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# IMPACT OF ASSET QUALITY ON SOLVENCY & LIQUIDITY OF BANKS: A COMPARATIVE STUDY OF PUBLIC SECTOR AND PRIVATE SECTOR BANKS IN INDIA

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## ABSTRACT

*Banks are the custodians of money entrusted to them by their depositors which is one of the main sources of funds in their operations. These funds are deployed in creating banking assets in the form of lending and investments which gives them a return to not only meet the cost of deposits and other source of funds, but to meet the operating costs and also maximising the return to the shareholders. In the normal course of their business operations, banks face the risk of non-servicing and non-return of the funds lent to their borrowers which is one of the main business risks known as the 'credit risk'. Though the credit risk has always been there in the banking system in view of the very nature of the business, this has received added attention in the recent past especially after the global financial crisis of 2007-08. The slow down in the industrial and commercial activities caused by the crisis has severely impacted the servicing of debts by the borrowers. This has led to the deterioration in the quality of assets of banks thus affecting their financial performance. The current study spanning a period of ten years from FY 2005 to 2014 is intended to analyse the impact of the Asset Quality on the two macro financial parameters of Solvency and Liquidity of commercial banks in India. The results of the study show that the solvency of New Private Sector Banks and Old Private Sector Banks is higher than the Public Sector Banks. On the other hand, the Liquidity of New Private Sector Banks was significantly higher than the Old Private Sector Banks and the Public Sector Banks.*

## KEYWORDS

Asset Quality, Liquidity, Non-performing Assets, Solvency.

## INTRODUCTION

Banking as an essential economic activity originated centuries ago in several countries. The origin of Banking in India can be traced back to the early ages of civilisation. 'Evidence regarding the existence of money-lending operations in India is found in the literature of Vedic times, i.e., 2000 to 1400 BC. The literature of Buddhist period, supply evidence of the existence of sreshtis or bankers. From the laws of Manu, it appears that money-lending and allied problems had assumed considerable importance in ancient India'<sup>1</sup>

Modern banking in an organised way is said to have commenced during the period of 16<sup>th</sup> and 19<sup>th</sup> centuries with the traditional banking functions of accepting deposits, money lending, money changing and even transferring of funds. Though banking has evolved from a simple way of dealing with deposits and lending to the modern day of using technology to deliver the same services, the basic function of 'intermediation' has never changed. While the depositors' motive of saving is to meet their future needs by sacrificing their present consumption, the borrowers approach banks to satisfy their present funding needs. The intermediation process generates a surplus and helps in sustaining and remaining in the business long term. Unlike other intermediaries, the banks are unique and the reasons are not difficult to find. Banks are perceived to be almost risk free when the saving community entrust their money to them.

While accepting of deposits from the general public by banks is fraught with little risk, there is a huge responsibility assumed by the banks in deployment of these resources. Banks are considered trustees of depositors' money and it is expected that they would take utmost care in their lending and investment activities. Banks accept savings from the general public without any choice, but they need to be very choosy to whom they lend and invest. Despite of their best efforts, banks often find that some of their loans and investments turn sour. It is a common phenomenon that not every borrower will repay the money borrowed. It means that some loans that a bank makes will not be recovered and the non-recovered principal will be a charge against the profits earned apart from losing an opportunity to earn a return on the loans which becomes non-recoverable. This is an inherent risk in banking and cannot be avoided totally in spite of all good strategies and efficient risk management systems adopted by banks.

The present study is aimed at studying what the asset quality means in banks, consequences of poor asset quality and impact of asset quality on their financial performance. These aspects will be studied with reference to the SBI & Associate banks, Public Sector Banks, Old Private Sector Banks and New Private Sector Banks operating in India.

## REVIEW OF LITERATURE

In the past, several studies have been carried out with reference to the asset quality and how it is impacted by macro economic factors and its impact on the performance of the banks. Some of the relevant studies related to the subject of discussion are stated herein.

Lokare Shashidhar M. (2014) in an RBI published working paper explores the macro-financial linkages and micro level sources underlying the asset quality deterioration. The study shows that external macroeconomic situation post-crisis, high inflation and reduced asset prices have eroded the debt servicing ability of borrowers contributed to the asset quality problems. The study also went into the sectoral analysis which revealed rising incidence of loan defaults in infrastructure, retail, SSIs and agriculture across bank groups. In a similar study by Latif Abdul Alhassan et al., (2014) examined both bank level and macroeconomic determinants of bank assets quality in an emerging Ghanaian banking with high levels of non-performing loans. The study covering a six year period of 2005 – 2010 indicates that significant portions of banking industry assets are locked up in non-performing loans. They find evidence of persistence positive effect on non-performing loans from market concentration, bank size and income diversification, while bank interest spread and credit growth impact negatively on the performance of bank loan portfolio. The study also supports the view that the macroeconomic environment is an important factor in explaining non-performing loans and specifically show inflation rate and exchange rate depreciation negatively impacts the assets quality of banking industry.

In a study by Abata, et al, (2014) of commercial banks in Nigeria shows that there is a significant relationship between bank performance (in terms of profitability) and asset quality (in terms of loan performance). Loans and advances, loan loss provisions and non performing loans are major variables in determining asset quality of a bank. The study reveals that where a bank does not effectively manage its risk, its profit will be unstable. Banks become more concerned because loans are usually among the riskiest of all assets and therefore may threaten their liquidity position and lead to distress. Better credit risk management results in better bank performance



Bock De Reinout, et al, an IMF working paper (2012) on 'Bank Asset Quality in Emerging Markets: Determinants and Spillovers' study the vulnerability of emerging markets and their banks to aggregate shocks. They find significant links between banks' asset quality, credit and macroeconomic aggregates. Lower economic growth, exchange rate depreciation, weaker terms of trade and a fall in debt-creating capital inflows reduce credit growth while loan quality deteriorates.

Ram Mohan and Subhash Ray (2004), make a comparison of performance among three categories of banks – public (PSBs), private and foreign using inputs and outputs and comparing revenue maximisation efficiency of banks during 1992-2000. The study used the interest spread and interest spread net of provisions (both as proportions of total assets) as measures for revenue and intermediation cost to total assets ratio as costs. For the purpose of computing revenue maximisation efficiency, loans, investments and other income are treated as outputs and deposits and operating costs as inputs. The results of the study show that PSBs are significantly better than private sector banks on revenue maximisation efficiency but there is no difference between PSBs and foreign banks.

In a study of determinants of bank asset quality and profitability by Swamy (2013) reveals that favourable macroeconomic conditions facilitate in NPA management leading to better asset quality. As the banks grow in size, they tend to control the NPA owing to efficiency in their management, meaning larger banks exhibit better credit risk management with lower NPA levels. Priority Sector lending is found to be not much significant in contributing to NPAs in contrast to the perception otherwise. This study shows that private banks and foreign banks are better placed in terms of their efficiencies in credit management in containing the NPAs.

Das & Ghosh (2007) in their study reveal that at the macro level, GDP growth and at the bank level, real loan growth, operating expenses and bank size play an important role in influencing problem loans. Also observed is a rapid expansion of lending by banks often leads to poor loan quality, albeit with a lag, because the growth of lending may outstrip the lender's capacity to appraise and monitor its borrowers, bigger banks tend to have higher problem loans and from the supervisory standpoint, excessive rapid loan growth, as well as sharp declines in bank capital levels which can be used as pointers to the deterioration in the financial health of banks and early warning signals of future problem loans.

In a study of NPA and select key financial heads by Bamoriya and Jain (2013) shows some interesting results. A multiple regression equation taking NPA as dependent variable and Total Deposits, Total Advances, Deposits and Net Interest Income as independent variable was formed to examine the total effect of independent variables on NPA. Among the select Key Financial Heads, Total Assets had significant negative impact on NPAs implying that with increase in Total Assets, NPAs decrease. Total Advances and Net Interest Income had no significant impact on NPAs as while the Total Deposits had significant positive impact on NPAs meaning that with increase in Total Deposits, NPAs also increase.

The current study is aimed at analysing the impact of the asset quality on two important macro indicators i.e. the solvency and liquidity of banks in India by way a comparative analysis of public sector banks and private sector banks covering a period of ten years from 2005 to 2014.

## STATEMENT OF THE PROBLEM

Asset quality has received added focus in the recent times especially after the financial crisis in the USA in 2007-08 which not only affected the financial system in the US, but elsewhere around the globe. It is not difficult to comprehend this as the financial systems of different countries are well connected by movement of funds for investment. The impact of the slow down has affected various countries and their local manufacturing, commercial, services and export-import activities which had their spill over effect on the banking system. As the banks are the main source of funding for all kinds of economic activities especially in developing countries like India, the impact of the slow down has not only affected fresh off take of funds, but the quality of existing loans and advances have also been adversely affected. Given the background of the slow down and the damage it caused to the financial system in general and the banking system in particular, the Basel Committee for Banking Supervision has come out with Basel III norms which have more stringent risk management measure to be adopted by the banks. This has resulted in additional capital requirements to be met by banks in the next couple of years. Therefore, in the current dispensation, banks not only need to ensure that there is no further slippage in the quality of existing loan portfolio, but also scout for only high quality assets. This situation has prompted a number of studies being carried out to analyse the reasons for the poor asset quality, ways and means to improve the quality of assets, impact on the financial performance of banks, etc.,

Some of the recent statistics relating to the non-performing assets of Indian banks reveal the alarming situation calling for a close attention by the government and the RBI. The gross NPA of 39 listed banks rose 26.87% to Rs. 3.40 trillion in the quarter ended September 2015 from Rs. 2.68 trillion for the same quarter the previous year. According to a report by CARE Ratings, Gross NPA ratio of banks in India rose to 4.9 % in the September 2015 quarter from 4.2% in the same period the previous year. The average Gross NPA in the public sector banks stood at 6% at the end of September 2015. According to a rough estimate, public sector banks would need an additional capital of Rs. 2.40 Lac Crores by 2018 to meet the Basel III capital adequacy norms. Given that the government owns > 51% equity stake in all the public sector banks, the government need to infuse an amount of Rs. 1.20 – 1.50 Lac Crores. Similarly, the private sector banks need to tap the capital market to meet their incremental capital requirement in addition to their retained earnings in the next few years.

## ASSET QUALITY

In financial and banking parlance, the resources of banks are termed as 'Liabilities' since they are the sources of funds in their operations and the lending and investments are termed as 'Assets'. Asset quality and loan quality are two terms with primarily the same meaning. Safety of depositors' money is a fundamental requirement, but at the same time ensuring maximum profitability and value to the shareholders becomes a major challenge for the banking system. Asset quality shows how good is the loans portfolio of a bank in terms of the credit risk. In other words, asset quality refers to the credit quality of a bank's interest bearing loans portfolio. It is reflected in the performance of assets as per the terms set out for making available the credit facility to the borrowers. The portion of the assets portfolio which becomes bad is termed as 'non-performing' assets. The asset quality can be measured by stating what portion of the loans portfolio is absolutely good, meaning that they are performing as per the agreed terms in servicing of the interest and the principal. The other way of saying is what portion of the loan portfolio is not performing as per the agreed terms between the bank and its client more easily identified as 'non-performing' assets.

## IMPORTANCE OF ASSET QUALITY

Quality of assets is of paramount importance and how well the banks manage to remain with high quality of assets (means a lower level of poor quality assets) dictates the standing of the bank. One of the major parameters of measuring banks' performance is the quality of assets. Quality of banks' assets is both important and also difficult to analyse. It is important because, asset quality has a direct relationship to income, cash flow, solvency and liquidity. It also has an impact on the bank's reputation and investor behaviour reflected in the stock price. It is difficult because of the different approaches used by the analysts to determine the quality of assets and the risks associated with it.

The quality of assets is of a major concern not only to the banks concerned, but to the central banking authorities as well. Failure of a bank is most often caused by a major part of its loan portfolio becoming bad contributing to multiple organ failure in the bank. It also creates ripples in the financial system of the country. 'The ability to maintain prudent standards and effectively control credit risk is one of the most fundamental responsibilities of bank managers and an ability to effectively perform this function is both damning in itself and implies deficiencies by management in other areas. Accordingly, because it has a direct relationship to solvency, income, cash flow, and liquidity, as well as management's competence, a bank's asset quality is arguably the most important criteria in evaluating its financial condition'2 Therefore, the importance of asset quality can not be overemphasised. Good quality of a bank's assets helps them to grow without creating any problems for the stakeholders. By the same logic, poor quality of assets impacts profit and growth. In their study, 'Problem Loan and Cost Efficiency in commercial banks', Allen N. Berger and Robert De Young (1997) conclude that increases in non-performing loans tend to be followed by decreases in efficiency, suggesting that high levels of problem loans cause banks to increase spending on monitoring, working out, and/or selling off the loans which will increase the cost of operations.

One of recent bank failures in India in 2005 of Global Trust Bank, a new generation private sector bank is attributed to bulk of its credit portfolio becoming non-performing because of excessive exposure to sensitive sector like the stock market operations. With a view to protect the depositors and avoid liquidation of the bank which would have sent wrong signals about the banking and financial sector of the country, the RBI allowed the failed bank to be taken over by the Oriental Bank of Commerce, a public sector bank.

A good credit risk management of the bank is not merely a reflection on the quality of assets, but of the bank management as well. It is said that there is one big difference between selling a credit product and other products. The sale of credit product is not final as the banks are expected to get it back with interest. A good credit portfolio management with appropriate exposures by choosing the right kind of borrowers and an on-going mechanism of follow-up determines the efficiency of the credit risk management. Poor quality of assets in the books of the bank demonstrates a bad credit risk management leading to loss of reputation among the depositors resulting in liquidity and solvency risk for the bank.

## HYPOTHESIS

### ASSET QUALITY IMPACTS SOLVENCY AND LIQUIDITY OF BANKS

Good asset quality is an indicator of a healthy bank. Therefore, in the current context, measuring a bank's performance with asset quality as a basis is of utmost importance. As with any kind of financial analysis, banks performance is measured not only against its own past performance, but against its peers as well. In India, banks operate under different ownership patterns and majority of them are grouped as public sector, private sector and foreign banks. The public sector and private sector banks take a major share of banking business and play an important role in the country. Therefore the present study attempts to study the impact of assets quality on various parameters. The hypothesis will test the impact of asset quality on the solvency and liquidity of banks by a comparative analysis of public sector and private sector banks for a period of 10 years between 2005 and 2010.

## RESEARCH METHODOLOGY

Considering the objective & the hypothesis of this study which attempts to analyse banks performance at the balance sheet level, the data required is sourced from the secondary data. The required data has been obtained from the statistical reports of the Reserve Bank of India and the financial statements of the banks concerned. The study covered a period of ten years from the FY 2005 to FY 2014. For the purpose of the study, banks have been grouped into four categories : Public Sector Banks: State Bank of India & associate banks (SBI Group), Other Public Banks (excluding SBI Group) and Private Sector Banks: Old Private Banks and New Private Banks.

TABLE 1: LIST OF BANKS COVERED IN THE STUDY

Category		
Public Sector Banks	SBI Group	Other Public Banks
	State Bank of India State Bank of Bikaner & Jaipur State Bank of Hyderabad State Bank of Mysore State Bank of Patiala State Bank of Travancore	Allahabad Bank Andhra Bank Bank of Baroda Bank of Maharashtra Bank of India Canara Bank Central Bank of India Corporation Bank Dena Bank IDBI Bank Indian Bank Indian Overseas Bank Oriental Bank of Commerce Punjab & Sind Bank Punjab National Bank Syndicate Bank UCO Bank Union Bank of India United Bank of India Vijaya Bank
Private Sector	Old Private Banks	New Private Banks
	Federal Bank J&K Bank Karnataka Bank Karur Vysya Bank South Indian Bank Tamilnad Mercantile Bank	AXIS Bank HDFC Bank ICICI Bank IndusInd Bank Kotak Mahindra Bank Yes Bank

The financial performance of these banks has been assessed based on the impact of asset quality on two vital macro measures i.e. Solvency and Liquidity. These two macro measures are very important and the health of banks can be gauged by how well the banks are managed. The importance of liquidity and solvency in banks can be summed up in the words of Godhart (2008) as 'Liquidity and solvency are the heavenly twins of banking, frequently indistinguishable. An illiquid bank can rapidly become insolvent and an insolvent bank illiquid'.

Solvency is commonly defined as 'the ability of a financial institution to meet its short, medium and long term financial obligations'. It also refers to the ability of a financial institution to meet its obligations in the event of liquidation. A bank is considered solvent if their assets is equal to or exceed its liabilities.

As per the Basel Committee on Banking Supervision, liquidity is the ability to fund increases in assets and meet obligations as they come without incurring unacceptable losses. Liquidity is the combination of the mismatch between the maturity of a bank's assets and its liabilities, the reliability of its funding and its capacity to meet cash outflows from liquid resources.

The study has considered the Solvency as the sum of the three indices: (1) *Quality of Assets* represented by the ratio of Gross NPA, (2) Ratio of Capital to Risk Weighted Assets used as proxy for *Capital*, and (3) Profitability represented by the ratio of Net Income to Tangible Assets. Liquidity is the sum of two indices (1) Funding Liquidity and Market Liquidity. Liquid Assets to Tangible Assets ratio will determine the *Funding Liquidity structure* and the ability to borrow in the market represented by Market borrowing to Tangible Banking Assets will determine the *Market Liquidity*.

## THE RESULTS & DISCUSSION

From Table 2, it is evident that the Solvency level of New Private Banks (4.195±.706) and Old Private Banks (4.004±.568) was higher than Other Public Banks (3.61±.331); and SBI Group (3.62±.275). One way ANOVA analysis shows that this difference is significant at  $P < 0.05$  ( $F = 3.75$ ;  $p = 0.000$ ).

The Liquidity level of New Private Banks (8.8534±1.507) was significantly higher than the Old Private Banks (6.1996±.787) and the Other Public Banks (6.8532±1.52); SBI Group (6.42±.701). Further, New Private Banks were found to have better liquidity in comparison with the Old Private Banks and Public Banks (with and without SBI) ( $F = 51.47$ ;  $p = 0.000$ ).

TABLE 2: DESCRIPTIVE STATISTICS

	Mean	Std. Deviation	N
New Private Bank Solvency	4.1945	.70585	60
New Private Banks Liquidity	8.8534	1.50718	60
Old Private Banks Solvency	4.0040	.56768	60
Old Private Banks Liquidity	6.1996	.78719	60
Other Public Banks Solvency	3.6092	.33065	190
Other Public Banks Liquidity	6.8532	1.52076	190
SBI Group Solvency	3.6209	.27520	60
SBI Group Liquidity	6.4222	.70110	60

Source: own calculations

Table 3 depicts the intercorrelation among the Asset Quality, Solvency and Liquidity. In the case of New Private Banks, Old Private Banks, and Other Public Banks, a weak positive correlation was found between the three variables under study and it was significant at  $p = 0.01$ . The positive relationship between Asset Quality, Solvency and Liquidity indicates that if Asset Quality is controlled, the Solvency and Liquidity of the banks can improve.

In contrast, a weak negative correlation was found between Solvency and Liquidity of SBI Group. However, this effect was found to be not significant. Though there is a negative relationship between Solvency and Liquidity, the impact may not be great as the relationship is not significant.

TABLE 3: CORRELATION MATRIX

	Asset Quality	Solvency	Liquidity
<b>New Private Banks</b>			
Asset Quality	1		
Solvency	.354**	1	
Liquidity	.391**	.429**	1
<b>Old Private Banks</b>			
Asset Quality	1		
Solvency	.338**	1	
Liquidity	.480**	.093	1
<b>Other Public Banks</b>			
Asset Quality	1		
Solvency	.256**	1	
Liquidity	.126	.225**	1
<b>SBI Group</b>			
Asset Quality	1		
Solvency	.300*	1	
Liquidity	.195	-.026	1

Source: own calculations

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

Multivariate analysis was conducted to find the impact of Asset Quality on Solvency and Liquidity using the software Statistical Packages for Social Scientist (SPSS version 21). Multivariate data analysis techniques are generally utilized to analyse the simultaneous relationship between three or more dependent variables that are affected by one independent variable. Multivariate Analysis can be defined as "the application of methods that deal with reasonably large numbers of variables made on each object in one or more samples simultaneously" Bansal & Khosla, (2015). In the present study, asset quality represented by Gross NPA to Gross advances has been taken as the independent variable to show if it has any impact on the Solvency and Liquidity of the banks.

From Table 4.3, it can be observed that there was a statistically significant impact of Asset quality on Solvency and Liquidity in all the types of banks (New Private Banks,  $F = 6.916$ ; Old Private Banks,  $F = 13.22$ ; Other Public Banks,  $F = 7.108$ ; SBI Group,  $F = 4.296$ ) at  $p < 0.01$ .

TABLE 4: MULTIVARIATE ANALYSIS

	F	Sig.
New Private Bank Asset Quality	6.916	.002
Old Private Bank Asset Quality	13.220	.000
Public Bank Asset Quality	7.108	.001
Public SBI Bank Asset Quality	4.296	.018

Source: own calculations

To determine how the Solvency and Liquidity differ for the Asset Quality, the Tests of Between-Subjects Effects was analysed. From Table 5, it is evident that Asset quality has a statistically significant effect on both Solvency ( $F = 8.319$ ,  $p = .005$ ) and Liquidity of the New Private Banks (Solvency  $F = 8.319$ ,  $p = .005$ ; Liquidity  $F = 10.442$ ,  $p = .002$ ) and Old Private Banks (Solvency  $F = 7.476$ ,  $p = .008$ ; Liquidity  $F = 17.325$ ,  $p = .000$ ).

In contrast, Other Public Banks suggest that Asset quality has an impact on Solvency ( $F = 13.216$ ), which was highly significant ( $p = .000$ ), but it did not have a significant effect on Liquidity ( $F = 3.045$ ,  $p = .083$ ). Similarly, it was true for the SBI & Associates too where only Solvency was affected by Asset Quality and not the Liquidity.

TABLE 5: TESTS OF BETWEEN-SUBJECTS EFFECTS

	Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Model 1	New Private Bank Asset Quality	Solvency	3.687	1	3.687	8.319	.005
		Liquidity	20.447	1	20.447	10.442	.002
Model 2	Old Private Bank Asset Quality	Solvency	2.171	1	2.171	7.476	.008
		Liquidity	8.409	1	8.409	17.325	.000
Model 3	Other Public Banks Asset Quality	Solvency	1.357	1	1.357	13.216	.000
		Liquidity	6.966	1	6.966	3.045	.083
Model 4	SBI & Associates Asset Quality	Solvency	.401	1	.401	5.725	.020
		Liquidity	1.101	1	1.101	2.290	.136

Source: own calculations

## CONCLUSIONS

The earlier studies were mostly focused on the macro economic determinants, causes for the problem loans, and comparative analysis of financial performance under different ownership groupings and similar. The current study is focused on the two major indices which has influence on the overall performance of the banks.

The study suggests that there is a definite and positive impact of asset quality on the solvency and liquidity on banks of all groupings, but with varying degree. New Private Banks and Old Private Banks were found to be in a better solvency position than the Public Banks – both SBI Group and Other Public Banks. This is an indication of higher levels of non-performing assets during the period of study among the both groups of Public Banks and its impact on the solvency of these banks. In fact, the situation seems to have further worsened looking at the growth in the non-performing assets during the FY 2014-15. As per the Financial Stability Report of RBI of December 2015, public banks recorded highest level of stressed assets at 14.1% of advances at the end of September 2015, while it is 4.6% in the case of private banks. The situation can turn out to be alarming if the stressed assets eventually slip into non-performing assets. Improvement can be achieved by a fresh infusion of equity, retaining major portion of earnings and quicker recovery of the non-performing loans by whatever means it takes either through legal action or by way of settlement with the defaulters. Legal action may not yield the desired results soon, but selling of the non-performing assets to Asset Reconstruction Companies could be an option, but that will happen with considerable amount of write off which may worsen the situation.

The multivariate analyses suggest that the liquidity position of the Public Banks was not significantly affected by the asset quality. This suggests that in spite of comparatively higher level of non-performing assets, public banks were able to manage their liquidity well. This demonstrates their ability to meet the funding requirements from their own liquid assets as well as raising the required funds from the market without much difficulty. It is possibly because of the perception of lower level of counter party risks when they had to borrow from the market to meet their liquidity needs. However if the asset quality is not improved soon, some of the banks who have relatively higher levels of NPA may suffer from serious liquidity issues resulting in higher cost of borrowing from the market. It may also lead to loss of confidence of depositors which will further aggravate the liquidity problems.

The study covered a period of ten years during which very scattered information has been available about the restructured loans. One of the major concerns in recent times is that even the restructured loans are eventually turning out to be non-performing. A further research in this area especially understanding the causes and how to reduce the instances of restructured loans becoming non-performing assets will help the banking industry.

## NOTES

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