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Banking Sector in India – An Intersectoral Analysis

Dr. Soheli Ghose * & Mr. Suyash Luhariwala**
*Assistant Professor of Commerce , St. Xavier's College (Autonomous),Kolkata, Bengal, India
**Ex Student, St. Xavier's College (Autonomous), Kolkata ,Bengal, India

Abstract

The Banking system in India is the backbone of our economy and the quality of assets held by the banks is a critical indicator of the health of the financial system. In the last decade the Indian Banking system has witnessed a massive growth of Non Performing Assets. The BASEL III norms also have had an impact on the categorization of NPAs. As on March 31, 2016, total distressed assets of banks were Rs.611607 crore which is 5.39% of the total GDP of India at constant prices for that year. NPAs are value destroyers of the economy. In this study we have compared and analysed the proportion of NPAs in public sector, private sector and foreign banks and analysed the interrelation between NPAs and profitability of banks of all the three sectors. Overall in the Indian Banking System, the private sector banks have managed to keep NPA at low levels as compared with the Public Sector Banks.

Key words: *Banking Sector, Correlation and Non-Performing Assets.*

Introduction: An asset, including a leased asset, becomes non-performing when it ceases to generate income for the bank. The Indian banking sector is plagued by burgeoning NPAs due to combination of various factors as discussed:

Internal factors: Poor credit appraisal system, Diversion of funds, lack of post credit supervision, project cost and time overruns, wilful defaults, siphoning of funds, frauds, disputes, misappropriation, etc., Non-compliance to lending norms. *External factors:* Economic slowdown, Input shortage, power shortage, unanticipated price escalations, accidents and natural calamities, changes in government policies relating to excise duties and import duties, sluggish legal system, business failures due to inefficient management system, strained labour relations, inappropriate technology, product obsolescence etc.

Apart from the above factors, there are certain other factors which are responsible for standard assets becoming NPA. They are the following:

- Liberalisation of the economy and the consequent pressures from Liberalisation like severe competition, reduction of tariffs, removal of restriction, etc.

- Poor monitoring of credits and the failure to recognise early warning signals shown by standard assets.
- Promoters' over optimism in setting up large projects.
- Sudden crashing of capital markets and the failure to raise adequate funds.
- Granting of loans for certain sectors on the basis of government's directives rather than commercial imperatives.
- Mismatch of funding i.e., using loans granted for long – term transactions.
- High leveraging and high cost of borrowing.

***Gross NPA*:** Gross NPAs are the sum total of all loan assets that are classified as NPAs as per RBI guidelines as on Balance Sheet date. Gross NPA reflects the quality of the loans made by banks. It consists of all the non-standard assets like as sub-standard, doubtful, and loss assets.

Net NPA: Net NPAs are those type of NPAs in which the bank has deducted the provision regarding NPAs. Net NPA shows the actual burden of banks. Since in India, bank balance sheets contain a huge amount of NPAs and the process of recovery and write off of loans is very time consuming, the provisions the banks have to make against the NPAs according to the central bank guidelines, are quite significant. That is why the difference between gross and net NPA is quite high.

Impact of NPAs:

Adverse Impact on Profitability: NPAs affect both current and future profitability of banks. The non-performing assets lead to blocking of estimated interest income as well as the principal amount of the loan. Non realisation of interest income directly affects the realisable profit of banks while non-realisation of the principal amount affects the future profitability in the form of opportunity cost on account of blockage of loanable funds.

Liquidity Crunch: NPAs lead to blocking of funds which impairs the banks' liquidity and affects the capital adequacy norms. The lack of enough cash and cash equivalents to meet short term obligations leads the banks to borrow such sums entailing additional cost of borrowing too. Liquidity crunch affects smooth functioning of banks thereby affecting its operational efficiency.

Managerial Efficiency Loss: The most important business implication of the NPAs is that it leads to the credit risk management assuming priority over principal aspects of bank'sfunctioning.NPAs demand time and effort of management which is another indirect cost incurred for recovery of such bad loans. Time and effort of management involved in managing and handling of NPAs leads to efficiency loss of managerial efforts which could have been productively used. Also, nowadays banks have separate employees for management of NPAs which also leads to incurrence to additional cost.

Loss of Goodwill: Excessive or rising NPAs pose a threat to the goodwill or public image of banks, thereby adversely affecting its potential business. Goodwill and NPAs of banks are thus negatively related.

Impact on Economy: Non-performing asset may spill over the banking system and contract the money stock, which may lead to economic contraction. Thisspillover effect can channelize through liquidity or bank insolvency:

a) When many borrowers fail to pay interest, banks may experience liquidity shortage. This can jam payment across the country.
b) Illiquidity constraints bank in paying depositors.
c) Under-capitalized banks exceed the bank’s capital base.

Literature Review: B.Selvarajan and G. Vadivalagan (2012)concluded that Non Performing Assets add cost to the credit Management. The fear of Non-Performing Assets permeates the psychology of bank managers in entertaining new projects for credit expansion. Apart from internal and external complexities, increases in NPAs directly affects banks' profitability sometimes even their existence. **Chandan Chatterjee, Jeet Mukherjee and Ratan Das (2012)** concluded that proper identification of the guarantor should be checked by the bank including scrutiny of his/her wealth and that the NPAs have a negative influence on the achievement of capital adequacy level, funds mobilization and deployment policy, banking system credibility, productivity and overall economy. **C.S.Balasubramaniam (2012)** concluded that the Indian Banks have overall demonstrated a trend of continued good performance and profitability despite rising interest rates, increase in operating costs and the spill over effects of recent global financial crisis. **B.Selvarajan and G. Vadivalagan (2013)** analysed in detail the Priority sector advances under three major heads: Agriculture, Small Scale Industries and Other Priority Sector with data related to Indian Bank and Public sector banks for the past 10 years. The study concluded that the growth of Indian Bank’s lending to Priority sector is more than that of the Public Sector Banks as a whole. In case of NPA management, the performance of Indian Bank is better than that of Public Sector Banks as a whole. **Ghose (2016)**concluded that there is a significant relation between the profitability and NPAs of various Private and Public Sector Banks.

Objectives of Study:

1. To compare and analyse the proportion of NPAs in public sector, private sector and foreign banks i.e. inter sector comparison.
2. To compare and analyse the NPAs of commercial banks intra-sector.
3. To calculate and analyse the degree of correlation between NPAs and profitability of banks of all the three sectors.

Research Methodology: This research is empirical in nature and is based on secondary data collected from authentic websites and journals from 2006 to 2016. Random Sampling Technique has been applied to select the banks. Statistical technique like Karl Pearson's Product Moment Correlation Coefficient (5% Level of Significance) has been used through SPSS 19. Ratios are analysed to compare overall effect. Statistical tools like graphs, charts, and ratios have been calculated, created and analysed.

Limitations of the Study: The sample size could have been increased to 2 decades. Effect of Basel III norms could have been analysed in the sample. A regression model could have been included to study the effect further.

Analysis, Findings and Inferences:

Analysis 1: Inter Sector Comparison

Inference 1.1: The Gross NPA Ratio has increased at a staggering Simple Annual Growth Rate (SAGR) of 12.36%, with public sector banks driving the high growth of the ratio at 15.01% SAGR during the 11 year period of study. However, the private sector proved to be the most efficient and effective sector with SAGR of a modest 1.74% whereas the foreign banks were also inefficient in management of NPAs registering a SAGR of 9.81%. Due to high market share of public sector banks at 71.24% the overall commercial bank's Gross NPA Ratio has increased at such high rate. In the earlier part of the period, the Gross NPA Ratio has decreased till 2008 after which there is a marked increase in the ratio of foreign banks. This was due to the high exposure of foreign banks to the Global Financial Crisis of 2008. The Crisis also affected the domestic banks but on a lower magnitude. Thus the Global Financial Crisis was a major turnaround factor in the Gross NPA ratio as the ratio started increasing after 2008 at a steady pace for all the sectors. However as the economies revived and effects of the Crisis started to fade, in the year 2011 the ratio again fell by a few percentage points for the commercial banks with foreign banks experiencing the highest fall. After the period of revival, barring the private sector, there has been a massive increase in the ratio of all the banks. This may be due to expansion plans of the public sector after experiencing the recessionary trend of the Crisis which led to advancing subprime loans, ultimately leading to defaults in payment. The private sector again proved to be efficient and managed to reduce the Gross NPA Ratio against the industry being on a steady rise. The year 2016 proved to be a nightmare for the banks with the Asset Quality Review (AQR) in the 3rd and 4th quarter playing havoc with the banks' financial statements. In the AQR, the sample size of loan accounts inspected was much bigger than that under regular Annual Financial Inspection (AFI) and in fact, most of the large borrower accounts were inspected to check if classification was in line with prudential norms. Banks were given two quarters, October-December and January-March of 2016 to complete the asset classification, which led to the mammoth increase in the ratio over the previous year for the entire Banking System. Now, trying to neutralise the special events during the period, comparing the Compound Annual Growth Rate (CAGR) of the sectors, we still get the same result with the public sector registering the highest at 9.60% while the private sector banks witnessed a meagre 1.62% growth. *Thus, the Public Sector Banks have been totally outperformed by its competitors in the Private and foreign sector. This is mainly because the public sector finances the government projects have time and cost overruns. The Private sector and foreign banks have been efficient mainly because of their advances towards strong and robust projects with proper credit appraisal promising healthy and regular returns.*

***Inference 1.2*:**

Comparing the of Gross Non-Performing Assets of the three sectors, it has risen from Rs. 421172 million in 2006 to Rs. 5399564 in 2016 for the public sector at a CAGR of 29.06%, from Rs.75988 million in 2006 to Rs. 558531 million in 2016 for the private sector banks at a CAGR of 22.08%. The CAGR of foreign banks was found to be 22.73% during the period with the Gross NPA rising from Rs.20370 million in 2006 to Rs.157980 million in 2016. For the entire commercial banks the CAGR was calculated out to be 28.01% or a 1081.78% increase in monetary terms. It may be argued that the Gross NPAs increased due to increase in the business of banks but comparing the same with CAGR of Gross Advances of the commercial banks we get 18.11%. This concludes that even though the business of banks increased at a rate of 18.11% the rise in bad loans has outpaced it with the rate of 28.01%. The extraordinary increase in 2016 is due to the surprise Asset Quality Review by the RBI which led to non-recognised bad loans in previous years to be recognised in 2016 under the review procedure which shows that along with recognised NPAs there were also huge amounts of disguised bad loans not recognised duly.

Analysis 2: To Compare and Analyse the Npas of Commercial Banks Intra-Sector

Intra-Sector Comparison of Public Sector Banks:

State Bank Of India: State Bank of India (SBI) is an Indian multinational, public sector banking and financial services company. It is a government-owned corporation with its headquarters in Mumbai, Maharashtra. As of 2016-17, it had assets of Rs.30.72 trillion (US$460 billion) and more than 14,000 branches, including 191 foreign offices spread across 36 countries, making it the largest banking and financial services company in India by assets. The company is ranked 232nd on the Fortune Global 500 list of the world's biggest corporations as of 2016.

Punjab National Bank: Punjab National Bank, India's first Swadeshi Bank, commenced its operations on April 12, 1895 from Lahore, with an authorised capital of Rs 2 lac and working capital of Rs.20,000. The Bank has recorded fast pace of digitisation with over 2.82 lakh UPI users, 78 lakh Internet banking users and 59 lakh mobile banking user as on 31.12.2016.

Bank of Baroda: Bank of Baroda is a public sector banking institution headquartered in Vadodara. The Bank has total assets in excess of Rs. 3.58 trillion, a network of 5493 branches in India and abroad, and 10441 ATMs as of Sept, 2016.

Inference 2.1: Among the three top banks of public sector by market share, the State Bank of India has been the most efficient in NPA control and management. It is the only bank which has achieved reduction in the Gross NPA Ratio over the period of 2012-15 from 4.9% to 4.25% with a decrease of 13.26% against increase of the same in the overall public sector and the other two banks. The ratio of Punjab National Bank and Bank of Baroda has increased at the rate of 107.94% and 96.83% respectively. This may be due to the huge amount of loans granted to alleged government favoured parties under UPA regime which may have turned bad.

Now considering the Asset Quality Review by the RBI in 2016, the increase in the ratio again substantiates the above finding regarding the public sector banks. There has been a remarkable increase in the ratio of Punjab National Bank and Bank of Baroda in 2016 with increase of 6.35 and 6.27 percentage points giving a 96.95% and 168.55% increase of Gross NPA Ratio in just one year. Whereas considering the same for SBI the increase is just 2.25% with only incremental increase of 52.94% over the previous year. This is in spite of the SBI being largest commercial bank in India with a total market share of 18.48%. This shows that the SBI is operationally efficient.

The graph of Punjab National Bank has always remained above the public sector banks' average graph which shows the grossly inefficient methods of recovery and management of NPAs which may also include involvement in crony capitalism. Bank of Baroda's ratio has remained below the average level but after AQR it has surpassed the public sector average which shows that the NPAs were disguised and not prudently recognised in its books. Consequently, both the banks reported net loss during the financial year ended 2016 as against profit in the previous. Thus it can be inferred that the banks were carrying only book profits which were imprudent and misleading and to a certain extent were non-realisable.

Intra-Sector Comparison of Private Sector Banks*:*

HDFC BANK: HDFC Bank was incorporated in August 1994in the name of 'HDFC Bank Limited', with its registered office in Mumbai, India. As of December 31, 2016, the Bank had a nationwide distribution network of 4,555 branches and 12,087 ATM's in 2,597 cities/towns.

ICICI Bank: ICICI Bank (Industrial Credit and Investment Corporation of India) is the second largest private sector bank by Gross Advances as on March 31, 2016, headquartered in Mumbai, Maharashtra with its registered office in Vadodara. ICICI Bank currently has a network of 4,608 Branches and 14,052 ATM's across India.

Axis Bank: Axis Bank is the third largest private sector bank in India headquartered in Mumbai with Registered Office in Ahmedabad. The Bank has a large footprint of 2904 domestic branches (including extension counters) and 12,743 ATMs spread across the country as on 31st March 2016.

Inferences 2.2: The private sector banks have been successful in keeping the Gross NPA Ratio at low levels with no significant increasing trend. This is the result of private shareholders' incentive.However in the above graph of private sector banks, an interesting observation is that there is no intersection point between any two graphs during the period creating layers of line graphs. This can directly be related to the operational efficiency of the top three banks maintained over the period. We may rank the banks' NPA management efficiency on the basis of position of their line graph in the above chart with HDFC being ranked one, Axis Bank being second and ICICI Bank the third among the three. The line graph of ICICI

Bank stands above all the other graphs including the private sector average which may be due to its high exposure to industrial projects carrying higher frequency and risk of defaults in payments and thus may be fallout of sick industrial units defaulting on payments.

The AQR in 2016 however impacted the private sector banks such as ICICI Bank and Axis Bank. HDFC Bank emerged unscathed from the crisis as its exposure to big-ticket infrastructure projects was relatively small as its Gross NPA Ratio increased only 3.37% as compared to ICICI Bank's 53.97% and Axis Bank's 25.74% increase in the ratio. Here again, the ICICI Bank's increase is largest which may be due to its exposure to large industrial projects becoming sick.

The HDFC Bank in spite of being the largest lender in private sector in 2016 has managed to keep Gross NPA lower than the second and third lenders at Rs. 42976 million as against ICICIBank's and Axis Bank's Rs. 262212 million and Rs. 58485 million respectively. This shows operational and managerial excellence of the HDFC Bank.

Intra-Sector Comparison of Foreign Sector Banks*:*

Standard Chartered Bank: Standard Chartered Bank was formed in 1969 through the merger of two separate banks, the Standard Bank of British South Africa and the Chartered Bank of India, Australia and China.It is India's largest international bank with 99 branches in 42 cities and operating in the country since 1858.

Citibank: Citibank is the consumer division of financial services multinational Citigroup. Citibank was founded in 1812 as the City Bank of New York, later First National City Bank of New York. It is India's second largest foreign bank in respect of gross advances as on March 31, 2016. Citi began operations in India over a century ago in 1902 in Kolkata and today is a significant foreign investor in the Indian financial market. It operates 44 full-service Citibank branches in 31 cities and over 700 ATMs across the country.

HSBC: Founded in 1865 to finance trade between Asia and the West, today, Hong Kong and Shanghai Banking Corporation Ltd.is one of the world's largest banking and financial services organisations serving more than 37 million customers worldwide.

Inference 2.3:Overall the foreign banks' Gross NPA Ratio has been above the private sector level but below the public sector banks' level. Standard Chartered Bank's graph has remained consistently above the other top two banks in foreign sector and also above the foreign banks' average graph. This asset quality issue is mainly because of their concentrated exposure to Indian corporates.

The wholesale lending by the largest foreign bank in India has led it to recognise huge bad loans in the books. However, the second and the third largest bank in this sector by Gross Advances in 2016 have managed to keep the ratio at low levels. While the Standard Chartered Bank's ratio increased by 61.82% during the 2012-15 period, the other two bank's ratio decreased with Citibank's decrease being 28.65% and HSBC Bank's decrease being 16% during the same period. This is an evidence of stringency in lending policies and credit appraisal methods of Citibank and HSBC bank in contrast with Standard Chartered bank's subprime lending. Such low quality loans may have been lent with the objective to expand its operations in India.

The AQR in 2016 has also affected the foreign banks with 31.25% increase in the ratio over previous year but surprisingly HSBC bank's Gross NPA Ratio has decreased in 2016 by 10.71% over that of 2015. This may be due to prudent accounting by the bank before the review which means that it already recognised the due accounts as non-performing. Citibank's increase in 2016 was only 9.45% as against Standard Chartered bank's 58.88%. Thus, Standard Chartered bank along with high Gross NPA ratio also had non-recognised accounts in its books which were unearthed during the special inspection. Thus, Standard Chartered Bank has been the overall driver of high NPA Ratio of foreign sector in India.

Analysis 3: Interrelation Between NPAS and Profitability of Banks of all the Three Sectors.

Karl Pearson's product moment correlation has been administered at 5% level of significance.

NULL HYPOTHESIS (H_0): There is no statistically significant correlation between Gross NPA and Net Profit of Banks for the past 11 years.

ALTERNATIVE HYPOTHESIS (H_1): There is statistically significant correlation between Gross NPA and Net Profit of Banks for the past 11 years.

Correlation Analysis:Net profit of the banks includes interest income and other income. Interest income includes interest/discount earned on advances/bills, income on investments, interest on balances with RBI and other inter-bank funds and other interest income. Other income includes non-interest incomes like commission on exchange and brokerage, profit/loss on sale of investments, revaluation of investments, sale of land and other assets, exchange transactions and other miscellaneous income. However, the interest income has a major share in the total income.

Inference 3.1:Null Hypothesis is rejected for all the three sectors as there is moderate negative correlation (-0.5701) for public sector banks, significant positive correlation (+0.8600) for private sector banks and significant positive correlation (+0.7549) for foreign banks between Gross NPAs and Net Profit for the past 11 years. The Public sector banks' negative correlation is a direct implication of the provisioning norms of RBI with respect to NPAs. As the non-performing assets increase in the banks' books, more provisions have to be made with respect to defaulting parties and higher provisions have to be made with respect to time (i.e. as the proportion to be written off increases with the period of NPAs) by the banks. It can be understood as, to improve the financial performance of public sector banks, the banks need to reduce their NPAs as they have a high dependency on interest income in their total income calculated at 89.26% (for 2016) (calculated from data from RBI website). The same data for private and foreign banks gives completely opposite results with strong positive correlation. This may be due to relatively lower dependency of private banks on interest income (83.31%) and a negative correlation (-0.2111) between Gross Advances and Gross NPA Ratio. Thus, as the business of private banks increase the proportion of NPAs starts declining, reflecting their gradual success in management and reduction of NPAs. The foreign banks also have lower dependency (80.70%) on interest income and a low positive correlation (+0.4861) between Gross Advances and Gross NPA Ratio which reflects their relative efficiency in expansion as a sector. The correlation between Gross Advances and Gross NPA Ratio of public sector banks is high and positive which means that along with increase in loan advanced, the proportion of NPAs also increases which is worrisome.

Table 3.1 has statistically insignificant correlation (-0.0673) between Gross Advances and Net Profit of public sector banks for the past 11 years. This means that any incremental loan advanced by the public sector banks is relatively more vulnerable to become bad. Whereas the same cell of Table 3.2 and Table 3.3 give significant positive correlation (+0.9818) and (+0.9059) respectively. This reflects the efficiency and prudent expansionary policies of the private and foreign banks.

Overall, the private sector banks have proved to be most efficient among the three sectors. The foreign banks are more efficient than the public sector but hold a very small share in the Indian Banking System at 4.2% and thus have minimal effect overall.

Conclusion: The world average of Gross Non-Performing Assets Ratio stood at just 3.9% in 2016 while that of India was reported at 7.5%. India's Gross NPA ratio is not only above world average but also higher than the average of lower middle income countries: the category in which it was classified by the World Bank in 2016. The Government of India and the Reserve Bank of India have taken some major steps towards the resolution of the issue including the Asset Quality Review (AQR) in 2016 and the enactment of the Insolvency and Bankruptcy Code (IBC) in May 2016. Overall in the Indian Banking System, the private sector banks have managed to keep NPA at low levels. It's the public sector banks which have high proportion of low quality advances and with the public sector holding 71.24% of the market share in Gross Advances has driven India's Gross NPA Ratio to a high level. A sector-wise approach with holistic remedial action is required to tackle the menace with preventive and curative measures both at the generation and recovery level.

Recommendations, Strategies and Suggestions for Management of NPAs: The current rise of NPAs with its severe adverse impact on the banks and economy makes it indispensable to control and manage NPAs and maintain it at lowest possible levels. Strategies to control the NPA menace may be divided into two categories: (A) Preventive measures and (B) Curative measures.

(A) *Preventive Measures:*They prevent the asset from becoming a non performing asset. Banks has to concentrate on the following to minimize the levelof NPAs.

(i) Early recognition of the problem: Identification of weakness in the very beginning is imperative. Assessment of the potential of revival may be done on the basis of a techno-economic viability study. Restructuring should be attempted where, after an objective assessment of the promoter's intention, banks are convinced of a turnaround within a scheduled timeframe. In respect of totally unviable units as decided by the bank, it is better to facilitate winding up/ selling of the unit earlier, so as to recover whatever is possible through legal means before the security position becomes worse. The Early Warning Signals (EWS) are those which clearly indicate or show some signs of credit deterioration in the loan account. They indicate the potential problems involved in the accounts so that remedial action can be initiated immediately. In fact most banks have EWS for identification of potential NPA. Some of these early warning signals which help in early recognition of NPAs are:

Financial Warning Signals: Default in repayment; Continuous irregularity in the account; Devolvement of L/C or invocation of guarantees; Deterioration in working capital position or in liquidity; Declining sales compared to previous period; Substantial increase in long-term debts in relation to equity; Rising sales but falling profits; Incurring operating losses or net losses; Rising level of bad debt losses.

Operational Warning Signals: Underutilisation of plant capacity; Non-payment of electricity, wages, other outstanding liabilities; Frequent labour-management conflict resulting in strikes, lockouts, etc; Poor diversification and frequent changes in plans for expansion or diversification or modernisation; Evidence of overstocking and aged inventory; Loss of critical customers.

Managerial Warning Signals: Diversion of funds and poor financial controls; Lack of cooperation from key managerial personnel; Change in management or ownership pattern or key personnel; Undertaking of undue risks; Fudging of financial statements

Banking Signals: Frequent request for further loans; Delays in servicing of interest; Reduction of operations in the accounts or reduction of bank balances; Opening of accounts with other banks; Dishonour of cheques or return of bills sent for collection; Not routing sales transactions through the account; Delays in submitting stock statement and other data or non-submission of periodical statements.

External Warning Signals: Economic recession; Introduction of new technology; Changes in government policies; Emergence of new competition; Natural calamities; Weakening of industry characteristics.

(ii) Credit Assessment and Risk management: Credit assessment and Risk management mechanism are ever lasting solution to the problem of NPAs. Managing credit risk is a much more forward looking approach and is mainly concerned with managing the quality of credit portfolio before default takes place. The documentation of credit policy and credit audit immediately after the sanction is necessary to upgrade the quality of credit appraisal in banks. In a situation of liquidity overhang the enthusiasm of the banking system is to increase lending with compromise on asset quality, raising concern about adverse selection and potential danger of addition to the NPA'sstock. It is necessary that the banking system is equipped with prudential norms to minimize if not completely avoid the problem of credit risk and develop an effective internal credit risk models for the purpose of credit risk management.

(iii) Identifying Wilful defaulters/ borrowers with genuine intent: Identifying borrowers with genuine intent from those who are non- serious with no commitment or stake in revival is a challenge confronting bankers. Here the role of frontline officials at the branch level is paramount as they are the ones who have intelligent inputs with regard to promoters' sincerity, and capability to achieve turnaround. Based on this objective assessment, banks should decide as quickly as possible whether it would be worthwhile to commit additional finance. In this regard banks may consider having "Special Investigation" of all financial transaction or business transaction, books of account in order to ascertain real factors that contributed to sickness of the borrower. Banks may have penal of technical experts with proven expertise and track record of preparing techno-economic study of the project of the borrowers. Borrowers having genuine problems due to temporary mismatch in fund flow or sudden requirement of additional fund may be entertained at branch level, and for this purpose a special limit to such type of cases should be decided. This will obviate the need to route the additional funding through the controlling offices in deserving cases, and help avert many accounts slipping into NPA category.

(iv) Post sanction follow up and supervision: Follow up function includes ensuring the specified end-use of funds and detecting deviations from terms of sanction. It also includes making periodic assessment of the health of the advances by noting some of the key indicators of performance like profitability, activity level, and management of the unit and ensuring that the assets created are effectively utilized for productive purposes and are well maintained.

The objective of supervisory function is to ensure that effective follow up of advances is in place and asset quality of good order is maintained and to look for early warning signals, identify 'incipient sickness' and initiate proactive remedial measures.

(B) *Curative Measures:* The curative measures are designed to maximize recoveries so that banks funds locked up in NPAs are released for recycling. The Central government android have taken steps for controlling incidence of fresh NPAs and creating legal and regulatory environment to facilitate the recovery of existing NPAs of banks.

(i) Identification and Ascertainment of Credit Default Risk

In order to assess the credit default risk the concerned bank has to check the following five C's from the borrower.

- Cash flows reflecting the earning capacity of the borrower.
- Collateral - the tangible assets of the borrowers who intends to mortgage.
- Character – the management capabilities of the concerned party.
- Conditions - the loan covenants to safeguard the lenders interest and
- Capital - referring to the buffer to absorb earnings shocks.

Utilization of credit default protection measures and instruments: Once the credit default is ascertained and quantified, credit default protection measures and instruments like credit default swaps, credit default options and credit linked notes can be utilized.

(ii) Corporate Debt Restructuring (CDR): The objective of the Corporate Debt Restructuring (CDR) framework is to ensure timely and transparent mechanism for restructuring the corporate debts of viable entities facing problems, outside the purview of BIFR, DRT and other legal proceedings, for the benefit of all concerned. In particular, the framework will aim at preserving viable corporates that are affected by certain internal and external factors and minimize the losses to the creditors and other stakeholders through an orderly and coordinated restructuring programme.

(iii) Debt Recovery Tribunals (DRTs): DRTs were set up under the Recovery of Debts due to Banks and Financial Institutions Act, 1993. Under the Act, two types of Tribunals were set up i.e. Debt Recovery Tribunal (DRT) and Debt Recovery Appellate Tribunal (DRAT). An important power conferred on the Tribunal is that of making an interim order (whether by way of injunction or stay) against the defendant to debar him from transferring, alienating or otherwise dealing with or disposing of any property and the assets belonging to him within prior permission of the Tribunal. This order can be passed even while the claim is pending.

(iv) Lok Adalats: The Lok Adalats institutions help banks to settle disputes involving accounts in doubtful and loss categories. These are proved to be an effective institution for settlement of dues in respect of smaller loans. The Lok Adalats and Debt Recovery Tribunals have been empowered to organize Lok Adalats to decide for NPAs of up to Rs. 20 lakhs.

(v) SARFAESI Act, 2002: The Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, of 2002, allow banks and financial institutions to auction properties (residential and commercial) when borrowers fail to repay their loans. It enables banks to reduce their non-performing assets (NPAs) by adopting measures for recovery or reconstruction. Upon loan default, banks can seize the securities (except agricultural land) without intervention of the court. SARFAESI is effective only for secured loans where bank can enforce the underlying security (e.g. hypothecation, pledge and mortgages). In such cases, court intervention is not necessary, unless the security is invalid or fraudulent. However, if the asset in question is an unsecured asset, the bank would have to move the court to file civil case against the defaulters.

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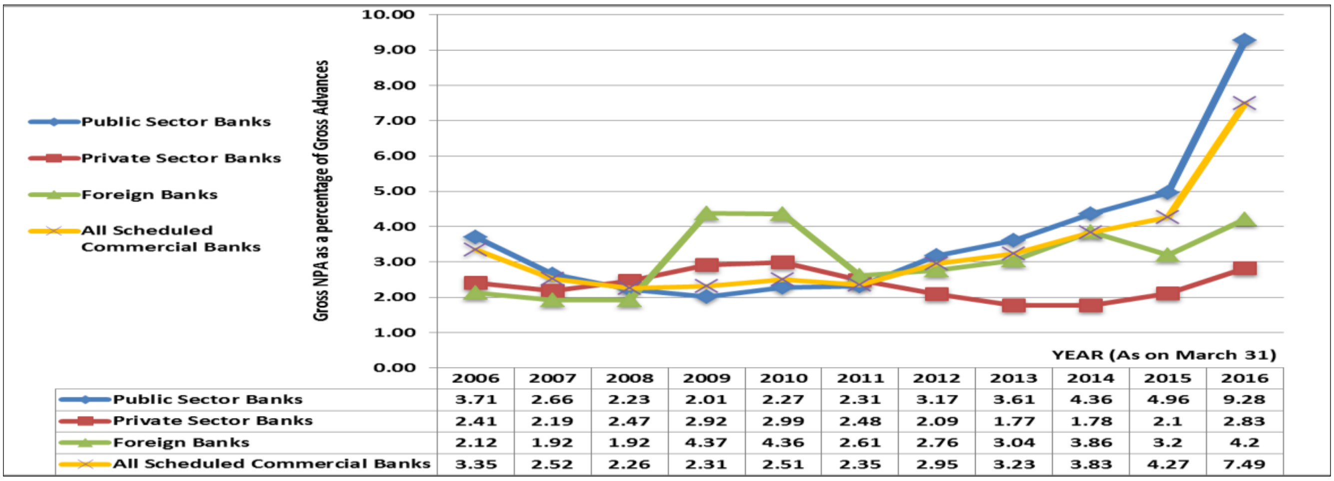
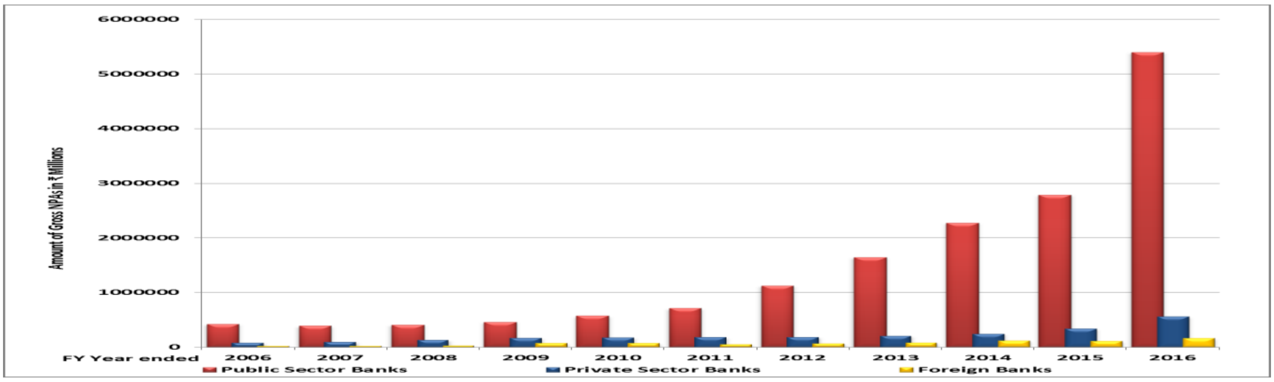
Figure 1.1: Inter Sector Comparison Of Gross Npa Ratio



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Public Sector Banks	3.71	2.66	2.23	2.01	2.27	2.31	3.17	3.61	4.36	4.96	9.28
Private Sector Banks	2.41	2.19	2.47	2.92	2.99	2.48	2.09	1.77	1.78	2.1	2.83
Foreign Banks	2.12	1.92	1.92	4.37	4.36	2.61	2.76	3.04	3.86	3.2	4.2
All Scheduled Commercial Banks	3.35	2.52	2.26	2.31	2.51	2.35	2.95	3.23	3.83	4.27	7.49

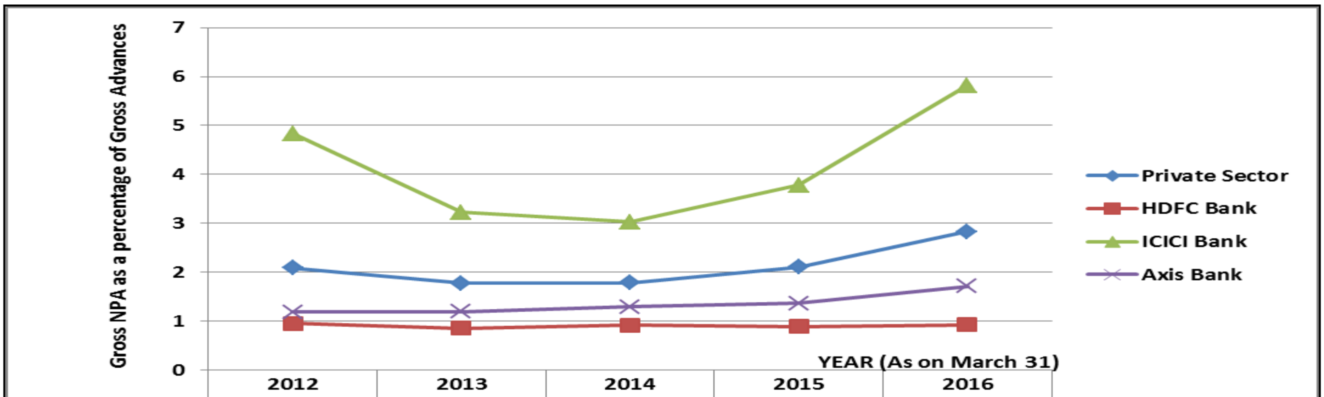
Compiled from: *Appendices A, B, C and D*

Figure 1.2: Inter Sector Comparison of Gross Npas



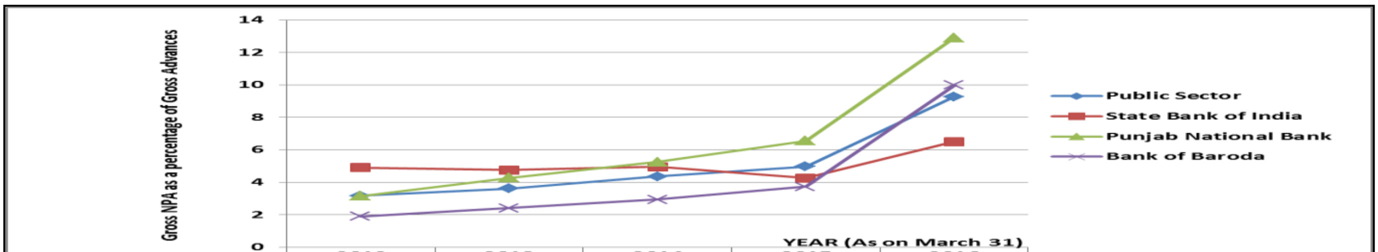
Compiled from: *Appendices A, B, and C*

Figure 2.1: Comparative Analysis



	2012	2013	2014	2015	2016
Private Sector	2.09	1.77	1.78	2.1	2.83
HDFC Bank	0.95	0.85	0.91	0.89	0.92
ICICI Bank	4.83	3.22	3.03	3.78	5.82
Axis Bank	1.18	1.19	1.29	1.36	1.71

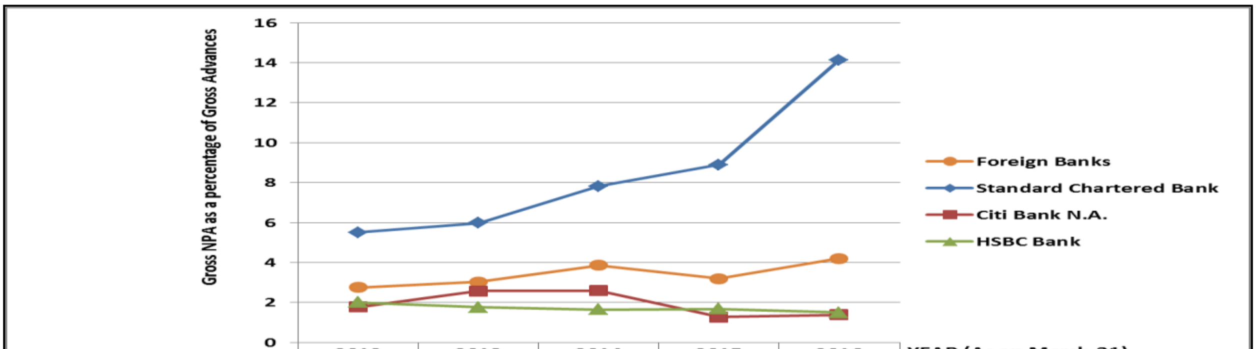
Figure 2.2: Comparative Analysis



	2012	2013	2014	2015	2016
Public Sector	3.17	3.61	4.36	4.96	9.28
State Bank of India	4.9	4.75	4.95	4.25	6.5
Punjab National Bank	3.15	4.27	5.25	6.55	12.9
Bank of Baroda	1.89	2.4	2.94	3.72	9.99

Compiled from: *www.rbi.org*

Figure 2.3: Comparative Analysis



	2012	2013	2014	2015	2016
Foreign Banks	2.76	3.04	3.86	3.2	4.2
Standard Chartered Bank	5.5	5.98	7.82	8.9	14.14
Citi Bank N.A.	1.78	2.58	2.59	1.27	1.39
HSBC Bank	2	1.77	1.65	1.68	1.5

Table 2.1 SBI Snapshot

Particulars (2015-16)	Amount (in Rs. million)
Gross Advances	15094998
Gross NPAs	981728
Gross NPA Ratio (in %)	6.5
Net Profit	99507
Sector Market Share (in %)	25.94
Total Market Share (in %)	18.48
Capital Adequacy Ratio (Basel III)	13.12

Table 2.2: Shareholding Pattern of SBI as on March 31, 2016 (%)

Total Government & RBI - Resident	Financial Institutions - Resident	Financial Institutions- Non Resident	Other Corporates - Resident	Other Corporates - Non Resident	Total Individual - Resident	Total Individual - Non Resident	Total - Resident	Total - Non Resident
60.2	18.4	11.0	3.2	0.0	7.0	0.2	88.8	11.2

Table 2.3 PNB Snapshot

Particulars (2015-16)	Amount (in Rs. million)
Gross Advances	4327750
Gross NPAs	558183
Gross NPA Ratio (in %)	12.9
Net Profit	-39744
Sector Market Share (in %)	7.44
Total Market Share (in %)	5.30
Capital Adequacy Ratio (Basel III)	11.28

Table 2.4: Shareholding Pattern of PNB as on March 31, 2016 (%)

Total Government & RBI - Resident	Financial Institutions - Resident	Financial Institutions- Non Resident	Other Corporates - Resident	Other Corporates - Non Resident	Total Individual - Resident	Total Individual - Non Resident	Total - Resident	Total - Non Resident

62.1	20.8	10.4	1.0	0.0	5.8	0.0	89.6	10.4

Table 2.5: Bank of Baroda Snapshot

Particulars (2015-16)	Amount (in Rs. million)
Gross Advances	4055172
Gross NPAs	405210
Gross NPA Ratio (in %)	9.99
Net Profit	-53955
Sector Market Share (in %)	6.97
Total Market Share (in %)	4.97
Capital Adequacy Ratio (Basel III)	13.18

Table 2.6: Shareholding Pattern of Bank of Baroda as on March 31, 2016 (%)

Total Government & RBI - Resident	Financial Institutions – Resident	Financial Institutions-Non Resident	Other Corporates - Resident	Other Corporates - Non Resident	Total Individual - Resident	Total Individual - Non Resident	Total - Resident	Total - Non Resident
59.2	9.7	11.5	14.3	0.0	4.8	0.4	88.1	11.9

Table 2.7: HDFC Snapshot

Particulars (2015-16)	Amount (in Rs. million)
Gross Advances	4675794
Gross NPAs	42976
Gross NPA Ratio (in %)	0.92
Net Profit	122962
Sector Market Share (in %)	23.70
Total Market Share (in %)	5.72
Capital Adequacy Ratio (Basel III)	15.53

Table 2.8: Shareholding Pattern as on March 31, 2016 (%)

Total Government & RBI -	Financial Institutions -	Financial Institutions-	Other Corporates - Residen	Other Corporates - Non	Total Individual - Reside	Total Individual - Non	Total - Resident	Total - Non Resident

Resident	Resident	Non Resident	t	Resident	nt	Resident		
0.1	11.2	0.0	7.3	72.4	8.7	0.3	27.3	72.7

Table 2.9: ICICI Bank Snapshot

Particulars (2015-16)	Amount (in Rs. million)
Gross Advances	4501826
Gross NPAs	262212
Gross NPA Ratio (in %)	5.82
Net Profit	97263
Sector Market Share (in %)	22.82
Total Market Share (in %)	5.51
Capital Adequacy Ratio (Basel III)	16.64

Table 2.10: Shareholding Pattern as on March 31, 2016 (%)

Total Government & RBI - Resident	Financial Institutions - Resident	Financial Institutions- Non Resident	Other Corporates - Resident	Other Corporates - Non Resident	Total Individual - Resident	Total Individual - Non Resident	Total - Resident	Total - Non Resident
0.1	23.1	64.4	6.0	0.0	6.1	0.3	35.3	64.7

Table 2.11: Axis Bank Snapshot

.Particulars (2015-16)	Amount (in Rs. million)
Gross Advances	3423119
Gross NPAs	58485
Gross NPA Ratio (in %)	1.71
Net Profit	82237
Sector Market Share (in %)	17.35
Total Market Share (in %)	4.19
Capital Adequacy Ratio (Basel III)	15.29

Table 2.12: Shareholding Pattern as on March 31, 2016 (%)

Total Govern	Financial	Financial	Other Corpor	Other Corpor	Total Individ	Total Individ	Total -	Total - Non

ment & RBI - Resident	Institutions - Resident	Institutions- Non Resident	ates - Resident	ates - Non Resident	ual - Resident	ual - Non Resident	Resident	Resident
0.0	40.1	44.2	6.7	0.1	8.6	0.3	55.4	44.6

Table 2.13: Standard Chartered Snapshot

Particulars (2015-16)	Amount (in Rs. million)
Gross Advances	766573
Gross NPAs	108355
Gross NPA Ratio (in %)	14.14
Net Profit	10065
Sector Market Share (in %)	20.37
Total Market Share (in %)	0.94
Capital Adequacy Ratio (Basel III)	12.98

Table 2.14: Citibank Snapshot

Particulars (2015-16)	Amount (in Rs. million)
Gross Advances	621095
Gross NPAs	8605
Gross NPA Ratio (in %)	1.39
Net Profit	32330
Sector Market Share (in %)	16.50
Total Market Share (in %)	0.76
Capital Adequacy Ratio (Basel III)	15.76

Table 2.15: HSBC Snapshot

Particulars (2015-16)	Amount (in Rs. million)
Gross Advances	555947
Gross NPAs	8358
Gross NPA Ratio (in %)	1.5
Net Profit	19341
Sector Market Share (in %)	14.77
Total Market Share (in %)	6.81
Capital Adequacy Ratio (Basel III)	15.99

Table 3.1: Public Sector Banks (*Compiled from:* *Appendix A*)

PUBLIC SECTOR BANKS	*GROSS ADVANCES (Rs. Million)*	*GROSS NPAs (in Rs. Million)*	*GROSS NPA RATIO (in %)*	*NET PROFIT (in Rs. Million)*
GROSS ADVANCES (in Rs. Million)	1			
GROSS NPAs (in Rs. Million)	0.852005494	1		
GROSS NPA RATIO (in %)	0.710401818	0.964021709	1	
NET PROFIT (in Rs. Million)	-0.067337015	-0.570066867	-0.71571902	1

Table 3.2: Private Sector Banks (*Compiled from:* *Appendix B*)

PRIVATE SECTOR BANKS	*GROSS ADVANCES (in Rs. Million)*	*GROSS NPAs (in Rs. Million)*	*GROSS NPA RATIO (in %)*	*NET PROFIT (in Rs. Million)*
GROSS ADVANCES (in Rs. Million)	1			
GROSS NPAs (in Rs. Million)	0.931110535	1		
GROSS NPA RATIO (in %)	-0.211076298	0.13461263	1	
NET PROFIT (in Rs. Million)	0.981777636	0.8599754	-0.325749	1

Table 3.3: Foreign Banks (*Compiled from:* *Appendix C)*

FOREIGN BANKS	*GROSS ADVANCES (in Rs. Million)*	*GROSS NPAs (in Rs. Million)*	*GROSS NPA RATIO (in %)*	*NET PROFIT (in Rs. Million)*
GROSS ADVANCES (in Rs. Million)	1			
GROSS NPAs (in Rs. Million)	0.930079192	1		
GROSS NPA RATIO (in %)	0.4861235	0.744604349	1	
NET PROFIT (in Rs. Million)	0.90588732	0.754869965	0.346078841	1

Appendix: A - Public Sector Banks' Variables

YEAR (As on March 31)	GROSS ADVANCES (in Rs. Million)	GROSS NPAs (in Rs. Million)	GROSS NPA RATIO (in %)	NET PROFIT (in Rs. Million)

2006	11347238	421172	3.71	165387
2007	14644950	389730	2.66	201521
2008	18190740	406000	2.23	265917
2009	22834734	459176	2.01	343726
2010	25193309	573009	2.27	392569
2011	30798042	710474	2.31	449007
2012	35503892	1124892	3.17	495138
2013	45601686	1644616	3.61	505827
2014	52159197	2272639	4.36	370189
2015	56167175	2784679	4.96	375400
2016	58183484	5399564	9.28	-179930

Appendix: B - Private Sector Banks' Variables

YEAR (As on March 31)	GROSS ADVANCES (in Rs. Million)	GROSS NPAs (in Rs. Million)	GROSS NPA RATIO (in %)	NET PROFIT (in Rs. Million)
2006	3151011	75988	2.41	49745
2007	4182410	91450	2.19	64653
2008	5236990	129220	2.47	95219
2009	5751668	167874	2.92	108676
2010	5795349	173067	2.99	131114
2011	7232054	179049	2.48	177116
2012	8716413	182102	2.09	227180
2013	11512463	203817	1.77	289954
2014	13602528	241835	1.78	337541
2015	16073394	336904	2.1	387347
2016	19726588	558531	2.83	413137

Appendix: C - Foreign Banks' Variables

YEAR (As on March 31)	GROSS ADVANCES (in Rs. Million)	GROSS NPAs (in Rs. Million)	GROSS NPA RATIO (in %)	NET PROFIT (in Rs. Million)
2006	959052	20370	2.12	30686
2007	1246770	23990	1.92	45852
2008	1606580	30840	1.92	66122
2009	1660116	72487	4.37	75097
2010	1632130	71105	4.36	47409
2011	1929719	50445	2.61	77189
2012	2267773	62689	2.76	94264
2013	2604049	79256	3.04	115865
2014	2995755	115678	3.86	101397
2015	3366090	107578	3.2	128032
2016	3763373	157980	4.2	108275

Appendix: D - All Scheduled Commercial Banks' Variables

YEAR (As on March 31)	GROSS ADVANCES (in Rs. Million)	GROSS NPAs (in Rs. Million)	GROSS NPA RATIO (in	NET PROFIT (in Rs. Million)

			%)	
2006	15457301	517531	3.35	245818
2007	20074130	505170	2.52	312026
2008	25034310	566060	2.26	427259
2009	30246518	699537	2.31	527499
2010	32620788	817181	2.51	571092
2011	39959815	939969	2.35	703313
2012	46488078	1369683	2.95	816583
2013	59718199	1927688	3.23	911647
2014	68757479	2630152	3.83	809127
2015	75606658	3229161	4.27	890778
2016	81673445	6116074	7.49	341482