A Study of Gross and Net Non-Performing Assets of Select Public Sector Banks in India for the Period 2007-2008 to 2017-2018

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Abstract
The Non-Performing Assets (NPAs) are considered as one of the important parameters for analysing the health of the Indian Banks. The Authors have taken a look at the Literature Reviews related to the non-performing assets related studies looked into by other Research Scholars. The authors in this research study has made an attempt to study the secondary data related to Gross and Net Non-Performing Assets or Loans of select Banks in India, which is available in the public domain of the regulators of Indian Banks i.e. Reserve Bank of India (RBI) from April 2007 to March 2018 and has performed the ABC analysis as per cumulative (decreasing method) to study the performance and the management and governance of those Banks. Finally, the authors conclude that some of the select Indian Banks taken for study appear in the various Groups formulated for study i.e. Group A (Poor Performance), Group B (Satisfactory Performance) and Group C (Good Performance) are thus a matter of great concern to the economy of the country.

Keywords: Assets, Banks, Governance, Gross, Indian, Loans, Management, Net, Performance.

1. Introduction
The entire world has accepted that the country is galloping towards being the third largest economy of the world in the near future and therefore, the financial and banking system or sector in India is required to play an important role to shape up its economy. The main business of the banking system is to cater to the financial needs of the business and individuals, but now it has also been vested with the responsibility to support other activities like the Insurance and supporting various schemes announced by the government from time to time. The Banks are required not only to safeguard the deposits of the Customers but also required to ensure that the loans or advances given are not defrauded by the business community or certain individuals for their own vested interest, as it has been observed in the recent past. Therefore, to arrive at the strength of the banking system in India the Non-Performing Assets (NPAs) are considered as one of the important parameter for analysis. A sound banking and financial system is therefore, needs now.

2. Literature Review
The objective of study of Sanjeev (2007) was to identify critical factors, which were responsible for the loans of the banks to go bad in the Indian commercial banking system. The Methodology adopted for the study was mainly related to primary data collected from credit managers of banks operating in India. Their study revealed that the external factors have a higher influence compared to the internal factors, which was also very surprising. The Economic downturn and willful default have been found to be most critical factor. Also the poor credit scoring skill of managers, absence of suitable administrative penalties and target completion have been found to have a significant influence amongst factors related with the loan appraisal mechanism of the banks. The seizure and disposal of collateral have found to be the toughest challenges amongst the factors related with the loan monitoring and controlling mechanism. The level of loan manager's motivation, manpower, skill to appraise collateral, effort to reduce costs, government and political intervention and soft budget constraints have been found to have a lower influence.

However, the objective of study of Khushpatand & Rahul (2012) was to analyze the trends in Non-Performing Assets (NPAs) in the Indian Banking Sector from 2004-2011, to assess the contributing factors to the NPA in the Indian Banking Sector and to suggest measures to halt and curtail the rising burden of NPAs. They mainly dealt with the rising burden of NPAs in Indian financial system and their likely impact and measures to minimize such adverse impact on the Indian
banking system in particular and Indian economy in general. They were also of the view that the factor contributing to the rising NPAs is the upward shift in interest rates due to the Reserve Bank of India’s (RBI) tight monetary policy for controlling inflation. The increased interest rate (floating interest) has increased the repayment burden of borrowers which is compelling them to default their interest payments and repayments. The authors concluded that the banks should focus on recovery of existing loans and be more circumspect in their credit appraisal, rescheduling of large corporate loans as rising interest cost and falling sales revenue may result in widespread defaults of corporate loans, phasing out of priority sector loans to 10% of the total loans so as to reduce the burden of NPAs in priority sector, making priority sector loans need-based rather than target based which results in poor credit appraisal and loan default. The authors arrived at a conclusion that the major contributor to the NPAs in banking sector was agricultural sector. NPAs in non-priority sectors are likely to increase due to decelerating trends in major sectors like manufacturing and infrastructure and slowing down of economy during 2012.

3. Definitions

3.1 Non-Performing Assets (NPA) or Non-Performing Loans (NPL)
The non-performing assets or loans in the books of the Banks are the loan that has been defaulted by the borrower. As per the regulators of Banks in India the loan becomes non-performing it is in default for 90 days.

3.2 Gross Non-Performing Assets (GNPA) or Gross Non-Performing Loans (GNPL)
It is the total number of Non-Performing Assets or Loans of the Banks added together.

3.3 Net Non-Performing Assets (NNPA) or Net Non-Performing Loans (NNPL)
Net Non-Performing Assets or NNPL is the total of actual bad assets minus the provision left aside. The Indian Banks Regulator defines Net NPA or NPL as Net NPA or NPL = Gross NPA or NPL – (Balance in Interest Suspense Account + Deposit Insurance and Credit Guarantee Corporation (DICGC)/Export Credit Guarantee Corporation of India (ECGC) claims received and held pending adjustment + Part payment received and kept in suspense account + Total provisions held.

4. Objective of Research Study

- To study and analyze Select Indian Bank’s Gross Non-Performing Assets or Loans and Net Non-Performing Assets or Loans from April 2007 to March 2018.
- To do comparative analysis of the Select Indian Bank’s Gross Non-Performing Assets or Loans and Net Non-Performing Assets or Loans from April 2007 to March 2018.
- To analyse the management and governance or performance of directing and controlling of the Select Indian Bank’s from April 2007 to March 2018.

5. Methodology Adopted For Research

Banking sector is analysed using secondary data available from Reserve Bank of India (RBI) and Money Control websites. It is an Analytical Research. The data was collected for the period of April 2007 to March 2018 i.e. 2007-2008 to 2017-2018. Assuming that the figures are given by the apex body of the banking sector, i.e. Reserve Bank of India and therefore, ABC analysis is attempted on that.

6. Analysis of Data

6.1 The defaulted loans of the Select Indian Bank’s from April 2007 to March 2018 were done according to the increasing method as given in Appendix A and respectively.

6.2 The Group ranking of the select Indian Bank’s Defaulted Loans from April 2007 to March 2018 was as per the results arrived from the ABC Analysis method as given in Appendix A, B and C, D respectively.

Table 1. Ranking of Gross Non-Performing Assets or Loans of the select Indian Banks from April 2007 to March 2018 (Bank with Highest Gross Non-Performing Loans is Rated I).

| Name of the Select Indian Banks | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | 2012-2013 | 2013-2014 | 2014-2015 | 2015-2016 | 2016-2017 | 2017-2018 |
|---------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| State Bank of India             | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         |
| Punjab National Bank            | 2         | 2         | 4         | 3         | 2         | 2         | 2         | 2         | 2         | 2         | 2         |
### Table 2. Ranking of Net Non-Performing Assets or Loans of the select Indian Banks from April 2007 to March 2018 (Bank with Highest Net Non-Performing Assets or Loans is Rated I).

| Name of the Bank | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | 2012-2013 | 2013-2014 | 2014-2015 | 2015-2016 | 2016-2017 | 2017-2018 |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| State Bank of India | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         |

Figure 1. Ranking of Gross Non-Performing Assets or Loans of the select Indian Banks from April 2007 to May 2018
### 6.3 Select Indian Banks – Gross and Net Non-Performing Assets or Loans – Analysis

For the purpose of analyzing the select Indian Banks, and deciding the management performance and governance, it was decided to have ABC Analysis of three groups from the cumulative (decreasing method) Gross & Net NPAs or NPLs of the select Indian Banks.

**Group A** – 1 - 70 – Poor management and governance or performance of directing and controlling.

**Figure 2.** Ranking of Net Non-Performing Assets or Loans of the select Indian Banks from April 2007 to March 2018
Group – B - 71 – 90 – Satisfactory management and governance or performance of directing and controlling.
Group – C - 91 – 100 - Good management and governance or performance of directing and controlling.

6.3.1 Group – A
State Bank of India, Punjab National Bank, Bank of India and Central Bank of India were in Group A i.e. 1-70% (Poor performance) most the years in Gross Non-Performing Assets or Loans and Net Non-Performing Assets or Loans from April 2007 to March 2018. An analysis of this four Bank’s movement is studied and it is observed as below:

6.3.1.1 State Bank of India
From August 2008 to April 2017, along with its seven subsidiary banks and Bhartiya Mahila Bank were merged into State Bank of India. However, it can be observed from Appendix A and B that there was not much impact on the Non-Performing Assets or Loans during that period.

Table 3. Gross & Net Non-Performing Assets or Loans as on March 2018

| Year   | Last Year's Outstanding | Added during the year | Reduced during the year | Written-Off | Present Year | Last Year | Present Year |
|--------|-------------------------|-----------------------|-------------------------|-------------|-------------|-----------|--------------|
| 2017-18| 1123430                 | 1603037               | 90238                   | 401954      | 2234275     | 582774    | 1108547      |

Source: https://www.rbi.org.in

Table 4. Details of Chairman of State Bank of India from April 2007 to March 2018

| S.No. | Name              | Period          |
|-------|-------------------|-----------------|
| 1.    | Shri O.P.Bhatt    | July 2006 - March 2011 |
| 2.    | Shri Pratip Chaudhari | April 2011 - September 2013 |
| 3.    | Smt. Arundhati Blhattacharya | October 2013 - October 2017 |
| 4.    | Shri Rajnish Kumar | October 2017 - Till Date |

It can be observed from table 3 that the Gross Non-Performing Assets or Loans during the previous year ending i.e. March 2017 was Rs.1123430 Million and during the year April 2017 to March 2018 Rs.1603037 Million were added. During the year Bank had reduced Rs.90238 Million and written off Rs.401954 Million. The Gross Non-Performing Assets or Loans of the Bank at the end of March 2018 stood at Rs.2234275 Million. As regards the Net Non-Performing Assets or Loans during the previous year ending was Rs.582774 Million and during the year ending March 2018 it stood at Rs.1108547 Million. It can also be observed that during the study period April 2007 to March 2018 the Bank topped in Group A, during the entire period.

6.3.1.2 Punjab National Bank
It is interesting to note that there were no other Banks merged into Punjab National Bank from April 2007 to March 2018. The Gross and Net Non-Performing Assets or Loans of the Bank were amongst the top two for the study period i.e. April 2007 to March 2018 as can be seen from Appendix A,B,C and D.

Table 5. Gross & Net Non-Performing Assets or Loans as on March 2018

| Year   | Last Year's Outstanding | Added during the year | Reduced during the year | Written-Off | Present Year | Last Year | Present Year |
|--------|-------------------------|-----------------------|-------------------------|-------------|-------------|-----------|--------------|
| 2017-18| 553705                  | 442743                | 56175                   | 74072       | 866201      | 327021    | 486843       |

Source: https://www.rbi.org.in
Table 6. Details of Chairman and Managing Director and Chief Executive Officer—Punjab National Bank from April 2007 to March 2018

| Sl.No. | Name                     | Period         |
|-------|--------------------------|----------------|
| 1.    | Dr. K.C. Chakravarty    | 2007-2009      |
| 2.    | Mr. K.R. Kamath         | October 2009-October 2014 |
| 3.    | Mr. Gauri Shankar, Executive Director (Acting Chairman and Managing Director) | February 2015-August 2015 |
| 4.    | Mrs. Usha Ananthasubramanian | August 2015-May 2017 |
| 5.    | Mr. Sunil Mehta         | May 2017-September 2019 |

It can be observed from Table 5 that the Gross Non-Performing Loans during the previous year ending i.e. March 2017 was Rs.553705 Million and during the year April 2017 to March 2018 Rs.442743 Million were added. During the year the Bank had reduced Rs.56175 Million and written off Rs.74072 Million. The Gross Non-Performing Assets or Loans of the Bank stood at the end of April 2018 to Rs.866201 Million. As regards the Net Non-Performing Assets or Loans during the previous year ending was Rs.327021 Million and during the year ending March 2018 it stood at Rs.486843 Million. It can also be observed that during the study period April 2007 to March 2018 the Bank was mostly in Group A.

6.3.1.3 Bank of India

The Gross and Net Non-Performing Assets or Loans of the Bank were amongst the top three for the study period i.e. April 2007 to March 2018 as can be seen from Appendix A,B,C and D.

Table 7. Gross & Net Non-Performing Assets or Loans as on March 2018

| Year       | Rs. Million |
|------------|-------------|
| 2017-2018  |             |
| Last Year's Outstanding | 520445     |
| Added during the year   | 62518       |
| Reduced during the year | 0448       |
| Written-Off             | 253050      |
| Present Year            | 282073      |

Source: https://www.rbi.org.in

Table 8. Details of Chairman and Managing Director and Chief Executive Officer - Bank of India from April 2007 to March 2018

| Sl.No. | Name                | Period          |
|-------|---------------------|-----------------|
| 1.    | Mr. Alok K. Misra  | August 2003-September 2012 |
| 2.    | Mrs. V.R. Iyer     | November 2012-May 2015 |
| 3.    | Mr. Melwyn Rego    | February 2015-August 2015 |
| 4.    | Mrs. Usha Ananthasubramanian | August 2015-May 2017 |
| 5.    | Mr. Dinabandhu Mohapatra | May 2017-June 2019 |

It can be observed from Table 7 that the Gross Non-Performing Loans during the previous year ending i.e. March 2017 was Rs.520445 Million and during the year April 2017 to March 2018 Rs.255805 Million were added. During the year the Bank had reduced Rs.62518 Million and written off Rs.90448 Million. The Gross Non-Performing Assets or Loans of the Bank at the end of March 2018 stood at Rs.623285 Million. As regards the Net Non-Performing Assets or Loans during the previous year ending was Rs.253050 Million and during the year ending March 2018 it stood at Rs.282074 Million. It can also be observed that during the study period April 2007 to March 2018 the Bank was mostly in Group A.

6.3.1.4 Central Bank of India

The Gross and Net Non-Performing Assets or Loans of the Bank were amongst the top four for the study period i.e. April 2007 to March 2018 as can be seen from Appendix A,B,C and D.
Table 9. Gross & Net Non-Performing Assets or Loans as on March 2018

| Year | Last Year's Outstanding | Added during the year | Reduced during the year | Written-Off | Present Year | Last Year | Present Year |
|------|------------------------|-----------------------|-------------------------|-------------|--------------|-----------|--------------|
| 2017-2018 | 272513 | 170712 | 32683 | 29236 | 381307 | 142178 | 173779 |

Source: https://www.rbi.org.in

Table 10. Details of Chairman and Managing Director and Chief Executive Officer - Central Bank of India from April 2007 to March 2018

| Sl.No. | Name            | Period From To       |
|-------|-----------------|----------------------|
| 1.    | Ms. H.A. Daruwalla | June 2005 - December 2008 |
| 2.    | Mr. S. Sridharan   | March 2009 - May 2011 |
| 3.    | Mr. M.V. Tanksale  | June 2011 - July 2013 |
| 4.    | Mr. Rajeev Rishi   | 1 August 2013 - 31 August 2018 |
| 5.    | Mr. Pallav Mohapatra| September 2018 - Till Date |

It can be observed from table 9 that the Gross Non-Performing Assets or Loans during the previous year ending i.e. March 2017 was Rs.272513 Million and during the year April 2017 to March 2018 Rs.170712 Million were added. During the year the Bank had reduced Rs.32683 Million and written off Rs.29236 Million. The Gross Non-Performing Assets or Loans of the Bank at the end of March 2018 stood at Rs.381307 Million. As regards the Net Non-Performing Assets or Loans during the previous year ending was Rs.142178 Million and during the year ending March 2018 it stood at Rs.173779 Million. It can also be observed that during the study period April 2007 to March 2018 the Bank was mostly in Group A.

6.3.2 Group – B
Canara Bank and Bank of Maharashtra - were in Group B i.e. 71 – 90% (Satisfactory Performance) most of the years in Gross NPAs and Net NPAs during the period of study i.e. 2007-2008 to 2017-2018. An analysis of movement of two Banks i.e. Canara Bank and Bank of Maharashtra is studied and it is observed as below:

6.3.2.1 Canara Bank
The Gross and Net Non-Performing Assets or Loans of the Bank were fluctuated in various rankings and was mostly in Group B during the period March 2007 to April 2018, can be seen from Appendix A,B,C and D.

Table 11. Gross & Net Non-Performing Assets or Loans as on March 2018

| Year | Last Year's Outstanding | Added during the year | Reduced during the year | Written-Off | Present Year | Last Year | Present Year |
|------|------------------------|-----------------------|-------------------------|-------------|--------------|-----------|--------------|
| 2017-2018 | 342020 | 247608 | 31847 | 83097 | 474685 | 216490 | 285424 |

Source: https://www.rbi.org.in
Table 12. Details of Chairman and Managing Director and Chief Executive Officer - Canara Bank from April 2007 to March 2018

| SL No. | Name                | From       | To          |
|--------|---------------------|------------|-------------|
| 1.     | Mr. M B A Rao       | June 2005  | June 2008   |
| 2.     | Mr. A.C. Mahajan    | July 2008  | July 2010   |
| 3.     | Mr. S. Raman        | September 2010 | September 2012 |
| 4.     | Mr. R.K. Dubey      | January 2013 | September 2014 |
| 5.     | Mr. Shri D.N. Manoharan | 2014        | July 2015   |
| 6.     | Mr. Rakesh Sharma   | August 2015 | July 2018   |
| 7.     | RA Sankara Narayanan | April 2019  | January 2020 |

It can be observed from table 11 that the Gross Non-Performing Assets or Loans during the previous year ending i.e. March 2017 was Rs.342020 Million and during the year March 2017 to April 2018 Rs.247608 Million were added. During the year Bank had reduced Rs.31847 Million and written off Rs.83097 Million. The Gross Non-Performing Assets or Loans of the Bank at the end of March 2018 stood at Rs.474685 Million. As regards the Net Non-Performing Assets or Loans during the previous year ending was Rs.216490 Million and during the year ending March 2018 it stood at Rs.285424 Million. It can also be observed that during the study period April 2007 to March 2018 the Bank was mostly in Group B.

6.3.2.2 Bank of Maharashtra

The Gross and Net Non-Performing Assets or Loans of the Bank were fluctuated in various rankings and was mostly in Group B during the period April 2007 to March 2018, as can be seen from Appendix A,B,C and D.

Table 13. Gross & Net Non-Performing Loans as on March 2018

| Year       | Last Year’s Outstanding | Added during the year | Reduced during the year | Written-Off | Present Year | Last Year | Present Year |
|------------|-------------------------|-----------------------|-------------------------|-------------|--------------|-----------|--------------|
| 2017-2018  | 171887                  | 54349                 | 20300                   | 24603       | 184332       | 113312    | 96412        |

Source: http://www.rbi.org.in

Table 14. Details of Chairman and Managing Director and Chief Executive Officer - Bank of Maharashtra from April 2007 to March 2018

| SL No. | Name               | From   | To       |
|--------|--------------------|--------|----------|
| 1.     | Mr. Allen Pereira  | 2007   | 2011     |
| 2.     | Mr. Narendra Singh | February 2012 | September 2013 |
| 3.     | Mr. Sushil Muhnoot | September 2013 | September 2016 |
| 4.     | Mr. Ravindra Marathe | September 2016 | June 2018 |

It can be observed from table 13 that the Gross Non-Performing Assets or Loans during the previous year ending i.e. March 2017 was Rs.171887 Million and during the year April 2017 to March 2018 Rs.54349 Millions were added. During the year Bank had reduced Rs.20300 Million and written off Rs.24603 Million. The Gross Non-Performing Assets or Loans of the Bank at the end of March 2018 stood at Rs.184332 Million. As regards the Net Non-Performing Assets or Loans during the previous year ending was Rs.113312 Million and during the year ending March 2018 it stood at Rs.96412 Million. It can also be observed that during the study period April 2007 to March 2018 the Bank was mostly in Group B.
6.3.3 Group – C
United Bank of India and Punjab and Sind Bank - were in Group C i.e. 91 – 100% (Good Performance) most of the years in Gross Non-Performing Assets or Loans and Net Non-Performing Assets or Loans during the period of study i.e. April 2007 to March 2018. An analysis of these two Banks movement is studied and it is observed as below:

6.3.3.1 United Bank of India
The Gross and Net Non-Performing Assets or Loans of the Bank were fluctuated mostly in Group C during the period April 2007 to March 2018, as can be seen from Appendix A, B, C and D.

Table 15. Gross & Net Non-Performing Assets or Loans as on March 2018

| Year        | Last Year’s Outstanding | Added during the year | Reduced during the year | Written-Off | Present Year | Last Year | Present Year |
|-------------|-------------------------|-----------------------|-------------------------|-------------|--------------|-----------|--------------|
| 2017-2018   | 109520                  | 86063                 | 11391                   | 18669       | 165521       | 65919     | 103163       |

Source: [https://www.rbi.org.in](https://www.rbi.org.in)

Table 16. Details of Chairman and Managing Director and Chief Executive Officer - United Bank of India - From April 2007 To March 2018

| Sl.No. | Name                | Period                        |
|--------|---------------------|-------------------------------|
| 1.     | Mr. P.K.Gupta       | November 2008 - February 2010|
| 2.     | Mr. Bhaskar Sen     | March 2010 - 2013             |
| 3.     | Mrs. Archana Bhargava | April 2013 - February 2014  |
| 4.     | Mr. Peturi Srinivasan | December 2014 - June 2016   |
| 5.     | Mr. Pawan Kumar Bajaj | August 2016 - September 2018|
| 6.     | Mr. Ashok Kumar Pradhan | October 2018 - Till Date    |

It can be observed from table 15 that the Gross Non-Performing Assets or Loans during the previous year ending i.e. March 2017 was Rs.109520 Million and during the year April 2017 to March 2018 Rs. 86063 Millions were added. During the year Bank had reduced Rs.11391 Million and written off Rs.18669 Million. The Gross Non-Performing Assets or Loans of the Bank at the end of March 2018 stood at Rs.165521 Million. As regards the Net Non-Performing Assets or Loans during the previous year ending was Rs.65919 Million and during the year ending March 2018 it stood at Rs. 103163 Million. It can also be observed that during the study period April 2007 to March 2018 the Bank was mostly in Group C.

6.3.3.2 Punjab and Sind Bank
The Gross and Net Non-Performing Assets or Loans of the Bank were mostly in Group C during the period April 2007 to March 2018, as can be seen from Appendix A, B, C and D.

Table 17. Gross & Net Non-Performing Assets or Loans as on March 2018

| Year        | Last Year’s Outstanding | Added during the year | Reduced during the year | Written-Off | Present Year | Last Year | Present Year |
|-------------|-------------------------|-----------------------|-------------------------|-------------|--------------|-----------|--------------|
| 2017-2018   | 62976                   | 25918                 | 6279                    | 4598        | 78017        | 43751     | 46079        |

Source: [https://www.rbi.org.in](https://www.rbi.org.in)
Table 18. Details of Chairman and Managing Director and Chief Executive Officer - United Bank of India - From April 2007 to March 2018

| SL No. | Name                  | Period From          | Period To       |
|--------|-----------------------|----------------------|-----------------|
| 1      | Mr. S.R.P. Singh      | 2007                 | August 2009     |
| 2      | Mr. S.G.S. Vedi       | August 2009          | June 2010       |
| 3      | Mr. D.P. Singh        | November 2011        | January 2014    |
| 4      | Mr. Jatinder Singh    | February 2014        | December 2017   |
| 5      | S Harisankar          | September 2018       | Till Date       |

It can be observed from table 17 that the Gross Non-Performing Assets or Loans during the previous year ending i.e. March 2017 was Rs.62976 Million and during the year April 2017 to March 2018 Rs. 25918 Millions were added. During the year the Banks had reduced Rs. 6279 Million and written off Rs.4598 Million. The Gross Non-Performing Loans of the Bank at the end of March 2018 stood at Rs.78017 Million. As regards the Net Non-Performing Assets or Loans during the previous year ending was Rs.43751 Million and during the year ending March 2018 it stood at Rs. 46079 Million. It can also be observed that during the study period March 2007 to April 2008 the Bank was mostly in Group C.

7. Conclusion
The study of select Indian Banks for the period from April 2007 to March 2018 of all the groups together concludes that some of the Banks Net Performing Assets or Loans were very high and beyond the control of the Banks. The Banks have also been defrauded by large borrowers which have brought more strain on its assets. In some cases from the study it indicates that the performance of the Bank’s management was one of the reasons for rise in non-performing assets or loans and also it can be seen that there were no heads in respect of some Banks during the study period and it is a matter of great concern. It is therefore, concluded that there should be a strong management for better results and governance and the Regulators must also have strong supervisory control and policies put in place for better results. Since the Banks under study are formed under the law of the Government, it becomes necessary for the Government to have in place heads for all the Banks, so that decision making becomes easier and also those large borrowers who are defrauding their loans should be also strictly dealt with. It is necessary to have a sound financial and banking system to strengthen the economy of the country.

8. Limitations
Only few selected banks are analyzed. Only the government banks were taken up for study and other type of banks i.e. Private, Co-operative and Foreign are not part of study. The qualitative aspect of the banking sector and the political environment prevailing in the country is also not part of the research study. It will be therefore, interesting to study the performance and management of the Banks after another five years after the merger of government banks into 4 to 5 big banks.

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### Appendix – A

ABC Analysis of Gross Non-Performing Assets (GNPA) or Loans of select Indian Public Sector Banks for the period April 2007 to March 2018

| Name of Bank                  | 2007-2008 | Percentage of Total Gross NPA | Cumulative | Name of Bank                  | 2008-2009 | Percentage of Total Gross NPA | Cumulative | Name of Bank                  | 2009-2010 | Percentage of Total Gross NPA | Cumulative |
|-------------------------------|-----------|------------------------------|------------|-------------------------------|-----------|------------------------------|------------|-------------------------------|-----------|------------------------------|------------|
| State Bank of India           | 128373    | 33.95                        | 33.95      | State Bank of India           | 157140    | 37.19                        | 37.19      | State Bank of India           | 195349    | 34.93                        | 34.93      |
| Punjab National Bank          | 33193     | 8.78                         | 42.73      | Punjab National Bank          | 25069     | 5.93                         | 43.12      | Bank of India                 | 48827     | 8.73                         | 43.66      |
| Central Bank of India         | 23500     | 6.22                         | 48.94      | Bank of India                 | 24709     | 5.85                         | 48.97      | Indian Overseas Bank          | 36111     | 6.46                         | 50.11      |
| Bank of Baroda                | 19814     | 5.24                         | 54.18      | Central Bank of India         | 23160     | 5.48                         | 54.45      | Punjab National Bank          | 32144     | 5.75                         | 55.86      |
| Bank of India                 | 19309     | 5.11                         | 59.29      | Canara Bank                  | 21680     | 5.13                         | 59.58      | Union Bank of India           | 26709     | 4.78                         | 60.64      |
| Syndicate Bank                | 17687     | 4.68                         | 63.97      | Indian Overseas Bank          | 19234     | 4.55                         | 64.13      | Canara Bank                  | 25903     | 4.63                         | 65.27      |
| Union Bank of India           | 16566     | 4.38                         | 68.35      | Union Bank of India           | 19234     | 4.55                         | 68.68      | Central Bank of India         | 24580     | 4.39                         | 69.66      |
| UCO Bank                      | 16520     | 4.37                         | 72.72      | Bank of Baroda               | 18429     | 4.36                         | 73.04      | Bank of Baroda               | 24007     | 4.29                         | 73.96      |
| IDBI Bank                     | 15647     | 4.14                         | 76.86      | Syndicate Bank               | 15945     | 3.77                         | 76.82      | IDBI Bank                    | 21294     | 3.81                         | 77.76      |
| Oriental Bank of Commerce     | 12801     | 3.39                         | 80.24      | UCO Bank                     | 15395     | 3.64                         | 80.46      | Syndicate Bank               | 20068     | 3.59                         | 81.35      |
| Canara Bank                   | 12726     | 3.37                         | 83.61      | IDBI Bank                    | 14357     | 3.40                         | 83.86      | UCO Bank                     | 16664     | 2.98                         | 84.33      |
| Allahabad Bank                | 10105     | 2.67                         | 86.28      | Allahabad Bank               | 10783     | 2.55                         | 86.41      | Oriental Bank of Commerce    | 14688     | 2.63                         | 86.96      |
| Indian Overseas Bank          | 9970      | 2.64                         | 88.92      | Oriental Bank of Commerce    | 10581     | 2.50                         | 88.91      | United Bank of India          | 13723     | 2.45                         | 89.41      |
| Bank of Maharashtra           | 7663      | 2.03                         | 90.94      | United Bank of India         | 10200     | 2.41                         | 91.33      | Allahabad Bank               | 12218     | 2.18                         | 91.59      |
| United Bank of India          | 7610      | 2.01                         | 92.96      | Bank of Maharashtra          | 7984      | 1.89                         | 93.22      | Bank of Maharashtra           | 12098     | 2.16                         | 93.76      |
| Corporation Bank              | 5844      | 1.55                         | 94.50      | Vijaya Bank                  | 6988      | 1.65                         | 94.87      | Vijaya Bank                  | 9945      | 1.78                         | 95.54      |
| Dena Bank                     | 5726      | 1.51                         | 96.02      | Dena Bank                    | 6208      | 1.47                         | 96.34      | Corporation Bank             | 6509      | 1.16                         | 96.70      |
| Vijaya Bank                   | 5115      | 1.35                         | 97.37      | Corporation Bank             | 5592      | 1.32                         | 97.66      | Dena Bank                    | 6420      | 1.15                         | 97.85      |
| Indian Bank                   | 4869      | 1.29                         | 98.66      | Indian Bank                  | 4592      | 1.09                         | 98.75      | Indian Bank                  | 5101      | 0.91                         | 98.76      |
| Andhra Bank                   | 3724      | 0.98                         | 99.64      | Andhra Bank                  | 3681      | 0.87                         | 99.62      | Andhra Bank                  | 4879      | 0.87                         | 99.63      |
| Punjab & Sind Bank            | 1355      | 0.36                         | 100        | Punjab & Sind Bank           | 1610      | 0.38                         | 100        | Punjab & Sind Bank           | 2062      | 0.37                         | 100        |
| **TOTAL:**                    | **378117**| **100**                      |            | **TOTAL:**                   | **422571**| **100**                      |            | **TOTAL:**                   | **559299**| **100**                      |            |
| Name of Bank          | 2010-2011 | Percentage of Total Gross NPA | Cumulative | Name of Bank          | 2011-2012 | Percentage of Total Gross NPA | Cumulative | Name of Bank          | 2012-2013 | Percentage of Total Gross NPA | Cumulative |
|-----------------------|-----------|-------------------------------|------------|-----------------------|-----------|-------------------------------|------------|-----------------------|-----------|-------------------------------|------------|
| State Bank of India   | 253263    | 36.41                         | 36.41      | State Bank of India   | 396765    | 36.48                         | 36.48      | State Bank of India   | 511894    | 33.49                         | 33.49      |
| Bank of India         | 48116     | 6.92                          | 43.33      | Punjab National Bank  | 87196     | 8.02                          | 44.50      | Punjab National Bank  | 134658    | 8.81                          | 42.29      |
| Punjab National Bank  | 43794     | 6.30                          | 49.63      | Central Bank of India | 72730     | 6.69                          | 51.19      | Bank of India         | 87653     | 5.73                          | 48.03      |
| Union Bank of India   | 36228     | 5.21                          | 54.84      | Bank of India         | 58940     | 5.42                          | 56.61      | Central Bank of India | 84560     | 5.53                          | 53.56      |
| Bank of Baroda        | 31525     | 4.53                          | 59.37      | Union Bank of India   | 54499     | 5.01                          | 61.62      | Bank of Baroda        | 79826     | 5.22                          | 58.78      |
| UCO Bank              | 31504     | 4.53                          | 63.90      | IDBI Bank             | 45514     | 4.19                          | 65.80      | UCO Bank              | 71301     | 4.66                          | 63.44      |
| Indian Overseas Bank  | 30896     | 4.44                          | 68.34      | Bank of Baroda        | 44648     | 4.11                          | 69.91      | Indian Overseas Bank  | 66080     | 4.32                          | 67.77      |
| Canara Bank           | 30892     | 4.44                          | 72.79      | UCO Bank              | 40862     | 3.76                          | 73.67      | IDBI Bank             | 64500     | 4.22                          | 71.99      |
| IDBI Bank             | 27847     | 4.00                          | 76.79      | Canara Bank           | 40318     | 3.71                          | 77.37      | Union Bank of India   | 63138     | 4.13                          | 76.12      |
| Syndicate Bank        | 25990     | 3.74                          | 80.53      | Indian Overseas Bank  | 39201     | 3.60                          | 80.98      | Canara Bank           | 62602     | 4.10                          | 80.21      |
| Central Bank of India | 23940     | 3.44                          | 83.97      | Oriental Bk of Comm.  | 35805     | 3.29                          | 84.27      | Allahabad Bank        | 51370     | 3.36                          | 83.57      |
| Oriental Bank of Commerce | 19205 | 2.76                          | 86.73      | Syndicate Bank        | 31827     | 2.93                          | 87.20      | Oriental Bank of Commerce | 41840 | 2.74                          | 86.31      |
| Allahabad Bank        | 16479     | 2.37                          | 89.10      | United Bank of India  | 21764     | 2.00                          | 89.20      | Andhra Bank           | 37145     | 2.43                          | 88.74      |
| United Bank of India  | 13558     | 1.95                          | 91.05      | Allahabad Bank        | 20890     | 1.92                          | 91.12      | Indian Bank           | 35655     | 2.33                          | 91.07      |
| Vijaya Bank           | 12592     | 1.81                          | 92.86      | Indian Bank           | 18508     | 1.70                          | 92.82      | Syndicate Bank        | 29785     | 1.95                          | 93.02      |
| Bank of Maharashtra   | 11737     | 1.69                          | 94.55      | Andhra Bank           | 17980     | 1.65                          | 94.47      | United Bank of India  | 29638     | 1.94                          | 94.96      |
| Andhra Bank           | 9956      | 1.43                          | 95.98      | Vijaya Bank           | 17185     | 1.58                          | 96.05      | Corporation Bank      | 20482     | 1.34                          | 96.30      |
| Dena Bank             | 8422      | 1.21                          | 97.19      | Bank of Maharashtra   | 12970     | 1.19                          | 97.25      | Punjab & Sind Bank    | 15369     | 1.01                          | 97.30      |
| Corporation Bank      | 7902      | 1.14                          | 98.33      | Corporation Bank      | 12742     | 1.17                          | 98.42      | Vijaya Bank           | 15329     | 1.00                          | 98.31      |
| Indian Bank           | 7403      | 1.06                          | 99.39      | Dena Bank             | 9565      | 0.88                          | 99.30      | Dena Bank             | 14525     | 0.95                          | 99.26      |
| Punjab & Sind Bank    | 4243      | 0.61                          | 100        | Punjab & Sind Bank    | 7634      | 0.70                          | 100        | Bank of Maharashtra   | 11376     | 0.74                          | 100        |
| TOTAL:                | 695492    | 100                           | TOTAL:     | 1087543               | 100       | TOTAL:                        | 1528726    | 100                   |
| Name of Bank            | 2013-2014 | Percentage of Total Gross NPA | Cumulative | Name of Bank            | 2014-2015 | Percentage of Total Gross NPA | Cumulative | Name of Bank            | 2015-2016 | Percentage of Total Gross NPA | Cumulative |
|------------------------|-----------|-------------------------------|------------|------------------------|-----------|-------------------------------|------------|------------------------|-----------|-------------------------------|------------|
| State Bank of India    | 616054    | 29.47                         | 29.47      | State Bank of India    | 567253    | 22.26                         | 22.26      | State Bank of India    | 981728    | 19.02                         | 19.02      |
| Punjab National Bank   | 188801    | 9.03                          | 38.50      | Punjab National Bank   | 256949    | 10.08                         | 32.35      | Punjab National Bank   | 558183    | 10.81                         | 29.83      |
| Bank of Baroda         | 118759    | 5.68                          | 44.18      | Bank of India          | 221932    | 8.71                          | 41.06      | Bank of India          | 498791    | 9.66                          | 39.50      |
| Bank of India          | 118686    | 5.68                          | 49.86      | Bank of Baroda         | 162614    | 6.38                          | 47.44      | Bank of Baroda         | 405210    | 7.85                          | 47.35      |
| Central Bank of India  | 115000    | 5.50                          | 55.36      | Indian Overseas Bank   | 149225    | 5.86                          | 53.30      | Canara Bank            | 316378    | 6.13                          | 53.48      |
| IDBI Bank              | 99620     | 4.77                          | 60.12      | Canara Bank            | 130400    | 5.12                          | 58.42      | Indian Overseas Bank   | 300486    | 5.82                          | 59.30      |
| Union Bank of India    | 95637     | 4.57                          | 64.70      | Union Bank of India    | 130309    | 5.11                          | 63.53      | IDBI Bank              | 248751    | 4.82                          | 64.12      |
| Indian Overseas Bank   | 90205     | 4.31                          | 69.01      | IDBI Bank              | 126850    | 4.98                          | 68.51      | Union Bank of India    | 241709    | 4.68                          | 68.80      |
| Allahabad Bank         | 80680     | 3.86                          | 72.87      | Central Bank of India  | 118730    | 4.66                          | 73.17      | Central Bank of India  | 227210    | 4.40                          | 73.20      |
| Canara Bank            | 75702     | 3.62                          | 76.49      | UCO Bank               | 102651    | 4.03                          | 77.20      | UCO Bank               | 209077    | 4.05                          | 77.25      |
| United Bank of India   | 71180     | 3.40                          | 79.90      | Allahabad Bank         | 83580     | 3.28                          | 80.48      | Allahabad Bank         | 153846    | 2.98                          | 80.23      |
| UCO Bank               | 66214     | 3.17                          | 83.07      | Corporation Bank       | 71067     | 2.79                          | 83.27      | Oriental Bank of Commerce | 147017    | 2.85                          | 83.08      |
| Andhra Bank            | 58576     | 2.80                          | 85.87      | Andhra Bank            | 68765     | 2.70                          | 85.97      | Corporation Bank       | 145443    | 2.82                          | 85.90      |
| Oriental Bank of Commerce | 56179  | 2.69                          | 88.56      | United Bank of India   | 65529     | 2.57                          | 88.54      | Syndicate Bank         | 138322    | 2.68                          | 88.58      |
| Corporation Bank       | 47368     | 2.27                          | 90.82      | Syndicate Bank         | 64424     | 2.53                          | 91.07      | Andhra Bank            | 114436    | 2.22                          | 90.80      |
| Syndicate Bank         | 46111     | 2.21                          | 93.03      | Bank of Maharashtra    | 64021     | 2.51                          | 93.58      | Bank of Maharashtra    | 103859    | 2.01                          | 92.81      |
| Indian Bank            | 45622     | 2.18                          | 95.21      | Indian Bank            | 56704     | 2.23                          | 95.81      | United Bank of India   | 94710     | 1.83                          | 94.64      |
| Bank of Maharashtra    | 28599     | 1.37                          | 96.58      | Dena Bank              | 43930     | 1.72                          | 97.53      | Indian Bank            | 88270     | 1.71                          | 96.35      |
| Dena Bank              | 26160     | 1.25                          | 97.83      | Punjab & Sind Bank     | 30822     | 1.21                          | 98.74      | Dena Bank              | 85605     | 1.66                          | 98.01      |
| Punjab & Sind Bank     | 25535     | 1.22                          | 99.05      | Vijaya Bank            | 24432     | 0.96                          | 99.70      | Vijaya Bank            | 60271     | 1.17                          | 99.18      |
| Vijaya Bank            | 19859     | 0.95                          | 100        | Oriental Bank of Commerce | 7662     | 0.30                          | 100        | Punjab & Sind Bank     | 42291     | 0.82                          | 100        |
| **TOTAL:**             | **2090547** | **100**                      |            | **TOTAL:**             | **2547849** | **100**                      |            | **TOTAL:**             | **5161593** | **100**                      |            |
| Name of Bank            | 2016-2017 | Percentage of Total Gross NPA | Cumulative   | Name of Bank | 2017-2018 | Percentage of Total Gross NPA | Cumulative |
|-------------------------|-----------|------------------------------|--------------|--------------|-----------|------------------------------|------------|
| State Bank of India     | 1123430   | 18.14                        | 18.14        | State Bank of India | 2234275   | 24.95                        | 24.95      |
| Punjab National Bank    | 553705    | 8.94                         | 27.09        | Punjab National Bank | 866201    | 9.67                         | 34.62      |
| Bank of India           | 520445    | 8.40                         | 35.49        | Bank of India  | 623285    | 6.96                         | 41.58      |
| IDBI Bank               | 447526    | 7.23                         | 42.72        | Bank of Baroda | 564804    | 6.31                         | 47.88      |
| Bank of Baroda          | 427187    | 6.90                         | 49.62        | IDBI Bank     | 555883    | 6.21                         | 54.09      |
| Indian Overseas Bank    | 350983    | 5.67                         | 55.28        | Union Bank of India | 493699    | 5.51                         | 59.60      |
| Canara Bank             | 342020    | 5.52                         | 60.81        | Canara Bank   | 474685    | 5.30                         | 64.90      |
| Union Bank of India     | 337123    | 5.44                         | 66.25        | Indian Overseas Bank | 381802    | 4.26                         | 69.17      |
| Central Bank of India   | 272510    | 4.40                         | 70.65        | Central Bank of India | 381307    | 4.26                         | 73.42      |
| Oriental Bank of Commerce | 228593   | 3.69                         | 74.35        | UCO Bank      | 305499    | 3.41                         | 76.84      |
| UCO Bank                | 225410    | 3.64                         | 77.99        | Andhra Bank   | 281244    | 3.14                         | 79.98      |
| Allahabad Bank          | 206878    | 3.34                         | 81.33        | Allahabad Bank | 265628    | 2.97                         | 82.94      |
| Andhra Bank             | 176700    | 2.85                         | 84.18        | Oriental Bank of Commerce | 261336    | 2.92                         | 85.86      |
| Syndicate Bank          | 176093    | 2.84                         | 87.02        | Syndicate Bank | 257586    | 2.88                         | 88.74      |
| Bank of Maharashtra     | 171887    | 2.78                         | 89.80        | Corporation Bank | 222134    | 2.48                         | 91.22      |
| Corporation Bank        | 170452    | 2.75                         | 92.55        | Bank of Maharashtra | 184332    | 2.06                         | 93.27      |
| Dena Bank               | 126187    | 2.04                         | 94.59        | United Bank of India | 165521    | 1.85                         | 95.12      |
| United Bank of India    | 109520    | 1.77                         | 96.36        | Dena Bank     | 163614    | 1.83                         | 96.95      |
| Indian Bank             | 98651     | 1.59                         | 97.95        | Indian Bank   | 119901    | 1.34                         | 98.29      |
| Vijaya Bank             | 63818     | 1.03                         | 98.98        | Punjab & Sind Bank | 78017    | 0.87                         | 99.16      |
| Punjab & Sind Bank      | 62976     | 1.02                         | 100          | Vijaya Bank   | 75261     | 0.84                         | 100        |

**TOTAL:** 6192094 100 **TOTAL:** 8956014 100

Source: https://www.rbi.org.in and https://www.moneycontrol.com
Appendix – B
ABC Analysis of Net Non-Performing Assets (NNPAs) or Loans of Select Indian Public Sector Banks for the period April 2007 to March 2018.

| Name of Bank          | 2007-2009 | Percentage of total Net NPA | Cumulative | Name of Bank          | 2008-2009 | Percentage of total Net NPA | Cumulative | Name of Bank          | 2009-2010 | Percentage of total Net NPA | Cumulative |
|-----------------------|-----------|----------------------------|------------|-----------------------|-----------|----------------------------|------------|-----------------------|-----------|----------------------------|------------|
| State Bank of India   | 74243     | 44.32                      | 44.32      | State Bank of India   | 96774     | 48.47                      | 48.47      | State Bank of India   | 108702   | 39.27                      | 39.27      |
| UCO Bank              | 10923     | 6.52                       | 50.84      | Canara Bank           | 15073     | 7.55                       | 56.03      | Bank of India         | 22075    | 7.97                       | 47.24      |
| IDBI Bank             | 10829     | 6.46                       | 57.30      | Central Bank of India | 10630     | 5.32                       | 61.35      | Overseas Bank         | 19950    | 7.21                       | 54.45      |
| Central Bank of India | 10600     | 6.33                       | 63.63      | Indian Bank           | 9991      | 5.00                       | 66.35      | Canara Bank           | 17997    | 6.50                       | 60.95      |
| Canara Bank           | 8990      | 5.37                       | 69.00      | IDBI Bank             | 9490      | 4.75                       | 71.11      | IDBI Bank             | 14063    | 5.08                       | 66.03      |
| Punjab National Bank  | 7538      | 4.50                       | 73.50      | UCO Bank              | 8127      | 4.07                       | 75.18      | Punjab National Bank  | 9817     | 3.55                       | 69.57      |
| Syndicate Bank        | 6227      | 3.72                       | 77.22      | Syndicate Bank        | 6318      | 3.16                       | 78.34      | UCO Bank              | 9663     | 3.49                       | 73.06      |
| Bank of India         | 5920      | 3.53                       | 80.75      | Bank of India         | 6282      | 3.15                       | 81.49      | Union Bank of India   | 9653     | 3.49                       | 76.55      |
| Oriental Bank of Commerce | 5384  | 3.21                       | 83.96      | United Bank of India  | 5250      | 2.63                       | 84.12      | Syndicate Bank        | 9632     | 3.48                       | 80.03      |
| Bank of Baroda        | 4936      | 2.95                       | 86.91      | Bank of Baroda        | 4490      | 2.25                       | 86.37      | United Bank of India  | 7786     | 2.81                       | 82.84      |
| Allahabad Bank        | 3998      | 2.39                       | 89.30      | Oriental Bank of Commerce | 4424    | 2.22                       | 88.59      | Central Bank of India | 7270     | 2.63                       | 85.47      |
| Indian Overseas Bank  | 3632      | 2.17                       | 91.46      | Allahabad Bank        | 4221      | 2.11                       | 90.70      | Oriental Bank of Commerce | 7238    | 2.61                       | 88.08      |
| United Bank of India  | 3060      | 1.83                       | 93.29      | Union Bank of India   | 3259      | 1.63                       | 92.33      | Bank of Maharashtra   | 6624     | 2.39                       | 90.48      |
| Bank of Maharashtra   | 2540      | 1.52                       | 94.81      | Dena Bank             | 3134      | 1.57                       | 93.90      | Bank of Baroda        | 6023     | 2.18                       | 92.65      |
| Dena Bank             | 2154      | 1.29                       | 96.09      | Vijaya Bank           | 2923      | 1.46                       | 95.37      | Vijaya Bank           | 5818     | 2.10                       | 94.75      |
| Vijaya Bank           | 1816      | 1.08                       | 97.18      | Bank of Maharashtra   | 2719      | 1.36                       | 96.73      | Allahabad Bank        | 4702     | 1.70                       | 96.45      |
| Union Bank of India   | 1276      | 0.76                       | 97.94      | Punjab National Bank  | 2639      | 1.32                       | 98.05      | Dena Bank             | 4275     | 1.54                       | 98.00      |
| Corporation Bank      | 1269      | 0.76                       | 98.70      | Corporation Bank      | 1383      | 0.69                       | 98.74      | Corporation Bank      | 1973     | 0.71                       | 98.71      |
| Indian Bank           | 976       | 0.58                       | 99.28      | Indian Bank           | 938       | 0.47                       | 99.21      | Indian Bank           | 1449     | 0.52                       | 99.23      |
| Punjab & Sind Bank    | 670       | 0.40                       | 99.68      | Andhra Bank           | 792       | 0.40                       | 99.61      | Punjab & Sind Bank    | 1166     | 0.42                       | 99.65      |
| Andhra Bank           | 537       | 0.32                       | 100        | Punjab & Sind Bank    | 780       | 0.39                       | 100        | Andhra Bank           | 957      | 0.35                       | 100        |

TOTAL: 167518 100

TOTAL: 199637 100

TOTAL: 276833 100

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| Name of Bank                | 2010-2011 Percentage of total Net NPA | Cumulative  | Name of Bank                | 2011-2012 Percentage of total Net NPA | Cumulative  | Name of Bank                | 2012-2013 Percentage of total Net NPA | Cumulative  |
|-----------------------------|--------------------------------------|-------------|-----------------------------|--------------------------------------|-------------|-----------------------------|--------------------------------------|-------------|
| State Bank of India         | 123469                               | 36.73       | Cumulative 4                | 158189                               | 28.87       | Cumulative 6                | 219565                               | 26.20       |
| Canara Bank                 | 23299                                | 6.93        | Central Bank of India       | 46000                                | 8.40        | Punjab National Bank        | 72365                                | 8.63        |
| Punjab National Bank        | 20386                                | 6.07        | Punjab National Bank        | 44542                                | 8.13        | Bank of India               | 59473                                | 7.10        |
| Bank of India               | 19450                                | 5.79        | Bank of India               | 36564                                | 6.67        | Canara Bank                 | 52781                                | 6.30        |
| UCO Bank                    | 18246                                | 5.43        | Canara Bank                 | 33863                                | 6.18        | Central Bank of India       | 49880                                | 5.95        |
| Union Bank of India         | 18034                                | 5.37        | Union Bank of India         | 30250                                | 5.52        | Bank of Baroda              | 41920                                | 5.00        |
| IDBI Bank                   | 16779                                | 4.99        | IDBI Bank                   | 29109                                | 5.31        | Allahabad Bank              | 41268                                | 4.92        |
| Indian Overseas Bank        | 13284                                | 3.95        | Oriental Bank of Commerce   | 24590                                | 4.49        | UCO Bank                    | 40693                                | 4.86        |
| Syndicate Bank              | 10308                                | 3.07        | UCO Bank                    | 22639                                | 4.13        | Indian Overseas Bank        | 40272                                | 4.81        |
| Oriental Bank of Commerce   | 9382                                 | 2.79        | Indian Overseas Bank        | 19074                                | 3.48        | Union Bank of India         | 33534                                | 4.00        |
| Central Bank of India       | 8470                                 | 2.52        | Bank of Baroda              | 15436                                | 2.82        | IDBI Bank                   | 31004                                | 3.70        |
| Bank of Baroda              | 7909                                 | 2.35        | Indian Bank                 | 11968                                | 2.18        | Oriental Bank of Commerce   | 29027                                | 3.46        |
| United Bank of India        | 7574                                 | 2.25        | Syndicate Bank              | 11854                                | 2.16        | Andhra Bank                 | 24092                                | 2.87        |
| Vijaya Bank                 | 7412                                 | 2.21        | Allahabad Bank              | 10917                                | 1.99        | Indian Bank                 | 23843                                | 2.84        |
| Allahabad Bank              | 7364                                 | 2.19        | United Bank of India        | 10756                                | 1.96        | United Bank of India        | 19700                                | 2.35        |
| Bank of Maharashtra         | 6190                                 | 1.84        | Vijaya Bank                 | 9980                                 | 1.82        | Corporation Bank            | 14109                                | 1.68        |
| Dena Bank                   | 5490                                 | 1.63        | Corporation Bank            | 8694                                 | 1.59        | Syndicate Bank              | 11248                                | 1.34        |
| Corporation Bank            | 3977                                 | 1.18        | Andhra Bank                 | 7559                                 | 1.38        | Punjab & Sind Bank          | 11104                                | 1.32        |
| Indian Bank                 | 3970                                 | 1.18        | Dena Bank                   | 5717                                 | 1.04        | Dena Bank                   | 9172                                 | 1.09        |
| Andhra Bank                 | 2737                                 | 0.81        | Punjab & Sind Bank          | 5476                                 | 1.00        | Vijaya Bank                 | 9097                                 | 1.09        |
| Punjab & Sind Bank          | 2379                                 | 0.71        | Bank of Maharashtra         | 4696                                 | 0.86        | Bank of Maharashtra         | 3929                                 | 0.47        |
| TOTAL:                      | 336109                               | 100         | TOTAL: 547873                | 100                                  | TOTAL: 838076 | 100         |
| Name of Bank                 | 2013-2014 | Percentage of total Net NPA | Cumulative | Name of Bank                 | 2014-2015 | Percentage of total Net NPA | Cumulative | Name of Bank                 | 2015-2016 | Percentage of total Net NPA | Cumulative |
|-----------------------------|-----------|-----------------------------|------------|-----------------------------|-----------|-----------------------------|------------|-----------------------------|-----------|-----------------------------|------------|
| State Bank of India         | 310961    | 25.99                       | 25.99      | State Bank of India         | 275906    | 18.36                       | 18.36      | State Bank of India         | 558070    | 18.16                       | 18.16      |
| Punjab National Bank        | 99170     | 8.29                        | 34.28      | Punjab National Bank        | 153965    | 10.25                       | 28.61      | Punjab National Bank        | 354226    | 11.53                       | 29.69      |
| Bank of India               | 74172     | 6.20                        | 40.48      | Bank of India               | 135176    | 9.00                        | 37.60      | Bank of India               | 279964    | 9.11                        | 38.80      |
| Central Bank of India       | 66500     | 5.56                        | 46.04      | Indian Overseas Bank        | 98133     | 6.53                        | 44.13      | Canara Bank                 | 208329    | 6.78                        | 45.58      |
| Bank of Baroda              | 60348     | 5.04                        | 51.08      | Canara Bank                 | 87401     | 5.82                        | 49.95      | Bank of Baroda              | 194065    | 6.32                        | 51.89      |
| Canara Bank                 | 59655     | 4.99                        | 56.07      | Bank of Baroda              | 80695     | 5.37                        | 55.32      | Indian Overseas Bank        | 192126    | 6.25                        | 58.15      |
| Allahabad Bank              | 57218     | 4.78                        | 60.85      | Union Bank of India         | 69190     | 4.60                        | 59.93      | IDBI Bank                   | 146434    | 4.77                        | 62.91      |
| Indian Overseas Bank        | 56581     | 4.73                        | 65.58      | Central Bank of India       | 68070     | 4.53                        | 64.46      | Union Bank of India         | 140259    | 4.56                        | 67.48      |
| Union Bank of India         | 53403     | 4.46                        | 70.04      | UCO Bank                    | 63306     | 4.21                        | 68.67      | Central Bank of India       | 132420    | 4.31                        | 71.79      |
| IDBI Bank                   | 49023     | 4.10                        | 74.14      | IDBI Bank                   | 59925     | 3.99                        | 72.66      | UCO Bank                    | 114436    | 3.72                        | 75.51      |
| United Bank of India        | 46641     | 3.90                        | 78.04      | Allahabad Bank              | 59789     | 3.98                        | 76.64      | Allahabad Bank              | 102925    | 3.35                        | 78.86      |
| Oriental Bank of Commerce   | 39044     | 3.26                        | 81.30      | Oriental Bank of Commerce   | 48162     | 3.21                        | 79.84      | Oriental Bank of Commerce   | 99322     | 3.23                        | 82.09      |
| UCO Bank                    | 35564     | 2.97                        | 84.27      | Corporation Bank            | 44650     | 2.97                        | 82.81      | Corporation Bank            | 91601     | 2.98                        | 85.07      |
| Andhra Bank                 | 33425     | 2.79                        | 87.07      | Bank of Maharashtra         | 41266     | 2.75                        | 85.56      | Syndicate Bank              | 90149     | 2.93                        | 88.01      |
| Corporation Bank            | 31806     | 2.66                        | 89.73      | United Bank of India        | 40814     | 2.72                        | 88.27      | Bank of Maharashtra         | 68320     | 2.22                        | 90.23      |
| Indian Bank                 | 27637     | 2.31                        | 92.04      | Syndicate Bank              | 38437     | 2.56                        | 90.83      | United Bank of India        | 61107     | 1.99                        | 92.22      |
| Syndicate Bank              | 27206     | 2.27                        | 94.31      | Andhra Bank                 | 36886     | 2.45                        | 93.29      | Andhra Bank                 | 60357     | 1.96                        | 94.18      |
| Punjab & Sind Bank          | 19186     | 1.60                        | 95.91      | Indian Bank                 | 31470     | 2.09                        | 95.38      | Indian Bank                 | 54194     | 1.76                        | 95.95      |
| Dena Bank                   | 18189     | 1.52                        | 97.43      | Dena Bank                   | 30143     | 2.01                        | 97.39      | Dena Bank                   | 52305     | 1.70                        | 97.65      |
| Bank of Maharashtra         | 18073     | 1.51                        | 98.94      | Punjab & Sind Bank          | 22660     | 1.51                        | 98.90      | Vijaya Bank                 | 42768     | 1.39                        | 99.04      |
| Vijaya Bank                 | 12624     | 1.06                        | 100        | Vijaya Bank                 | 16597     | 1.10                        | 100        | Punjab & Sind Bank          | 29495     | 0.96                        | 100        |
| **TOTAL: 1196426**          | **100**   |                             |            | **TOTAL: 1502641**         | **100**   |                             |            | **TOTAL: 3072872**         | **100**   |                             |            |
| Name of Bank               | 2016-17 | Percentage of total Net NPA | Cumulative Net NPA | Name of Bank               | 2017-18 | Percentage of total Net NPA | Cumulative Net NPA |
|---------------------------|---------|----------------------------|--------------------|---------------------------|---------|----------------------------|--------------------|
| State Bank of India       | 582774  | 16.92                      | 16.92              | State Bank of India       | 1108547 | 24.39                      | 24.39              |
| Punjab National Bank      | 327021  | 9.50                       | 26.42              | Punjab National Bank      | 486843  | 10.71                      | 35.10              |
| Bank of India             | 253050  | 7.35                       | 33.77              | IDBI Bank                 | 286651  | 6.31                       | 41.41              |
| IDBI Bank                 | 252058  | 7.32                       | 41.08              | Canara Bank               | 285424  | 6.28                       | 47.69              |
| Canara Bank               | 216490  | 6.29                       | 47.37              | Bank of India             | 282073  | 6.21                       | 53.90              |
| Indian Overseas Bank      | 197493  | 5.73                       | 53.11              | Union Bank of India       | 243263  | 5.35                       | 59.25              |
| Union Bank of India       | 188321  | 5.47                       | 58.57              | Bank of Baroda            | 234827  | 5.17                       | 64.42              |
| Bank of Baroda            | 180802  | 5.25                       | 63.82              | Indian Overseas Bank      | 203997  | 4.49                       | 68.91              |
| Central Bank of India     | 142180  | 4.13                       | 67.95              | Central Bank of India     | 173779  | 3.82                       | 72.73              |
| Oriental Bank of Commerce | 141178  | 4.10                       | 72.05              | Oriental Bank of Commerce | 142829  | 3.14                       | 75.87              |
| Allahabad Bank            | 134335  | 3.90                       | 75.95              | UCO Bank                  | 140821  | 3.10                       | 78.97              |
| Corporation Bank          | 116922  | 3.40                       | 79.35              | Corporation Bank          | 140770  | 3.10                       | 82.07              |
| Bank of Maharashtra       | 112296  | 3.26                       | 82.61              | Syndicate Bank            | 132395  | 2.91                       | 84.98              |
| UCO Bank                  | 107034  | 3.11                       | 85.72              | Andhra Bank               | 126369  | 2.78                       | 87.76              |
| Syndicate Bank            | 104110  | 3.02                       | 88.74              | Allahabad Bank            | 122291  | 2.69                       | 90.45              |
| Andhra Bank               | 103548  | 3.01                       | 91.75              | United Bank of India      | 103163  | 2.27                       | 92.72              |
| Dena Bank                 | 77351   | 2.25                       | 93.99              | Bank of Maharashtra       | 96412   | 2.12                       | 94.85              |
| United Bank of India      | 65919   | 1.91                       | 95.91              | Dena Bank                 | 78388   | 1.72                       | 96.57              |
| Indian Bank               | 56066   | 1.63                       | 97.53              | Indian Bank               | 59596   | 1.31                       | 97.88              |
| Punjab & Sind Bank        | 43751   | 1.27                       | 98.80              | Vijaya Bank               | 50212   | 1.10                       | 98.99              |
| Vijaya Bank               | 41182   | 1.20                       | 100                | Punjab & Sind Bank        | 46079   | 1.01                       | 100                |

**TOTAL:** 3443881 100 **TOTAL:** 4544729 100.00

Source: https://www.rbi.org.in and https://www.moneycontrol.com
Appendix – C
Details of Group Ranking of select Indian Public Sector Banks as per percentage of Gross Non-Performing Assets (GNPA) or Gross Non Performing Loans (GNPLs) for the period April 2007 to March 2018 - (Groups for studying the management and governance of select Banks from the cumulative (decreasing method) i.e. Group – A - 1-70 (Poor Performance), Group – B - 71-90 (Satisfactory Performance) and Group – C - 91-100 (Good Performance).

| Group       | 2007-2008                              |
|-------------|----------------------------------------|
| Highest GNPAs | A (1-70%) (Poor Performance)           |
|             | State Bank of India, Punjab National Bank, Central Bank of India, Bank of Baroda, Bank of India, Syndicate Bank, Canara Bank. |
| Medium GNPAs | B (71-90%) (Satisfactory Performance)  |
|             | UCO Bank, IDBI Bank, Oriental Bank of Commerce, Allahabad Bank, Indian Overseas Bank, Bank of Maharashtra. |
| Lowest GNPAs | C (91-100%) (Good Performance)         |
|             | United Bank of India, Corporation Bank, Dena Bank, Vijaya Bank, Indian Bank, Andhra Bank, Punjab & Sind Bank. |

| Group       | 2008-2009                              |
|-------------|----------------------------------------|
| Highest GNPAs | A (1-70%) (Poor Performance)           |
|             | State Bank of India, Punjab National Bank, Bank of India, Central Bank of India, Canara Bank, Indian Overseas Bank, Union Bank of India. |
| Medium GNPAs | B (71-90%) (Satisfactory Performance)  |
|             | Bank of Baroda, Syndicate Bank, UCO Bank, IDBI Bank, Allahabad Bank, Oriental Bank of Commerce. |
| Lowest GNPAs | C (91-100%) (Good Performance)         |
|             | United Bank of India, Bank of Maharashtra, Vijaya Bank, Dena Bank, Corporation Bank, Indian Bank, Andhra Bank, Punjab & Sind Bank. |

| Group       | 2009-2010                              |
|-------------|----------------------------------------|
| Highest GNPAs | A (1-70%) (Poor Performance)           |
|             | State Bank of India, Bank of India, Indian Overseas Bank, Punjab National Bank, Canara Bank, Central Bank of India. |
| Medium GNPAs | B (71-90%) (Satisfactory Performance)  |
|             | Bank of Baroda, IDBI Bank, Syndicate Bank, UCO Bank, Union Bank of India, Oriental Bank of Commerce, United Bank of India. |
| Lowest GNPAs | C (91-100%) (Good Performance)         |
|             | Allahabad Bank, Bank of Maharashtra, Vijaya Bank, Corporation Bank, Dena Bank, Indian Bank, Andhra Bank, Punjab & Sind Bank. |

| Group       | 2010-2011                              |
|-------------|----------------------------------------|
| Highest GNPAs | A (1-70%) (Poor Performance)           |
|             | State Bank of India, Bank of India, Punjab National Bank, Union Bank of India, Bank of Baroda, UCO Bank, Indian Overseas Bank. |
| Medium GNPAs | B (71-90%) (Satisfactory Performance)  |
|             | Canara Bank, IDBI Bank, Central Bank of India, Oriental Bank of Commerce, Allahabad Bank. |
| Lowest GNPAs | C (91-100%) (Good Performance)         |
|             | United Bank of India, Vijaya Bank, Bank of Maharashtra, Andhra Bank, Dena Bank, Corporation Bank, Indian Bank, Punjab & Sind Bank. |

| Group       | 2011-2012                              |
|-------------|----------------------------------------|
| Highest GNPAs | A (1-70%) (Poor Performance)           |
|             | State Bank of India, Punjab National Bank, Central Bank of India, Bank of India, Union Bank of India, IDBI. |
| Group | 2012-2013 |
|-------|-----------|
| Highest GNPAs | A (1-70%) (Poor Performance) |
| UCO Bank, Canara Bank, Indian Overseas Bank, Syndicate Bank, United Bank of India. |
| Medium GNPAs | B (71-90%) (Satisfactory Performance) |
| IDBI Bank, Union Bank of India, Canara Bank, Allahabad Bank, Oriental Bank of Commerce, Andhra Bank. |
| Lowest GNPAs | C (91-100%) (Good Performance) |
| Allahabad Bank, Indian Bank, Andhra Bank, Vijaya Bank, Bank of Maharashtra, Corporation Bank, Dena Bank, Punjab & Sind Bank. |

| Group | 2013-2014 |
|-------|-----------|
| Highest GNPAs | A (1-70%) (Poor Performance) |
| State Bank of India, Punjab National Bank, Bank of India, Central Bank of India, Bank of Baroda, UCO Bank, Union Bank of India, Indian Overseas Bank. |
| Medium GNPAs | B (71-90%) (Satisfactory Performance) |
| Allahabad Bank, Canara Bank, United Bank of India, UCO Bank, Andhra Bank, Oriental Bank of Commerce, Corporation Bank. |
| Lowest GNPAs | C (91-100%) (Good Performance) |
| Indian Bank, Syndicate Bank, United Bank of India, Corporation Bank, Punjab & Sind Bank, Vijaya Bank, Dena Bank, Bank of Maharashtra. |

| Group | 2014-2015 |
|-------|-----------|
| Highest GNPAs | A (1-70%) (Poor Performance) |
| State Bank of India, Punjab National Bank, Bank of India, Central Bank of India, Bank of Baroda, Indian Overseas Bank, Canara Bank, Union Bank of India, IDBI Bank. |
| Medium GNPAs | B (71-90%) (Satisfactory Performance) |
| Central Bank of India, UCO Bank, Allahabad Bank, Corporation Bank, Andhra Bank, United Bank of India. |
| Lowest GNPAs | C (91-100%) (Good Performance) |
| Syndicate Bank, Bank of Maharashtra, Indian Bank, Dena Bank, Punjab & Sind Bank, Oriental Bank of Commerce, Vijaya Bank. |

| Group | 2015-2016 |
|-------|-----------|
| Highest GNPAs | A (1-70%) (Poor Performance) |
| State Bank of India, Punjab National Bank, Bank of India, Bank of Baroda, Canara Bank, Indian Overseas Bank, IDBI Bank, Union Bank of India. |
| Medium GNPAs | B (71-90%) (Satisfactory Performance) |
| Central Bank of India, UCO Bank, Allahabad Bank, Oriental Bank of Commerce, Corporation Bank, Syndicate Bank, Andhra Bank. |
| Lowest GNPAs | C (91-100%) (Good Performance) |
| Bank of Maharashtra, United Bank of India, Indian Bank, Dena Bank, Punjab & Sind Bank. |

| Group | 2016-2017 |
|-------|-----------|
| Highest GNPAs | A (1-70%) (Poor Performance) |
| State Bank of India, Punjab National Bank, Bank of India, Indian Overseas Bank, Canara Bank, Union Bank of India, Central Bank of India. |
| Medium GNPAs | B (71-90%) (Satisfactory Performance) |
| Oriental Bank of Commerce, UCO Bank, Allahabad Bank, Andhra Bank, Syndicate Bank, Bank of Maharashtra. |
| Group          | Lowest GNPAs          | Highest GNPAs        | Medium GNPAs            | Lowest GNPAs          |
|---------------|-----------------------|----------------------|-------------------------|-----------------------|
| 2017-2018     | Corporation Bank, Dena Bank, United Bank of India, Indian Bank, Vijaya Bank, Punjab & Sind Bank. | State Bank of India, Punjab National Bank, Bank of India, Bank of Baroda, IDBI Bank, Union Bank of India, Canara Bank and Indian Overseas Bank. | Central Bank of India, UCO Bank, Andhra Bank, Allahabad Bank, Oriental Bank of Commerce, Syndicate Bank. | Corporation Bank, Bank of Maharashtra, Dena Bank, Indian Bank, Punjab & Sind Bank, Vijaya Bank. |

**Appendix – D**

Details of Group Ranking of select Indian Public Sector Banks as per percentage of Net Non-Performing Assets (NNPA) or Net Non-Performing Loans (NNPLs) for the period April 2007 to March 2018 - (Groups for studying the management and governance of select Banks from the cumulative (decreasing method) i.e. Group – A - 1-70 (Poor Performance), Group – B - 71-90 (Satisfactory Performance) and Group – C - 91-100 (Good Performance).
| Group          | Year           | Highest NNPAs | Performance | Banks                                                                 |
|---------------|----------------|---------------|-------------|----------------------------------------------------------------------|
|               | 2011-2012      | A (1-70%)     | Poor        | State Bank of India, Central Bank of India, Punjab National Bank, Bank of India, Canara Bank, UCO Bank, Andhra Bank, Punjab & Sind Bank, Vijaya Bank. |
| Medium NNPAs  |                | B (71-90%)    | Satisfactory | IDBI Bank, Union Bank of India, Oriental Bank of Commerce, Corporation Bank, Bank of Maharashtra, United Bank of India, Vijaya Bank. |
| Lowest NNPAs  |                | C (91-100%)   | Good        | Allahabad Bank, Bank of Baroda, Dena Bank, Corporation Bank, Indian Bank, Andhra Bank, Punjab & Sind Bank. |
|               | 2012-2013      | A (1-70%)     | Poor        | State Bank of India, Punjab National Bank, Bank of India, Canara Bank, Central Bank of India, Bank of Baroda, Allahabad Bank, UCO Bank. |
| Medium NNPAs  |                | B (71-90%)    | Satisfactory |IDBI Bank, United Bank of India, Oriental Bank of Commerce, Corporation Bank. |
| Lowest NNPAs  |                | C (91-100%)   | Good        | United Bank of India, Corporation Bank, Syndicate Bank, Punjab & Sind Bank, Dena Bank, Vijaya Bank. |
|               | 2013-2014      | A (1-70%)     | Poor        | State Bank of India, Punjab National Bank, Bank of India, Canara Bank, Central Bank of India, Bank of Baroda, Allahabad Bank, UCO Bank. |
| Medium NNPAs  |                | B (71-90%)    | Satisfactory |IDBI Bank, United Bank of India, Oriental Bank of Commerce, Corporation Bank. |
| Lowest NNPAs  |                | C (91-100%)   | Good        | Indian Bank, Syndicate Bank, Punjab & Sind Bank, Dena Bank, Bank of Maharashtra, Vijaya Bank. |
|               | 2014-2015      | A (1-70%)     | Poor        | State Bank of India, Punjab National Bank, Bank of India, Indian Overseas Bank, Canara Bank, Bank of Baroda, Union Bank of India, UCO Bank. |
| Medium NNPAs  |                | B (71-90%)    | Satisfactory |IDBI Bank, Allahabad Bank, United Bank of India, Union Bank of India. |
| Lowest NNPAs  |                | C (91-100%)   | Good        | Andhra Bank, Indian Bank, Dena Bank, Punjab & Sind Bank, Vijaya Bank. |
|               | 2015-2016      | A (1-70%)     | Poor        | State Bank of India, Punjab National Bank, Bank of India, Canara Bank, Bank of Baroda, Indian Overseas Bank, IDBI Bank, Union Bank of India. |
| Group | Medium NNPAs | Lowest NNPAs | Highest NNPAs |
|-------|-------------|--------------|---------------|
| 2016-2017 | B (71-90%) (Satisfactory Performance) | C (91-100%) (Good Performance) | A (1-70%) (Poor Performance) |
| 2017-2018 | B (71-90%) (Satisfactory Performance) | C (91-100%) (Good Performance) | A (1-70%) (Poor Performance) |

Medium NNPAs: B (71-90%) (Satisfactory Performance) Central Bank of India, UCO Bank, Allahabad Bank, Oriental Bank of Commerce, Corporation Bank, Syndicate Bank, Bank of Maharashtra.

Lowest NNPAs: C (91-100%) (Good Performance) United Bank of India, Andhra Bank, Indian Bank, Dena Bank, Vijaya Bank, Punjab & Sind Bank.

Highest NNPAs: A (1-70%) (Poor Performance) State Bank of India, Punjab National Bank, Bank of India, IDBI Bank, Canara Bank, Indian Overseas Bank, Union Bank of India, Bank of Baroda, Central Bank of India.

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