

## **TREND AND OCCURRENCES OF NPA ON NIFTY INDEXED BANKS IN INDIA**

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### **ABSTRACT**

The banking institution is one of the most significant financial intermediaries in any economy. NPA is one of the factor which is affecting the performance of banks in India. This study attempts to find out the trend and occurrences of Non-Performing Assets of Nifty indexed banks in India. The researcher has developed two hypotheses and these are studied with the help of correlation and T-test. There are a total of 12 banks which makes Nifty Bank Index as on 01/07/2018 and only 11 banks were considered for the study. This study is focusing on post-recession period which covers the period of 2008-2018. The result shows that out of 11 banks, 10 banks shows a significant strong positive relationship between Net NPA and Total Assets (all Sig. vales are less than 0.05) and only one bank shows a negative relationship is not significant with a Sig value of more than 0.05. The NNPA's Signiant change depends on the bank's management abilities. The result also shows that PNB has the highest levels of NPA while Yes Bank has the lowest among the banks. In general, the study shows that the trend of NNPA to total assets is increasing. Measures such as the principles of safety, liquidity and profitability etc. has been suggested in order to reduce NPAs in the banking sector.

**Keywords:** NPA, NNPA, Total Assets, Nifty Indexed Banks

### **1. INTRODUCTION**

The banking institution is one of the pillars to any economy. Its main purpose is to allocate funds from the areas of surplus to the areas of deficit. It also helps to get small amounts of deposits from individual small depositors and lend them in large amounts for productive purposes which in turn helps in economic growth. Banks also acts as the lubricant for the functioning of any financial industry, which means failure of such sector will affect the whole world, for example, the Global economic crisis of 2008, which affected the whole world (Crotty, 2009). In a nutshell, banks are the lifeblood of any economy (Elio Lannuzzi, 2010).

The financial reports of any bank shows different types of assets. Such assets consist of cash in hand and with other banks, call at money and short notice, fixed assets, investments, advances, loans etc. The performance of any bank depends mainly on these assets, however these assets can be performing or non-performing (Francis, 1998). When assets become Non-performing it means that there is no income which is realized from them. When assets still generate income which is expected from them and normal commercial risk is the only risk associated with it, then it is referred to as a performing asset (Miyan, 2017).

The concept of Non-Performing Assets arises mainly from investments and loans. Lending process involves risk of default which affects the bank's credit cycle (Jayanthi, 2015). When customers default in payment of their loans or when a bank made a wrong choice of its customers, the loans become non-performing assets. Despite the introduction of different policies and practices in the banking sector, NPA remains a challenge in banking sector (Zhanna Mingaleva, 2014).

Investment decision mainly depends on credit ratings of any company or country. If a bank has a high NPA value, it leads to a lower credit rating. This means it will affect its ability and power to raise new fresh capital, lowering its credibility and affecting its goodwill and brand image. If this happens, the depositors will choose to deposit their money in other banks, which affects the credit cycle and both current and future profits of a bank (Chatterjee, 2012).

The problem of NPA is also causing banks to incur other costs because banks won't have liquidity with them since their money will be blocked and causes them to borrow from other banks which requires them to pay interest. Operation of a bank will also be affected by the liquidity problem. Managerial skills are required to manage NPA in banks in order to reduce this problem (Singla D. S., 2014)

In general, asset means anything that can generate revenue. Asset can be physical asset or financial asset. Non-performing assets are those assets which ceases to generate profits/revenue for a specific period of time. It is very difficult for any bank to have zero amount of NPAs but NNPA should always be closer to zero, the negative NNPA is highly favorable (Singh A. , 2013). This income can be in the form of interest or instalment of principle amount which remain due for a specific time frame. When a customer fails to meet his obligations for a period of 90 days, then the asset will be called as a non-performing asset. In banking sector, or according to RBI, NPAs are categorized into 3 types which are sub-standard assets, doubtful assets and the loss assets (Daru, 2016).

NPAs can Gross Non-Performing Assets (GNPA) or Net Non-Performing Assets (NNPA). GNPA is the aggregate amount outstanding in the customer's account on the balance sheet date. This also includes interest which is not yet debited from the customer's account but has been

recorded already. It includes the total of all assets which are classified as non-performing assets as per the Reserve Bank of India guidelines. NNPA is Gross NPA less all the provision left aside by the bank. Since there is a possibility that bad debts might happen, banks have to create a provision for bad debts. In a healthy situation, all the banks NNPA should always be close to zero, if it becomes negative then it is a very good sign that the management of NPA is properly carried out by the management. GNPA and NNPA can be expressed as a percentage by considering the total assets/lending done during the financial year (Kumar, 2014).

All banks have made mandatory to categorize their assets into four major classes according to their performance and how long the asset remain outstanding. Out of these four, standard assets are considered to be performing assets and the rest are considered as NPAs(RBI, 2001). These categories are; Standard assets, Sub-standard assets, Doubtful assets, and Loss assets

Standard Assets are those assets which does not reveal any risk of evasion by the customer, this means it carries only a standard business risk and no such other risks. Such an asset is not an NPA (Kumar, 2014). Before March 2001, a sub-standard asset was the one which does not exceed two years but however, after March 2001 it was reduced to a period of less than or equal to 18 months(DAVE, 2016). In other words, these assets are well defined with credit weaknesses and characterized by the probability that a bank will incur some losses if measures are not implemented (RBI, 2001). From March 2001 onwards, a doubtful asset is the one which remains due for a period of more than 18 months. These assets include all the weaknesses of sub-standard assets with extra features that it is doubtful to collect or liquidate it in full based on the known current facts, it is highly questionable as compared to sub-standard assets (RBI, 2001).

Loss assets are those assets where loss has been identified by the bank or by the external or internal auditors or by the RBI inspection. If the debt remain outstanding for a period of 36 months is treated as a loss asset, which means the bank will not be able to collect such any income from such assets. These assets should always be written off and the concept of provisioning is to address such assets. The poor the asset, the higher the provision amount which means provision on loss assets should be made 100% (DAVE, 2016).

### **Factors that contributes to NPA**

NPA in India has been seen as one of the threat in banking sector. This problem is caused by both internal and external factors. Internal factors are those factors within the bank (inside) and the external factors are those factors from external environment(outside). Internal factors include; diversion of resources for modification or development projects, less satisfaction on the credit worthiness of the customers, noncompliance with the lending norms, shortage of documents, disproportionate overdraft lending.

However, the external factors that leads to NPA consist of recession in the economy or world at large like that of 2008, exchange rates instabilities, inflation, natural catastrophes and accidents and changes in the government guidelines like those relating to trade activities and loan waiver schemes.

## **2. LITERATURE REVIEW**

A lot of studies has been done in the area of Non-Performing Assets(loans) in India and world at large. Research articles and a lot of books in banking sector has been written to understand and solve this problem. Though research has been done, both domestic and foreign banks are still suffering from NPAs, this shows that there is something lacking. Public banks have more NPA values as compared to private and foreign banks but however there is no evidence for such (Sharma, 2015). Among the different classification of Non-performing assets, loss assets has a significant impact on GNPA's of all the scheduled commercial banks in India (Thangavelu., 2014) (Kamra, 2013). This problem can only be resolved by the strengthening of the bank's credit appraisal process. The increase in NPA shows the need for provisions which will then negatively affect the overall profitability of the public sector banks (Singh A. , 2013). This difference between public and private sector banks is because, the private banks are practicing a secured loan policy as compared to public banks (Rengarajan, 2016).

Public sector banks in India are not able to sustain the competition which is brought in by the new entry of both private and foreign banks. This new entry causes a lot of challenges to the public sector banks. Private sector banks have been improving due to the decline in the NPA ratios which was brought in by the proper recovery management of bank loans (Nancy Arora, 2014), this means that the public sector banks should improve their loan recovery measures. It is proven that many public sector banks are suffering from NPAs from Agriculture, small scale industries and priority sectors (Vadivalagan, 2013), in and around India. Whenever a public bank is giving loans, they have to access the borrower properly so as to avoid the defaults in loan payments and increase in provisions.

The problem of NPA is affecting bank's performance and profitability around the world but however, NPAs are also affecting the borrowers because it is hindering credit expansion to productive purposes which in turn affect the economy at large (Singh, 2014). This means that the problem is not affecting only public banks but all scheduled banks and the economy at large. For the period of 2003-2013, SBI has reported more NPAs than PNB, ICICI and HDFC (Sharma, 2014).

It is proven that there is a positive relationship between total advances, net profit and NPA. The increase in profits is caused by other investments of the banks and the increase in NPA is due to the wrong choice of the clients by the banks. Though the profitability of the banks increases, and

NPA also increases however, there is an adverse effect on the liquidity of the banks (Singla S. N., 2014). However, low NPA increases profits together with liquidity and helps in building a brand name and cycling of banking system, this means banks are supposed to strengthen their credit evaluation norms (Laveena, 2016). Due to increase in NPA, banks will not be able to give loans to new customers because they won't have liquid cash with them. There is a need to develop a specialized skill in the area of monitoring, recovery and appraisal of loans in banks in order to ensure the quality of credit portfolio and all the relevant information should be collected from the borrowers (Daru M. U., 2016).

The impact of NPA on equity market capitalization has been decreasing since the financial crisis, however this decrease is not necessarily because of the proper management of NPA but there is a mismatch between the market results and the year end (Deva Dutta Dubey, 2015). NPA's impact on share prices cannot be used in investment decision because there are other criteria to be looked at, NPA can only be used as a catalyst in investment decisions (Madhvi, 2017).

Earlier research has shown that a nation with a larger population or higher GDP tend to have more advances which in turn result in higher amounts of NPA (Mahesh, 2010). So it is very important to consider the proportionate of NPA to total assets in a given financial year. More so, NPA in priority sector especially SSI's remain higher than that of non-priority sectors (Mahesh, 2010).

In reality, weak banks in terms of profitability and low liquidity ratios tend to smokescreen their real GNPA as compared to others. The true position of Indian non-performing assets is relatively worse than that which is shown in the previous studies (Rishi, 2007). There is a need to implement international standards for the disclosure of any bad assets and credit risk in order to improve the quality of the banks in India. More than half of the NPAs in Public sector banks are from priority sector, that's why these banks tend to have more NPA than private and foreign banks (Shajahan, 1998).

### **3. RESEARCH PROBLEM**

The country's economic fitness depends on the performance and the efficiency of banks in an economy. The banking system reforms such as Basel Norms in India was introduced to reduce NPA levels thereby improving the performance and increasing the profitability of banks, despite these efforts, NPA remains a major problem in banking sector. This study tries to analyze the trend and occurrence of NPA for all Nifty indexed banks. The study also examines the significant change in NNPA during the study period and the relationship between total assets and NNPA.

### **4. OBJECTIVES**

1. To analyze the trend and occurrences of NPAs to total assets of Nifty indexed banks.
2. To compare the levels of NPAs across selected banks.
3. To suggest the measures to reduce NPA in banking sector.

## **5. HYPOTHESES**

H<sub>01</sub>: There is no significant change in NNPA of Nifty Indexed Banks.

H<sub>11</sub>: There is a significant change in NNPA of Nifty Indexed Banks.

H<sub>02</sub>: There is no significant relationship between total assets and NNPA of Nifty Indexed Banks.

H<sub>12</sub>: There is a significant relationship between total assets and NNPA of Nifty Indexed Banks.

## **6. RESEARCH METHODOLOGY**

The rant explains the period of study, sample size, database, the statistical tool, and the development and the testing of hypotheses for the study. The study is based on the secondary data collected from the CMIE (Center for Monitoring Indian Economy) Prowess database. The research aims to analyze the trend and occurrences of NPA of those banks on Nifty Bank Index. Nifty Bank Index is an index which consists of 12 utmost liquid and large capitalized stocks from the banking sector which are listed on the National Stock Exchange (NSE). This index provides all the users of financial statistics with a standard that captures the capital market performance of Indian Banking Sector.

### **6.1 Sample selection and study period.**

As on 01/07/2018, there were 12 banks listed on Nifty Bank Index of which, 11 banks are considered for this study. The 11 banks are Axis Bank Ltd, Bank of Baroda, Federal Bank Ltd, HDFC Bank Ltd, ICICI Bank Ltd, IDFC Bank Ltd, Indusland Bank, Kotak Mahindra Bank Ltd, Punjab National Bank, RBL Bank Ltd, State Bank of India and Yes Bank Ltd. The 12<sup>th</sup> bank (HDFC) has been excluded from the study because it was recently established and the data is not available to cover the study period.

The period of the study ranges from 2008-2018, that is a period of 11 years. The study is mainly focusing on post-recession period. The technique of the selection was based on listed and indexed on Nifty.

### **6.2 Techniques of Data Analysis**

The data collected, relating to the study was analyzed by using SPSS (Statistical Package for Social Sciences) version 20. The technique applied here is correlation and T-test, the significance of the co-efficient was tested at 95% confidence level. The trend was also shown in the form of

graph and the descriptive statistics were also applied. In order to compare the levels of NPA among banks, mean and standard deviation was used.

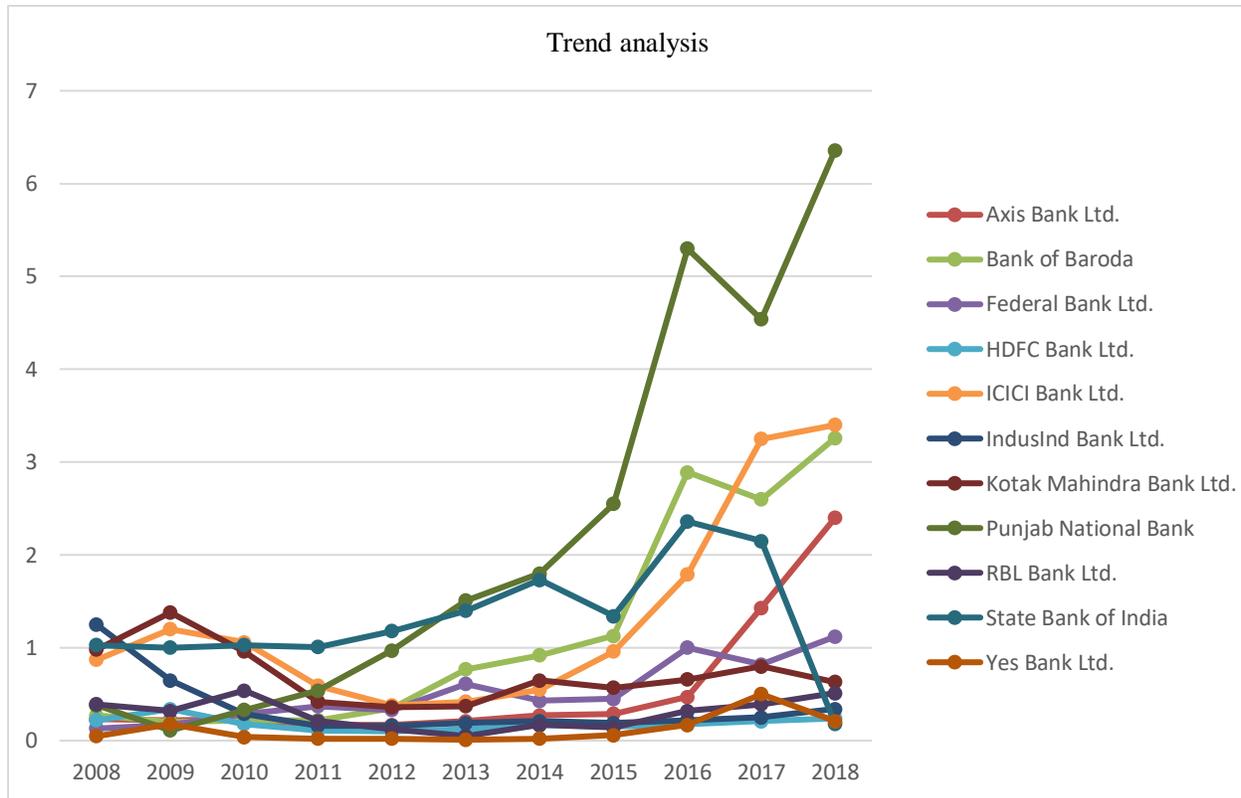
## 7. RESULTS AND DISCUSSION

The table 1. below show the percentages of NNPA to Total Assets

Year	Axis Bank Ltd.	Bank of Baroda	Federal Bank Ltd.	HDFC Bank Ltd.	ICICI Bank Ltd.	IndusInd Bank Ltd.	Kotak Mahindra Bank Ltd.	Punjab National Bank	RBL Bank Ltd.	State Bank of India	Yes, Bank Ltd.
2008	0.23	0.27	0.13	0.22	0.87	1.25	0.98	0.38	0.39	1.03	0.05
2009	0.22	0.20	0.17	0.34	1.20	0.65	1.38	0.11	0.32	1.00	0.18
2010	0.23	0.22	0.29	0.18	1.06	0.29	0.96	0.33	0.54	1.03	0.04
2011	0.17	0.22	0.37	0.11	0.59	0.16	0.42	0.54	0.21	1.01	0.02
2012	0.17	0.35	0.33	0.10	0.38	0.16	0.36	0.97	0.12	1.18	0.02
2013	0.21	0.77	0.61	0.12	0.42	0.19	0.37	1.51	0.05	1.40	0.01
2014	0.27	0.92	0.43	0.17	0.55	0.21	0.65	1.80	0.17	1.73	0.02
2015	0.29	1.13	0.45	0.15	0.96	0.19	0.57	2.55	0.14	1.34	0.06
2016	0.47	2.89	1.00	0.18	1.79	0.22	0.66	5.30	0.32	2.36	0.17
2017	1.43	2.60	0.82	0.21	3.25	0.25	0.80	4.54	0.39	2.15	0.50
2018	2.40	3.26	1.12	0.24	3.40	0.34	0.63	6.36	0.51	0.18	0.21

The table 1 above shows the percentages of Net Non-Performing Assets to Total Assets. This was done to find the real trend of Net Non-Performing Assets to Total Assets during the study period. Since it is generally believed that the value of NPA mainly depends on the value of total assets, hence the percentage of NNPA to total assets will show a better picture. this table also shows the occupancies of NPA which can be clearly seen in the graph below.

Figure 1: bellow shows the trend analysis of the banks under study



The graph above shows the trend analysis of the banks; it can be clearly seen that the trend of Punjab National Bank's NPA is very high as compared to other banks. This means that PNB is experiencing high levels of NPA as compared to other banks under study. There is a possibility that this bank may continue to suffer from NPA in the future. Previously, State Bank of India shows an increasing trend as compared to other banks but from 2017 it sharply decreases. Though there are ups and downs, Bank of Baroda shows an increasing trend during the study period. From 2008 to 2012, ICICI was showing a decreasing trend but from 2012 the trend started increasing till date. Axis Bank shows a stable trend till 2015, and it started increasing sharply till date. All other banks are shows a steady trend during the study period, which means there are only experiencing normal fluctuations in NPA as shown above.

**The table 2. below shows the descriptive statistics**

	<b>Axis Bank Ltd</b>	<b>Bank of Baroda</b>	<b>Federal Bank Ltd</b>	<b>HDFC Bank Ltd</b>	<b>ICICI Bank Ltd</b>	<b>Indusland Bank Ltd</b>	<b>Kotak Mahindra Bank Ltd</b>	<b>PNB</b>	<b>RBL Bank Ltd</b>	<b>SBI</b>	<b>Yes Bank Ltd</b>
Valid	11	11	11	11	11	11	11	11	11	11	11
Missing	0	0	0	0	0	0	0	0	0	0	0
Mean	.5536	1.1664	.5200	.1836	1.3155	.3555	.7073	2.2173	.2873	1.3100	.1164
Std. Deviation	.71185	1.17574	.32979	.06889	1.07264	.32761	.30767	2.20437	.16199	.60251	.14678

Using the table 2 above, from mean values we can understand that PNB has highest levels of NPA to Total assets, followed by ICICI, SBI, Bank of Baroda, Kotak Mahindra Bank, Axis Bank, Federal Bank, Indusland Bank, RBL Bank, HDFC Bank and Yes Bank respectively. According to this result, Yes Bank is having very less NPAs to its total assets, this shows how good the bank is in managing its amount of NPAs.

On the other hand, standard deviation, helps us to understand the bank which have high fluctuations in NPAs across the study period. Some banks might have high amounts of NPAs across the study period but very low fluctuations. PNB is showing higher fluctuations in NPAs followed by Bank of Baroda, ICICI, Axis Bank, SBI, Federal Bank, Kotak Mahindra Bank, Indusland Bank, RBL Bank, Yes Bank and HDFC Bank respectively. The result shows that Yes Bank, HDFC Bank and RBL are doing relatively better as compared to other selected banks.

**Table 3 below show a Hypothesis testing of change in NPA**

<b>BANK NAME</b>	<b>Sig. Value</b>	<b>Decision</b>
Axis Bank Ltd.	0.084	Accept Null hypothesis
Bank of Baroda	0.016	Reject Null hypothesis
Federal Bank Ltd.	0.236	Accept Null hypothesis
HDFC Bank	0.002	Reject Null hypothesis
ICICI Bank	0.235	Accept Null hypothesis
Indusland Bank Ltd.	0.221	Accept Null hypothesis
Kotak Mahindra Bank	0.003	Reject Null hypothesis
Panjab National Bank	0.241	Accept Null hypothesis
RBL	0.044	Reject Null hypothesis
State Bank of India	0.006	Reject Null hypothesis
Yes Bank	0.095	Accept Null hypothesis

The table 3 above shows the hypothesis testing to see if there is any significant change in the Net Performing Assets of the selected banks during the study period. It can be understood that from the table above some banks have significant change and others do not have. One sample T-test was used to analyze the data, the significance of the co-efficient was tested at 95% confidence level.

On the table 3 above, the significant values of Axis Bank Ltd, Federal Bank Ltd, ICICI Bank Ltd, Indusland bank Ltd, Panjab National Bank and Yes Bank Ltd are more than 0.05, we accept Null hypothesis which means there is no significant change in Net NPA of these banks during the study period. Out of 11 banks, 6 supported null hypothesis.

The significant values of Bank of Baroda, HDFC Bank, Kotak Mahindra Bank, RBL Bank and State Bank of India are less than 0.05, we fail to accept null hypothesis (reject null hypothesis) which means we accept an alternative hypothesis which states that there is significant change in Net NPA of these banks during the study period. Out of 11 banks, 5 supported an alternative hypothesis.

**Table 4 below shows a hypotheses testing of the relationship between NNPA and Total Assets**

<b>BANK NAME</b>	<b>CORRELATION</b>	<b>Sig. Value</b>	<b>Decision</b>
Axis Bank Ltd.	0.791	0.004	Reject Null hypothesis
Bank of Baroda	0.789	0.004	Reject Null hypothesis
Federal Bank Ltd.	0.946	0.001	Reject Null hypothesis
HDFC Bank Ltd.	0.946	0.001	Reject Null hypothesis
ICICI Bank Ltd.	0.998	0.001	Reject Null hypothesis
Indusland Bank Ltd.	0.999	0.001	Reject Null hypothesis
Kotak Mahindra Bank Ltd.	0.957	0.001	Reject Null hypothesis
Panjab National Bank	0.999	0.001	Reject Null hypothesis
RBL	-0.057	0.867	Accept Null hypothesis
State Bank of India	0.957	0.001	Reject Null hypothesis
Yes Bank Ltd	0.897	0.001	Reject Null hypothesis

The table 4 above table shows the hypothesis testing to see if there is any significant relationship between Total Assets and Net NPA of selected banks during the study period. Correlation was used to prove/disprove this hypothesis, and the significance of the co-efficient was tested at 95% confidence level.

As we can see from the 4 table above, there is strong positive correlation between Total Assets and Net NPA of Axis Bank, Bank of Baroda, Federal Bank, HDFC Bank, ICICI Bank, Indusland Bank, Kotak Mahindra Bank, Panjab National Bank, State Bank of India and Yes Bank. This is shown by a positive co-efficient value of more than 0.8 among all these banks. This positive relationship is also significant, because the sig. values among these banks are less than 0.05, hence we fail to accept the Null hypothesis (reject) and accept the alternative hypothesis which states there is a significant relationship between Total assets and NNPA.

RBL is the only bank with a negative correlation between Total Assets and Net NPA which is shown by the figure -0.057, this means when total assets increases, Net NPA is decreasing. This negative relationship is not significant because the sig. value is 0.867 which is more than 0.05 hence we accept the Null hypothesis which states that there is no significant relationship between Total Assets and NNPA.

Based on these results, 10 banks out of 11 shows a strong positive significant relationship between Net NPA and Total Assets, which means we can strongly state that there is a positive relationship between Net Non-Performing Assets and Total Assets of the banks. As total assets(loan) increase, NPAs will also increase despite the sector which the bank belongs.

## **8. MEASURES TO REDUCE NPA IN BANKING SECTOR**

Before arriving at the suggestions, we should ask ourselves the question, what causes NPA or why NPA exist? An asset becomes a non-performing when a borrower fails to pay the amount of interest or principal due to the lender on the specified duration. Then the next question will be, why these borrowers are not paying their dues? In my understanding, they may perhaps be only two reasons why customers are not paying their dues, one is that the customer does not want to pay (willful defaulters) and the second one is that the borrowers are not able to pay the dues.

At first, when we talk about willful defaulters, another question comes into my mind, why some customers do not pay their dues even though they have the ability to do so? There might be several reasons for that but in this paper, we consider two major reasons; weak legal system and worsening credit discipline. Some customers are deliberately taking advantage of the legal system which is weak. Thus the lawmakers and the judiciary should strengthen the laws on the banking sector. More so, the debt waivers which government announces also makes the borrowers not to make the loan payments on time.

Since some of the borrowers are not paying their dues unwillingly, an appropriate SWOT (Strength, Weaknesses, Opportunities, and Threats) analysis of a customer (borrower) should be done rigorously before giving the loan, with the help of market intelligence to decide the borrower's credibility. This helps the banks to give loans to only those borrowers who are capable of repaying their dues on time. This also means that the funds will be utilized productively which will help the economy at large. The lenders should guarantee the integrity of the borrower.

The lenders should find out the reason or the purpose for which the loan is required. The original cause to take such loan is very important especially when it comes to repayment of dues. The bank should know its customer/borrower very well before giving the loan, including the scrutinizing of his/her net worth/wealth.

They have to be a reasonable policy document when it comes to loan disbursement which is fair and the same for all borrowers. More emphasis should be given on reduction of Gross Non-Performing Assets than Net Non-Performing Assets. A committee should be constituted at the Head Office, to review the irregular accounts and bank officials should always visit the borrower's units, plants or homes to assess the physical conditions of assets. The banks can also

create a separate recovery department with special recovery officers with the required skills and knowledge. Apart from being in a good condition, the banks must make sure that the assets are fully insured so that if something happens, the bank will be able to recover something.

While giving loans, three principles must be adhered to, these are; safety principle, liquidity principle and the principle of profitability. They must also insure that the borrower is using the latest technologies in order to avoid obsolescence which might cause the borrower to go out of business or to incur huge losses.

Since the research shows that the public sector banks are suffering from higher amounts of NPA which are mainly from priority sector, banks should emphasize more and put more effort on priority sector to cut the amount of NPA. The recovery competition system should be implemented among the staff members, and the one who recovers the highest amount must be facilitated.

According to the researcher's opinion, there is a need to separate the willful and non-willful defaulters though it is very hard to do so. On willful defaulters, the law should be harsher than on non-willful defaulters. Moreover, the recovery process seems to be very slow. The government needs to update the recovery of NPA which is faster and effective.

In conclusion, banks should apply all acts so that NPA will be converted to performing assets. Banks should not forget to do ethical business, the business of any bank is to do an ethical banking business and if banks follow ethical business, NPA will be at its minimal.

## **9. CONCLUSION**

Based on the study above, we can understand that after recession period in 2008, NPA was on a decreasing trend till 2012, except for Bank of Baroda, PNB, and SBI. From the year 2012, the trend started to increase for all banks, and this shows that NPA is a problem which needs immediate attention. Since this study did not separate public banks from private banks, the result clearly shows that private banks are having relatively low levels of NPA compared to public banks. PNB, Bank of Baroda and SBI are the only public sector banks on Nifty Bank Index. SBI shows a sharp decrease in the trend of NPA from 2017 to 2018 which we can proudly say it is because of the merger between SBI and all its associates. However, while testing our first hypothesis, which says there is no significant change in NNPA during the study period proves that the change in Net NPA does not necessarily depends on the sector in which the bank belongs. Based on the trend analysis, if the RBI and all banks don't take initiatives, the banking sector will still suffer from NPA in the future because the trend is increasing. Moreover, NPAs of any bank depends on its total assets, which means when Total Assets (loans) increases, NPAs

will also tend to increase and the opposite is true with the decrease, which means there is a positive relationship between the two.

## **10. LIMITATIONS AND AREA FOR FURTHER STUDY**

The study is only limited to a period of 11 years and also it is only focusing on post-recession period ignoring pre-recession period. Though Nifty bank index consist of 12 banks as on 01/07/2018, the study only considers a total of 11 banks because IDFC Bank Ltd started only in 2015, so it is not included in this study because of unavailability of information from 2008 to 2015.

The future studies can be done as a comparative study on pre and post-recession period. This can be done including all banks in the country to have a clear picture on the occurrences of NPA in the country. Another study can also be done to analyze the relationship between NPA, Profits and Provisions because there is no clear understanding between these variables.

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