rajaraman and Vashishtha (2002) in an empirical study provided an evidence of significant bivariate relationship between an operating inefficiency indicator and the problem loans of public sector banks. In a similar manner, largely from lenders’ perspective, 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. Jimenez and Saurina (2003) used logit model for analyzing the determinants of the probability of default (PD) of bank loans in terms of variables such as collateral, type of lender and bank-borrower relationship while controlling for the other explanatory variables such as size of loan, size of borrower, maturity structure of loans and currency composition of
loans. Their empirical results suggested that collateralized loans had a higher PD, loans granted by savings banks were riskier and a close bank-borrower relationship had a positive effect on the willingness to take more risk. At the same time, size of bank loan had a negative effect on default while maturity term of loans, i.e., short-term loans of less than 1-year maturity had a significant positive effect on default. Financial sector reform in India has progressed rapidly on aspects like interest rate deregulation, reduction in reserve requirements, barriers to entry, prudential norms and risk-based supervision. But progress on the structural-institutional aspects has been much slower and is a cause for concern. The sheltering of weak institutions while liberalizing operational rules of the game is making implementation of operational changes difficult and ineffective. Changes required to tackle the NPA problem would have to span the entire gamut of judiciary, polity and the bureaucracy to be truly effective (Reddy, 2002). Saez (2001) analyzed the important process about financial reform in the area of bank illiquidity in low-income emerging markets. This process is taking place within the context of a debate as to whether or not governments should try to rehabilitate existing state-owned banks or allow a new or parallel banking system to emerge in order to reduce non-performing assets from state-owned commercial banks. A comparison of institutional development in China and India suggests that new entry rather than the rehabilitation approach may work more favorably to reduce non-performing assets. Chipalkatti (2005) revealed that, as part of the financial sector deregulation, India's central bank mandated specific annual report disclosures effective March 31, 2000, that primarily related to a bank's loan assets. This study attempts to verify whether these mandated disclosures were transparent to investors and whether they had any impact on the level of information asymmetry surrounding bank stocks as measured by their bid-ask spreads. The results indicate that the mandatory disclosures were indeed transparent to investors and that bid-ask spreads and asymmetric information costs reduced in the post disclosure period. Overall, the results suggest that the Reserve Bank of India's (RBI) efforts to reinforce the market's disciplining mechanism by mandating better quality disclosures has been positively received by investors. Srivastava (2003) explained that the last one decade has seen vigorous attempts on the part of the legislature to enact a law which could effectively curb the menace of ever growing Non Performing Assets, which today stand at more than Rs 1,00,000
Crores. The Civil Courts were not found effective, hence came the Recovery of Debts Due to Banks and Financial Institutions Act, 1993 (RDBFI Act). The desired results did not come from this Act, hence came The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 (Securitization Act).

Cross countries evidence proved that securitization is a powerful tool to manage the problem of NPAs. Securitization holds many benefits for banks and financial system. Securitization helps achieve an even distribution of risk across activities by minimizing assets-liability maturity mismatches in order to reduce regulatory capital requirements (Ganti, 2002). Keeping in view the growing importance of securitization in reducing the problem of NPAs, government of India passed Securitization and Reconstruction of financial Assets and Enforcement of Security Interest Act, 2002 (Paul and Suresh, 2005). Sharma (2002) revealed that Securitization and Reconstruction of financial Assets and Enforcement of Security Interest Act, 2002 (popularly known as SARFAESI Act, 2002) was hailed as the best solution to the chronic problem of recovering the NPAs or bad loans. Government felt that the Act was incomplete without ‘incorporating the point of view of borrowers’. The act enables banks to attach and sell off pledged assets in case of default, a feature that has been used considerably by banks to improve their NPA situation in recent years (Patra and Roy, 2002) As is done in such legislation in other parts of the world. This practice is called ‘Lender’ Liability’. Essentially recognizes the fact that defaults often happen because of problems beyond the control of borrowers. In India, these factors could include delayed projects approvals and irregular project financing. Mohpatra (2004) revealed that The Securitization Act empowers the banks and FIs to move on its own against a borrower whose assets are secured, and who has made some kind of default in repayment of the same. Srivastava (2002) concluded that banks/financial institutions had to enforce their security through courts. This was a very slow and time consuming process. There was also no provision in any of the present law in respect of hypothecation, though hypothecation is one of the major security interest taken by the banks/financial institution. Ganti (2002) concluded that Securitization Act may prove to be very beneficial for the Indian banking sector. While securitization act can be a means to manage balance sheet risks and operational risk by banks, it should be firmly emphasized that banks must not consider it as a means to attenuating their
obligations and further suggested that regularly requirements governing securitization have to be transparent so that the market players can be successfully navigate through the by lanes and highways strictly by traffic rules and signals. Sen (2002) revealed that SARFAESI Act has provided favour to banks and financial institutions by empowering these banks and financial institutions for direct permission/auction of secured without intervention of court or tribunal. They can take help from District Magistrate for peaceful possession of asset and it leads to faster recovery of debts. Saha (2003) concluded that the SARFAESI Act has power to recover NPAs provided host of other things are put in place. This Act will actually change the mindset of the creditors as well as the borrowers. And it will remove from the minds of the creditor the sense of lack of control it gets as soon as the amount of credit is out of its door and from the minds of most borrowers remove the sense of total complacency which many of them have about meeting the terms of agreement under which credit has been extended. Venugopal (2004) explained that the net impact of the Act must be viewed in the context of the progress of the overall banking reforms. Indian banking is in the second phase of reforms when more stringent prudential norms are likely to be introduced. Debashish (2004) found that securitization began in India in the early nineties. The major securitization deals in recent past in Indian scenario; and Securitization Act 2002 is just the new example. But the major constraints of securitization in India are: legal issues, taxation, lack of third party service, accounting, lack of data across economic cycles. Since late eighties, when securitization made its beginning in India, the number as well as the size of transactions has grown over the years, this trend is likely to continue and securitization is likely to be increasingly used for better assets liability management. Jaykar (2004) concluded that ever since the Securitization Act was introduced, at least 10 per cent asset reconstructions companies emerged on serve. Banks realized that deal like ARCIL’s may be their only hope of making their bad loans pay. A vibrant asset reconstruction industry ay be just what the doctor ordered for their NPAs added banking and financial industry. ARCs are no panacea but given the other option, which tantamount to simply wishing NPAs away, the ARCs are India’s best hope. What is needed is a regulatory environment that helps them find buyers. Business Today (2004) found that even though the SARFAESI Act which for the first time strengthened the bank’s power to take over management of a defaulting
company or take possession of its mortgaged assets was passed by some time back in November, 2002; but the momentum has grown only in the last few months. The biggest catalyst by far has been the setting up India’s first ARC by three of India’s largest financial institutions and further suggested that it is true that NPL’s problem in our country has not assumed the magnitude that could class it as a crisis situation; but ARCIL notes that its adverse impact can never be judged from slow growth credit. And NPAs marketing gears up for action as buyout prospects attract big overseas investors. Agarwal (2004) revealed that Supreme Court of India did not sort out a part of the NPA puzzle that it upheld the Securitization Act. But, lender’s liability is still a gray area. Prasad (2004) concluded that SARFAESI Act allows banks at least in theory, to take over defaulting borrower’s assets and sell them off to recover their money. There is still little action to back it up right now. Equity investors are still circling the opportunity. Banks have yet to decide which they should sell to outside investors. And specialist investors that deal with distressed debit or doubtful debt have yet to come into management. And in reality almost 40 per cent assets are such that a simple working capital restructuring can take the company of the woods and in majority bigger companies. A new management team will be needed once the promoters give up control. And this is where one finds another gap.

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Research Methodology

A systematic process and methodology is needed to conduct the research in a successful manner. This section of the study highlights the methodology and process used to conduct the present research. This section justifies the present study and highlights the main objectives and hypotheses of the study. Further, this section discusses the research methodology adopted for attaining the objectives and to test the hypotheses of the study. In the end of section, scope and limitations of the study are discussed.

Justification of the Present Study

The review of literature clearly indicates that the measures adopted by the Indian banking sector to recover the whopping non-performing assets (NPAs) seem to have virtually failed. The banking regulator's study on the rising NPA levels of commercial banks has observed that various steps like filing of suits, the BIFR (the Board of Industrial and Financial Reconstruction) route and debt recovery tribunals have not had the desired effect in reducing the sticky loans of banks. In fact, in many cases the recovery process was further delayed. The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 (here-in-after referred to as The Securitization Act) has been enacted with an intention to strengthen the creditors rights through foreclosure and enforcement of securities by the banks and financial institutions by conferring on the creditors the right to seize the secured asset and sell of the same in order to recover dues promptly bypassing the costly and very time consuming legal process through courts. But this effort of the government was not enough. The net non-performing assets has risen by an average 24 per cent while capital adequacy ratio was down by 2 percentage points in the second quarter of current fiscal as compared to the corresponding period last year, according to an ASSOCHAM study. The study titled ‘Solvency Analysis of the Indian Banking Sector’ reveals that 25 public sector and commercial banks, on an average, have registered a 24 per cent rise in net NPAs during the second quarter of the financial year against the corresponding quarter of the previous
financial year. The average CAR (Capital Adequacy Ratio) of the banks slipped to 12.68 per cent from 13.41 per cent in the previous year. Therefore, to fight the menace of the NPAs the Indian banks required more teeth with an object to give the banks more powers and skill. All existing research concluded that NPAs in an important parameter in the analysis of financial performance of banks and reduction of NPAs is necessary to improve the profitability of the banks and high level of NPAs also result in slow loan assets turnover and credit creation activity generally hampered. Studies conducted at international levels clearly indicates that Securitization is important tool to cope up with the problem with NPAs. In India, we do have SARFAESI Act. It is also imperative to find out the impact of Securitization Act on NPAs. Further, the review of literature also highlights that this particular field need comprehensive study regarding many aspects of NPAs in the Indian banking sector. Therefore, the researcher has decided to work under the title “Securitization and Management of NPAs in the Indian Public Sector Banks. The present study has made an attempt to overcome almost all the limitations of the existing studies by focusing on public sector banks; considering both primary and secondary data; and combining the behavioral, technical and managerial aspect of NPAs in the Indian public sector banks. Above all, the study has followed a macro approach by critical evaluation of Securitization Act and impact of it on NPAs of Indian public sector banks, so that the results of these studies can be generalized in Indian context. The broad objectives and hypothesis of the present study are as under:

Objectives of the Study

- **To study the magnitude of problem of NPAs in the Indian public sector banks**
- **To critically examine the various provisions of Securitization Act**
- **To study the most responsible factors of NPAs in the Indian public sector banks**
- **To Study the impact of Securitization Act in reducing the problem of NPAs in the Indian public sector banks**
- **To suggest the strategies to manage the problem of NPAs’ in Indian public sector banks**
Hypothesis of the Study

- It is hypothesized that there is no relationship between internal and external factors causing NPAs in Indian public sector banks.
- It is hypothesized that bank managers faced difficulties in inspection of accounts in Indian public sector banks.
- Securitization Act has no impact on reducing the problem of NPAs.

Research Methodology

In modern times, management research has reached a stage of development where the traditional methods and techniques require synthesis and extension. Now, research has become more complex, cost incurring and time consuming activity. Therefore, a systematic process and methodology is needed to conduct the research in a successful manner. Research methodology is the systematic method/process dealing with enunciating of identifying problem, formulating hypothesis, collecting of facts or data, analyzing these data and reaching at certain conclusion either in the form of solutions towards the problem concerned or certain generalization for some theoretical formulation (Hasouneh, 2003).

It also comprised of a number of alternative approaches and interrelated and frequently overlapping procedures and practices. Since there are many aspect of research methodology, the line of action has to be chosen from a variety of alternatives. The choice of suitable method can be arrived at through the assessment of objectives and hypotheses; and comparison of various alternatives. Research methodology used in the present study is as under:

**Research Types:** Type of research is based on the nature of data. In the light of the nature of data, the present research is mainly of quantitative nature, as most of the findings of the present study are based on quantified measures. However, the researcher also manipulates the causality and consequences, which also represents a

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1 On the basis of nature of data, research can be of two types: (1) Qualitative Research and Quantitative Research. In the quantitative research, findings are based on some quantified measures; on the other hand, if the findings are based on some statements, description and other value loaded stories and anecdotes, we may call it qualitative research or exposition research.
sign of qualitative research. In the light of purpose of research, the present study is mainly of applied nature as the researcher has tried to test the assumptions and applications of the problem in a given set of conditions. Further, the survey method has been adopted by selecting and studying sample chosen from the population (public sector banks) to test the hypotheses and discover the relevant incidence, distribution and interrelation of variables.

**Research Design:** Reliability and validity of the research require the planning of inquiry, i.e., the detailed strategy of how the research will be conducted. A good research design depends on two aspects of its designing: first, specifying what one wants to find out, i.e., properly posing the problem or properly phrasing the issues to be studied or the logical structure of inquiry; and second, determining how to do it, i.e., collecting data through scientific and appropriate methods, using effective techniques of data analysis and rational and meaningful deductions (Ahuja, 2001). Therefore, the researcher has to take great care in the preparation of the research design (Thanulingom, 2003). There are many types of research design and there is no standard or ideal research design to guide the researcher; many different research designs may accomplish the same objectives. Broadly, research design can be of three types: (1) Exploratory (2) Descriptive and (3) Casual/Experimental.

In the present study, mainly exploratory research design has been adopted, as the main purpose of this study is to gain familiarity with the various aspects of NPAs in the Indian public sector banks and to achieve new insights into it. Further, the study formulates more precise research problem by developing hypothesis. Since the scope of the study is very vast, the present study also represents some characteristics of descriptive research design.

**Sample Design**
In the most cases of research studies, it becomes almost impossible to examine the entire universe; the only alternative thus is to resort to sampling. The present study is also of the same nature. According to Manheim (1977), "a sample is a part of the population which
is studied in order to make inferences about the whole population”. Thus, a good sample is a miniature version of the population and a good sample design involve the following:

- Sample Unit (Unit of Analysis)
- Sample Techniques and
- Sample Size

**Sample Unit:** Before selecting a sample, a decision has to be taken concerning a sample unit. The sample unit is the individual, group, or other entity that is selected for the survey. This is also known as the unit of analysis\(^2\) when the survey data are examined statistically (Fink, 1995). Since the major objective of present study is to study the impact of Securitization Act in reducing NPAs in the Indian public sector banks and various causes of NPAs in Indian banks. Therefore the public sector bank has been considered as sample unit.

**Sampling Techniques:** The procedure that a researcher adopts in selecting the unit for the sample is known as sampling technique. There are mainly two types of sampling, the first type of sampling is known as Probability Sampling\(^3\). And the second type of sampling is known as Non Probability Sampling. Such samples are chosen based on judgment regarding the characteristics of the target population and the needs of the survey. With non-probability sampling, some members of the eligible target population have a chance of being chosen, whereas others do not.

In the present study, non probability sampling techniques have been used. The selection of the units has been made on the basis of non-probability sampling technique, viz, ‘convenience’ sampling\(^4\). To obtain the information from the various respondents within the banks stratified sampling, which is the form of probability sampling, has been used.

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\(^2\) Most of the times, sample unit and analysis unit are same, but not always. In simple one-stage sampling, they are same; in more complex multistage sampling they are not.

\(^3\) Probability sampling provides a statistical basis for saying that a sample is representative of the study or target population. In probability sampling every members of the target population has a known, nonzero probability of being included in the sample. Probability sampling implies the use of random selection.

\(^4\) A convenience sample consists of group of individual that is ready and available for the purpose of the survey.
Sample Size: Sample size means the number of sampling units selected from the population for the purpose of investigation. No doubt, sample size must be sufficiently large so that we can have a representative sample. But, money and time constraints tend to limit the size of sample. The population addressed under the present study consists of all public sector banks operating in India. 60 public sector banks with the representatives from public sector located in Haryana, Delhi and Punjab were chosen. Some of these banks were highly affected with NPAs, while many others were not. The sample industries involved in the survey, are given in the Table 3.1

<table>
<thead>
<tr>
<th>Banking Sector</th>
<th>Delhi</th>
<th>Haryana</th>
<th>Punjab</th>
<th>Total</th>
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<tbody>
<tr>
<td><strong>Public Sector Banks</strong></td>
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<tr>
<td>SBI Group</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>30</td>
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<tr>
<td>Nationalized Banks</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>60</td>
</tr>
</tbody>
</table>

The main respondents targeted were from the top management (Branch Manager). One respondent (Branch Manager) were selected from each bank branch. Thus sample size is total 60.

Data Collection
In research process, the result will be good if the data put in is good. If poor and unrelated data are collected, naturally poor and misleading conclusion will be drawn. Therefore, due consideration should be given to the type and method of data collection (Wilkinson and Bhandarkar, 2000). There are two types of data: primary data and secondary data. Since the scope of the study is really very vast, both types of data have been collected. Primary data has been collected through the well-structured comprehensive questionnaire (Appendix I). Well-structured questionnaires were prepared for the purpose to collect the necessary information. The questionnaires were prepared in the two phases. In the first phase, unstructured in-depth interviews were conducted to create initial questionnaires (the instrument). Further, expert opinions on the questionnaire were collected and improvements were made to the questionnaires. This necessitated some changes in the
final version of the questionnaire. In the second phase, a pilot survey was also conducted with 3 banks to evaluate how well the questionnaire was understood, and also to test alternative wordings of questions, alternative response options and determining whether some other response should be provided. During the interview process, some weaknesses in the design were also found. Some of the respondents had reservations about some questions in the initial questionnaire, due to the sensitive nature of topic addressed. The survey also helped the researcher in rewording and restructuring the questionnaire. The validation of the questionnaires was done by the feedback from the academicians, practitioners and by the issues identified by relevant literature. Finally, the structured questionnaires were prepared and the survey was conducted by explaining the purpose of the research to the respondents. The questionnaire has been divided into 5 sections. The content of questionnaire included the sample profile, types of lending, problem of non performing assets (in parentage), internal and external factors causes bad loans, difficulties faced in inspection of accounts and early warning signals of an assets turning into NPAs. Some strategical questions were also asked in the questionnaire to suggest the possible solution of problem of NPAs in the Indian banks.

The questionnaire mentioned above, contain several type of questions keeping in view the objectives of the present study. Easily understandable and answerable questions were prepared and were carried to the respondents to be filled up by them. In most of the cases, personal interviews were conducted by the researcher to secure correct and collect necessary information. Some questionnaires were mailed to the respondents by the ordinary post. However, the response of such types of respondents, were not encouraging. Most of them either did not return the questionnaires or they did not fill the complete questionnaire. Some questionnaires were also mailed to the respondents through the Internet. Here, it was quite interesting to know that, responses of such respondents were encouraging compare to those whom the questionnaires were mailed by the post. However few respondents insisted to collect the questionnaire after a few days.

In the present study analysis is also based on the secondary data, which have been collected from various journals, books, magazines, reports, working paper series. For this purpose, researcher visited many libraries. Internet was highly used for the purpose of
Data Processing and Analysis

The task of data collection is completed when all entries (or almost all) are filled with the appropriate responses or values (Galtung, 1967). After the data has been collected the researcher turns to the task of data processing and further analysis these data. ‘Data Processing and Analysis’, the task is to take the completed data matrix, which is amenable to processing, and do two things with, in this order: (1) Processing: to recast the matrix, concentrate and otherwise deal with it so that the data are as amenable to analysis as possible and (2) Analysis: to see the data in the light of the hypotheses and theories, and draw conclusions that are amenable to the theory formation as possible (Galton, 1967).

In the present study, responses from respondents were coded and tabulated with the help of computer. This process was used for the each type of the questionnaires. The responses of individuals have been given in all the tables in the term of both the numbers and percentages. Figures shown in tables with parentheses represent percentages while those without parentheses are simple frequencies. As exploratory research require some advance statistical tools,

For analyzing the data, both simple and advanced statistical tools have been used. In some cases simple statistics like average, percentage, weightage average and mean score have been applied. Exploratory research, require some advanced tools; therefore to test the various hypothesis of the study, non-parametric statistical tests based on Chi-square have been used5. The test was conducted at 95 per cent confidence level (or 5 per cent level of significance). The calculated chi-square values were compared with the

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5 The Chi-Square test is carried out in the following steps. For each observed number (0) in the table find an 'expected number' (E); this procedure is discussed below:

- Subtract the each expected number from each observed number: (O-E)
- Square the difference: (O-E)^2
- Divide the squares so obtained for each cell of the table by the expected number for that cell: (O-E)^2 / E

χ^2 is the sum of (O-E)^2 / E
table values of chi-square at a given degree of freedom. A five point Likert scale was also used to measure the intensity of the firms and customers attitudes towards the selected attributes. The respondents were asked to rate the variables, using five point Likert scale, which ranged from strongly agree to strongly disagree. The weighted average score were also calculated at the appropriate places where the respondents were asked to rank/rate different statements, either according to degree of their importance or according to the extent they agree with the statement as the case may be. Likert scale is qualitative in nature. A scoring system was adopted to quantify them. Score of 5,4,3,2, and 1 were allotted to (1) to (5) respectively.

**Scope and Limitations of the Study**

In liberalizing economy banking and financial sector get high priority. Indian banking sector of having a serious problem due non-performing. The earning capacity and profitability of the public sector banks are highly affected due to this. Thus, the topic ‘Securitization Act and Management of NPAs in the Public Sector Banks’ offers a vast scope for the study. However, it is not possible to cover all the aspects of NPAs. Hence, the researcher has restricted to study the ‘Securitisation Act and Management of NPAs in Indian Public Sector Banks ’. Further research efforts have been made to find out the viable solution for the problem of NPAs. The approaches to the study have been from the point of view of public sector banks, located in Haryana, Delhi and Punjab. Besides all these, the present study critically evaluates the various provisions of Securitization Act. Despite the scope of the present study is very vast; still the researcher has no claim to say that the present research work is complete in every sense and results are accurate and original. The reason, the every researcher (especially in Social Science) has to conduct the study under certain limitations and collect the data based on certain assumptions. The present study is not an exception. The present study has also been conducted under certain limitations and is based on some assumptions. Some of the most important are given as under:

- Since the scope of the study in this particular field is really very vast and collected data provides huge information; therefore the researcher may reveal some other interesting results. But, the researcher has limited the result of present study
according to objectives and hypothesis of the study. However, the researcher tried to include all the necessary information for justifying the result of the study.

- In the present global financial meltdown situation, public sector banks have also reported significant NPAs. But the present study is only limited to before the meltdown situation. According to a very recent report of RBI, public sector banks are expected to declare high NPAs in the next year due to global meltdown. Therefore, it can be an interesting work to study for the future.

- The size of present study is relatively small to generalize the results in the Indian context. But time and financial factors did not allow the researcher to selected very large sample size.

- The result of the present study is based on the opinions and experiences of the respondents. In opinions survey there is always possibilities of individual biasness in opinions, and results looks unreliable. This biasness could not be eliminated.

References

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