1.1. Background of the Study

The banking sector plays an important role in the economic growth of a country. Through its intermediary activities, the banking sector fosters the production, distribution, exchange and consumption processes in the economic system. It stimulates the flow of funds in the economy and fuels economic growth. The efficiency of banking system, thus determines the pace of development of the economy. Similar to any other business enterprise, the efficiency of a bank is evaluated based on profitability and quality of assets it possess. But unlike other commercial ventures, Indian banking has social commitments integrated into its operations. The banking system in India has had to serve the goals of economic policies enunciated in successive five year development plan, particularly concerning equitable income distribution, balanced regional economic growth and the reduction and elimination of private sector monopolies in trade and industry. In the post-independence period, the
banking sector has played a catalyst and commendable role in supporting the
government to achieve its social and economic objectives through deposit
mobilization, mass branch networking, priority sector lending, employment
generation etc. Achieving such societal objectives resulted in imposing
extensive regulations by the government which in turn hampered the
productivity of Indian banking during the pre-liberalization era.

An evaluation of the Indian banking industry during the pre-liberalization
era revealed the presence of several shortcomings which crept into the
financial system over the years’ notably reduced productivity, deteriorated
asset quality and efficiency and increased cost structure due to technological
backwardness. Among these deficiencies, policy makers identified the erosion
of asset quality as the most significant obstacle for the development of a sound
and efficient banking sector. In fact, the various practices that were followed
during pre-liberalization period that includes asset classification using health
code system, accrual basis used to book interest in bank accounts etc.,
concealed the gravity of asset quality issues of the banking sector. The asset
quality is a prime concern and impacts various performance indicators, i.e.,
profitability, intermediation costs, liquidity, credibility, income generating
capacity and overall functioning of banks. The reduction in asset quality
results in accumulation of Non-Performing Assets (NPAs).

The intermediation process is the principal function of a commercial
bank. Since it involves counterparty risk; risk is inherent in banking. A banker
should expect that all loan portfolios’ will not fetch returns/earnings in the
normal course. The loans/advances is an important source of income for the
banks. The strength and soundness of the banking system primarily depend on
the quality and performance of the loan portfolio, i.e. the fulfillment of
obligations by borrowers promptly.
Non-performing assets indicate an advance for which interest or repayment of principal or both remains overdue for a period of 90 days or more. An advance/loan is treated as non-performing when it fails to satisfy its repayment obligations. Thus, non-performing assets are loans in jeopardy of default. The level of NPAs is an indicator of the efficiency of banker’s credit risk management and efficiency of resource allocation to productive sectors. The Basel Committee on Banking Supervision defines credit risk as “potential default of a borrower to meet the obligation in accordance with the agreed terms” (BIS, 2005). Higher non-performing assets resulted in many bank failures (Nayak \textit{et al.}, 2010). NPAs represent a real economic cost in modern days as they reflect the application of scarce capital and credit funds to unproductive use. It also affects the lending capacity since funds are blocked and repayment is disturbed and has also resulted in additional cost for intermediation and realizing the NPAs.

The banking sector reforms in India during the post-liberalization period mostly focused on improving the efficiency of the banking sector by incorporating prudential norms for income recognition, asset classification and provisioning and through integrating international standards. The alarming level of NPAs is recognized as one of the major explanations for implementing structural changes and reform measures in the banking sector during this period. Keeping in view the inefficiencies in the banking sector and the presence of non-performing assets, the Committee on Financial System (Narasimham Committee – I) was set up. Few observations of Narasimham Committee – I on the banking sector and its inefficiencies include;

- Gross profits before provisions were no more than 1.10% of working funds indicating low profitability of banks.
- Net profit of public sector banks (PSBs) as a percentage of total assets show as low as 0.17%.
Average operating costs of banks as a percentage of assets was about 2.3% in India, while it was as low as 1.10% in China, 1.60% in Malaysia, 1.90% in Thailand, 1.00% Japan and 2.10% in European countries.

The Cash Reserve Ratio (CRR) stood at its legal upper limit of 15% and SLR at 38.50%.

The Credit to Deposit Ratio (CDR) shows 62.54% and Investment-Direct Deposit Ratio of 38%.

Huge amount of NPA without any clear cut regulation.

40% of bank credit channelize to priority sector at concessional rate.

Restriction on entry and expansion of domestic, private and foreign banks.

Non-interest income as percentage of total income shows 9.25%

High intermediation cost as 2.61%

The Capital adequacy ratio was 1.5% in India as compared to 4% in Korea and Pakistan, and 4% to 6% in Taiwan, Thailand and Singapore.

Banking reforms were initiated to upgrade the operating standards, health and financial soundness of banks to internationally accepted levels in an increasingly globalized market (Pathak, 2009). The reforms have been undertaken gradually with mutual consent and wider debate amongst the participants and in a sequential pattern that is reinforcing to the overall economy (Badola and Verma, 2006). These reform measures substantiate the views that highlight the key role in economic development that could be played by a banking system free from the types of controls on interest rates and quantities that were prevalent at the time (Barajas et al, 2012).
Introduction

Two decades had completed since the banking sector initiated measures to uplift the banking sector in line with international standards and to improve productivity and efficiency of banks. Many researches on NPA illustrated the relationship between asset quality and financial distress and considered management of NPA as a major prerequisite to counter the recessionary pressures and foster economic development. Some of the major observations from previous researches include;

- The problem of the NPA is severe in countries where severe government intervention had led to the institutional decay of banks or prevented their sound development (Renaud, 1997)
- NPA management assumes priority over other aspects of bank functioning (Batra, 2003)
- The existing capital adequacy regulations tried to protect the interest of depositors (avoiding bankruptcy), but impacted availability of funds for productive purposes. (Murinde and Yaseen, 2004)
- Reduction in NPA ratios does not indicate a reduction of fresh NPA. For ex, Banks have aggressively provided for their bad debts from the treasury profits during 2003-04 in order to show a better NPA picture, resulting a decline in NPA by 24.7% as against a decline of 8% in 2002-03. (Pathak, 2009)
- The NPA is a significant threat to Indian Banking Sector (Estrella et al, 2000; Gopalakrishan, 2004; Ahmed et al, 2007; Heid and Kruger, 2011)
- The Slowdown in economic growth and rapid credit growth are independently associated with higher levels of NPA (Bock and Demyanets, 2012)
Upon analyzing the banking sector in India, it is evident that the NPAs still pose a significant threat to the banking sector. This research is an attempt to examine the non-performing assets of public sector banks (PSBs) in India and to evaluate the various facets of NPA and its management in Indian banking sector.

1.2. Statement of Problem

Indian Banking, whose environment till early 1990’s was insulated from the global context and dominated by state controls of directed credit delivery, regulated interest rates and investment structure did not participate in the vibrant global banking revolution. The Indian banking sector is dominated by public sector banks (PSBs) that include SBI & associates and nationalized banks. The post-liberalization period saw an upsurge of many private sector banks and foreign banks. One of the major objectives of banking sector reforms was to encourage operational self-sufficiency, flexibility and competition in the system and to improve banking standards in India to the international best practices. Based on the recommendations of various committees’ especially the Committee on Financial Sector Reforms under the chairmanship of Mr. M. Narasimham and according the Basel requirements, various measures were implemented to liberalize the banking sector and it include;

- Liberalizing rules for entry of more domestic and foreign banks.
- Infusion of government capital in PSB and permission to inject private equity
- Deregulation of interest rate except for specific classes
- Reduction of SLR and CRR requirements.
- Reduction in credit controls
- Incorporation of broader definition of priority sector lending.
Introduction

- Implementation of prudential measures for income recognition, asset classification and provisioning requirements.
- Implementing Basel based capital adequacy requirements.
- Emphasis on performance, transparency and accountability.

RBI issued guidelines in 1993 based on the recommendations of the Narasimham Committee that mandated identification and reduction of NPA to be treated as ‘National Priority’. The level of the NPA indicates the efficiency of banker’s credit risk management and allocation of resource. The measures incorporate to manage NPA can be classified into precautionary measures and curative measures. Precautionary measures focus strengthening credit risk management system and continuous risk assessment systems of the bank. This will reduce the instances of fresh NPA that have been generated. The curative measures are reactionary in nature and focused on recovering from NPA accounts. It includes measures initiated by RBI such as setting up Asset Reconstruction Companies (ARCs), Debt Recovery Tribunals (DRTs), Securitization Act, Compromise Settlement Schemes, etc.

Despite the various prudential measures taken from the post - liberalization period, the non-performing assets still pose an important threat to the very existence of banking. From ₹636.09 billion in 2000-01, the total gross NPA (GNPA) has increased to ₹979.25 billion in 2010-11 and ₹1,423.26 billion in 2011-12. In percentage terms, Gross NPA increased to 45.3% in 2011-12, compared to 15.7% increase during the previous year. Similarly, from ₹314.63 billion in 2000-01, the total net NPA (NNPA) has increased to ₹418.15 billion in 2010-11 and ₹649.75 billion in 2011-12. In percentage terms, the net NPA increased to 55.6% in 2011-12, compared to 7.7% in the previous year. On the other hand, from ₹5,407 billion in 2000-01, the total loans and advances increased
to ₹42,975 billion in 2010-11 and ₹50,746 billion in 2011-12. In percentage terms, the total loans and advances increased to 18.1% during 2011-12. Along with increase of NPA, there exists an increase in the level of loan restructuring in standard advances during the study period. The observation made by Reserve Bank of India in its annual report 2011-12 state that “In the period immediately following the global financial crisis, when asset quality of banks in most advanced and emerging economies took a beating, the asset quality of Indian banks was largely maintained, partly on account of the policy of loan restructuring”. The restructured standard advances of public sector banks (PSBs) as a percentage of gross advances 5.07% in 2009-10, 4.2% in 2010-11 and 5.92% in 2011-12. The total NPA written off by banks in India during the last 13 years (2000 to 2013) is ₹100,000 crores. (Chakrabarthy, 2013). The financial analysts and rating agencies that include Moody’s maintained a negative outlook on Indian banking and mentioned that the asset quality of banks would continue to deteriorate especially for Indian Public Sector Banks (Moody’s, 2013). It reiterated the fact that even though the post-liberalization period witnessed significant reforms in the banking sector, the asset quality explained by the level of NPA still worries Indian banking sector, its stability and growth.

Examination of published works on NPA in scheduled commercial banks (SCBs) in India showed that; (1). Most of the studies focused on NPA ratio’s (gross NPA ratio and net NPA Ratio) to assess the asset quality and effectiveness of credit risk management. (2). Very few studies were conducted examining the relationship between NPA and bank performance and macroeconomic indicators. The mediation or moderation effect of these variables on asset quality is not studied in depth. (3). The fresh NPA generated during a particular year, gross NPA generation rate and net additions to NPA were not emphasized in assessing the asset quality, (4). Only a few studies were
conducted using banker’s perception on incidence, impact and management of NPA, and (5). Many measures were initiated since 2000 to effectively manage the menace of NPA. Further, limited studies have been done on the effectiveness of various measures taken from the post-millennium period, including One Time Settlement/Compromise Scheme (2000), Debt Recovery Tribunals (originally established in 1993, significant amendment was carried out during 2003), Corporate Debt Restructuring (2001), SARFAESI (the act was passed during 2002) and Asset Reconstruction Company (ARC).

Thus, the review of literature available on NPA highlighted the necessity to study NPA since the post-millennium period with specific focus to examine (1) whether NPA is managed effectively in Indian banking sector particularly the public sector banks (PSBs) which holds significant share of deposits and advances of Indian banking sector, (2) the moderating and/or mediating effect of bank performance and macroeconomic indicators on NPA, and (3) the major causes of NPAs and the various measures to be taken to enhance the credit risk management system in Indian banking.

1.3. Research Questions

The various research questions addressed in this study include;

1. Whether the NPA of Public Sector Banks (PSBs) are efficiently managed?

2. Do the various bank groups show similar trend in the movement of NPA?

3. Do additions to NPA occur at a faster rate in post millennium period?

4. Do the selected micro and macro variables pose a mediating and moderating effect on asset quality of banks?
5. Are Public Sector Banks (PSBs) still vulnerable to financial crisis?
6. What are the various reasons and the significance of each in creating NPA?

1.4. Objectives of the Study

The specific objectives of the study are;

1. To analyze the trend of the NPA in Public Sector Banks in India vis-à-vis State Bank of Travancore.
2. To analyze the moderating and mediating effect of selected bank specific and macroeconomic variables on NPA of Public Sector Banks.
3. To analyze the major causes of NPA and their significance on the generation of NPA.
4. To study the impact of NPA on banks and other stakeholders.
5. To suggest measures for the efficient and effective management of NPA.

1.5. Hypotheses of the Study

The following hypotheses were set for this research.

H1 There exist significant differences in the movement of NPA among different bank groups in India.
H2 There exist significant differences in movement of NPA of State Bank of Travancore with different bank groups in India.
H3 The Selected bank performance indicators moderate the relationship between advances and NPA of Public Sector Banks.
H4 The Selected macroeconomic variables mediate the relationship between advances and NPA of Public Sector Banks.
H5 NPA is a significant moderating variable in the relationship between interest income and net profit of Public Sector Banks.

H6 Bank Specific reasons are most prominent reasons for the generation of NPA.

1.6. Scope of the Study

1. This research evaluates the trend in the movement of NPA of public sector banks (PSBs) in India during post-millennium period (from 2000-01 to 2011-12). The post-millennium period is considered since RBI implemented the second phase reforms during 1998-99. Also, the significant NPA management measures that include DRTs, SARFAESI Act, ARCs etc. were implemented during this period.

2. The study focuses on public sector banks (PSBs) even though for comparative purpose, all bank groups are considered. The variables selected that include NPA indicators, bank performance indicators and macroeconomic indicators are based on previous studies on NPA conducted in India and international context.

3. The bank groups in India include (a) Public sector banks, (b) Private sector banks and, (c) Foreign banks. Public sector banks are further classified into (a) SBI & Associates, and (b) Nationalized banks.

4. To evaluate the trend in the movement of NPA variables, the study period is divided into pre financial crisis period and post financial crisis period. The period from 2000-01 to 2006-07 is considered as pre financial crisis period, while the period from 2007-08 to 2011-12 is considered as post-financial crisis period. Such a classification is undertaken based on expert feedback on the financial crisis that erupted globally during 2007.
5. In order to substantiate secondary data analysis and to analyze the various facets of non-performing assets, primary data were collected from officers working with State Bank of Travancore. The bank is selected since it is a major associate of the State Bank of India. The public sector banks, which comprise of the State Bank of India and nationalized banks, hold more than 75% of total advances and loans of all scheduled commercial banks in India.

1.7. State Bank of Travancore: A Profile

State Bank of Travancore (SBT) was originally established as Travancore Bank Limited in 1945 under the patronage of His Highness Sri Chithira Thirunal Bala Rama Varma, the Maharaja of Travancore. The bank was made as an associate of the State Bank of India by a special statute of Indian Parliament (SBI Subsidiary Act, 1959). The bank is a nationalized bank with primary operations in Kerala state.

The Travancore Bank Limited became a scheduled bank in 1946 and obtained a license to deal in foreign exchange business in 1947. The paid up capital of the bank was 1 crore, of which 30% was contributed by the Government of Travancore, the balance being subscribed by over 4,000 shareholders. In 1959, the Travancore bank entered into a tripartite agreement with Indo Mercantile Bank Ltd, and the Government of Kerala whereby the bank took over a portion of assets and liabilities of the Indo Mercantile Bank Ltd. After State Bank of Travancore came into existence in 1960, the bank also took over Travancore Forward Bank Ltd (14.5.1961), Kottayam Orient Bank Ltd (17.6.1961), The Bank of New India Ltd (17.6.1961), The Vasudeva Vilasom Bank Ltd (1.2.1963), The Cochin Nayar Bank Ltd (8.1.1964), The Latin Christian Bank Ltd (17.8.1964), The Champakulam Catholic Bank Ltd (1.10.1964), The Bank of Alwaye Ltd (1.2.1965), and The Chaldian Syrian
Bank Ltd (1.10.1965). With the merger of these banks, the State Bank of Travancore has become the premier banking institution in the State of Kerala having the widest and largest network in the state.

The bank is headquartered at Thiruvananthapuram (Kerala) and has 1013 branches spanning 14 states and 2 union territories as on March 31, 2013. The bank has 758 branches in Kerala which is 75% of the bank’s total network. During the financial year 2012-13, the bank has achieved three milestones.

1. SBT has surpassed the total business of 150,000 crore.
2. SBT has opened its 1000th office during the year.
3. SBT has opened its 1000th branch during the year.

The bank has received national award for excellence in MSME lending and national award for excellence in lending to micro enterprises for the year 2011-12.

1.7.1. Major Highlights

- More than 65 years of dedicated service.
- Premier bank in Kerala.
- Member of largest ATM network in the country with more than 24,000 ATMs.
- Using world class technology through the implementation of 100% core banking solution.
- Preferred bank for NRI, evident from the higher NRI deposits in the state of Kerala.
Spearheaded financial inclusion initiative in Kerala. 100% financial inclusion was achieved in Kerala in 2007.

The Bank also provides other financial products like Life Insurance [in tie-up with SBI Life], Mutual Fund Investments in tie-up with five Mutual Funds and General and Accident Insurance in tie-up with United India Insurance Co Ltd.

1.8. Research Methodology

In order to realize the stated objectives, the researcher utilized a combined approach that embraces features of both descriptive and analytical research designs. Though several research studies on NPA in Indian banking sector are available, the studies on a closer look validated NPA problem using secondary data and most often depended ratio analysis to identify whether NPA is managed efficiently. A closer look into the studies highlighted insufficient analytical studies on the interaction between different bank specific performance indicators and macroeconomic indicators on incidence of NPA of banks. The methodology for this research is designed considering the above aspects; to evaluate asset quality of public sector banks explained using the trend in movement non-performing assets.

1.8.1. Descriptive Research

This research by and large is descriptive in nature. A descriptive study used to “make descriptions of the phenomena or the characteristics associated with a subject population: who, what, when, where and how of a topic” (Cooper and Schindler, 2003). The methods typically used in a descriptive study could be surveys, panels, observations or secondary data analyzed in a quantitative manner (Malhotra, 2004). This research used both primary and secondary sources in order to explain the non-performing assets of public
sector banks in India. Statistics on NPA and various NPA indicators during post-millennium period (from 2000-01 to 2011-12) along with selected bank performance indicators and macroeconomic variables were utilized in order to study the trends in movement of NPA, its relationship with selected variables, and efficiency of management of NPA during post-millennium period. A preliminary study focused on two groups - (a) academicians and researchers in banking, (b) experts working in banks’ loan/advances section – provided input, which is used to refine the research problem and develop the questionnaire.

1.8.2. The Analytical Phase

The analytical part of this research employed facts or information already available, and analyzed them to make a critical evaluation of the subject. Basically, the analytical part utilized the statistical inputs and verified the research hypotheses put forward in the study. In addition to this, the results of secondary data analysis are verified to provide an insight into ‘why’ such trends are observed.

1.8.3. Data Sources

In order to achieve the stated objectives, this research utilized both primary data and secondary data.

1.8.3.1. Secondary Data

The primary emphasis of this research is focused on analyzing non-performing assets of public sector banks in India during the period 2000-01 to 2011-12. In specific terms, it includes (a) analyzing the trend in the movement of NPA variances during the study period, (b) the moderating role of bank performance variables on the relationship between advances and NPA, (c) the moderating role of NPA on the relationship between income and profitability of banks, and (d) the mediating role of macroeconomic indicators on the
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relationship between advances and NPA of banks. To achieve the stated objectives, data are collected from various sources and include:

1. Research reports, published articles, news reports and conference proceedings available in both national and international level related to NPA. The information obtained from these sources are used for critical evaluation of the subject and identify research gap in the area of study. These secondary sources are part of different chapters in this report.

2. Statistical Data on NPA, bank-specific and economic indicators during 2000-01 to 2011-12, collected mainly from RBI website, Indian Banks Association, IndiaStat and Ministry of National Economy. In addition to the above, information is obtained from individual bank web sites.


1.8.3.2. Primary Data Source

In order to explain the incidence of NPA and to substantiate the observations from secondary data analysis, the primary data are collected using a structured questionnaire from bankers working with State Bank of Travanvore.

1.8.3.3. Research Instrument

A pre-tested questionnaire is used to collect primary data. The questionnaire was divided into four sections. The first section includes questions on demographic characteristics of the sample taken for the study. The second part includes questions relating to various causes of the NPA, the third part includes questions related to the impact and the fourth part includes questions relating to the management of NPA.
The drafted questionnaire based on literature review and after consultation with experts was refined based on a pilot study. A sample of 10 managers was approached and their feedback was obtained. Based on the feedback, some questions were removed and measurement scale was revised for some questions. Also, the pattern of questions and its grouping is revised based on the feedback obtained. The reliability of the questionnaire is assessed using Cronbach alpha. To measure the reliability, the data collected were entered and analyzed in SPSS 17, and its reliability is measured.

1.8.3.4. Sampling Frame

The sample size of the study includes 160 officers working with State Bank of Travancore. The respondents with experience in credit division is considered for the purpose of data collection.

Multi-stage sampling was used to select respondents for the study. Multi-stage sampling combines different sampling methods (Sharma and Guptha, 2009). In the first stage, the total bank was divided into Head Office, Zonal Offices, Stressed Assets Resolution Centre and Bank Branches. The primary data are collected from Head Office and Stressed Assets Resolution Centre in Thiruvanathapuram. Among the zonal offices, Ernakulum zonal office is selected, while the branches from Ernakulum, Thrissur and Kozhikode district were selected. The judgment sampling method is adopted to select officers for the study. While selecting sample, the employees working in the bank are classified into Senior Management, Middle Level Management and Junior Management.

Considerations employed to develop the sample size include;

- Budgetary Constraints.
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- Time Limitations
- Review of similar studies and information gathered on sample size used in these studies.

1.8.4. Tools of Analysis

In order to achieve the various objectives mentioned, the data collected were entered, arranged and presented using Microsoft Excel and SPSS 17. The secondary data collected for the study is summarized and initial analysis is done using average and percentage, wherever required. Charts were used to simplify the data for analytical purpose. To achieve the first objective of the study, i.e., to estimate the trend in the movement of NPA in Public Sector Banks vis-a-vis State Bank of Travancore, the statistical measures utilized includes Averages, Ratio, Exponential Growth Rate (EG Rate); Correlation, Regression, ANOVA, Levene and Welch Statistics, F-test, t-test and Sobel test are used as other analytical tools.

The questionnaire included three types of questions, (1) questions with five point scale (2) multiple choice questions (other than five point scale), and (3) open ended questions. In addition, there are questions on ranking factors, according to its importance. Demographic variables such as level of management and level of experience are subject to descriptive analysis using average and percentage. Questions based on the ranking are analyzed using a weighted average. The other questions were analyzed using percentage; Mean Percentage Value, Z- value, etc. Hypothesis testing is also used in the study. In order to test the association among the selected variables and significance of difference between different levels of management, Chi-Square test is applied. To verify whether the results obtained through sample holds in population,
Z-value is obtained. In order to verify the model used in the study, Structural Equation Modeling (SEM) is used.

1.9. Analysis Plan

The analysis is divided into three parts as follows;

1. Trends in movement of NPA of public sector banks in India

2. The mediating and moderating role of bank performance indicators and economic variables on NPA.

3. Perceptions of bankers on causes, impact and management of NPA.

The first part ‘trends in the movement of NPA of public sector banks in India vis-a-vis State Bank of Travancore’ is further divided into the following;

a) Trend in movement of NPA indicators, such as Gross NPA, Net NPA, Additions to NPA, Reductions to NPA, and Provisions towards NPA.

b) Composition of NPA. The classification is based on priority sector advances and non-priority sector advances.

The second part is further divided into the following.


b) The moderating relationship of NPA variables on the relationship between interest income, expense and profitability of banks.

c) The mediating relationship of macroeconomic indicators on the relationship between advances and NPA of banks.
1.10. Chapter Scheme

Chapter One: Introduction – This chapter comprises of the broader perspectives of the research and includes a statement of the problem, rationale of research, the specific objectives of the research, various hypotheses used in the research, research methodology and various limitations of the research.

Chapter Two: Review of Literature - This chapter reviews the existing literature on non-performing assets. The literatures were classified into (1) Studies on NPA in Indian context, and (2) Studies on NPA in International context.

Chapter Three: Indian Banking Sector: An Overview – This chapter is about Indian Banking Sector, its background and development phases. The major changes in Indian banking sector since the post - liberalization period is explained. As well, the development of Indian banking sector during the study period in terms of number of branches, offices, deposits and advances are explained. An overview of State Bank of Travancore, the selected bank for collecting primary data is also provided.

Chapter Four: Non Performing Assets: A Theoretical Approach – The focus of this chapter is on the conceptual core, the non-performing Assets. The term NPA is defined along with detailed evaluation of various reasons for NPA, its impact on different stakeholders and its management in the post - liberalization period.
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Chapter Five: NPA in Indian Banking Sector – This chapter deals with analysis of statistical data on NPA during 2000-01 to 2011-12. The trend of NPA in public sector banks in India (Objective No.1) during the study period is explained. Also, the chapter explains the moderating and mediating role of bank performance indicators and macroeconomic indicators on NPA of public sector banks.

Chapter Six: Incidence of NPA: Causes, Impact and Management – This chapter essentially validates the findings of secondary data analysis based on primary data collected from bankers with special reference to State Bank of Travancore.

Chapter Seven: Findings, Recommendations and Conclusion: The chapter presents the summary of the thesis. The chapter briefs the various findings and put forward significant recommendations to mitigate the effects of NPA. In addition, the chapters narrate the major contributions of this research and possible directions for future research is also included.

1.1 Limitations of the Study

Even though, utmost care is exercised in all aspects of this research, certain limitations have been perceived and are acknowledged herewith.

- The results of the study cannot be generalized to other bank groups except public sector banks as the data are obtained with special focus on public sector banks.
The research utilized feedback from officers working in State Bank of Travancore, a premier scheduled commercial bank based in Kerala. The incidence of the NPA is explained with special reference to the selected bank.

The study is conducted for the period 2000-01 to 2011-12. Influence of regulatory measures taken after the study period might influence the findings of the study.

Respondent bias would have to some extent affected the quality of data in spite of all precautionary measures taken to ensure its reliability.