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The Impact of Demonetisation on Non-Performing Assets of Public Sector Banks of India: A Comparative Study

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➤ **Abstract:** The demonetization was announced by the Hon'ble Prime Minister at 8 pm on November 8, 2016 and he was informed that Rs. 500 and Rs. 1000 notes will be closed. This means that the legal existence of 500- and 1000-rupee notes will come to an end. The demonetization had a profound effect on the people and as a result retailer immediately stopped accepting Rs.500 and Rs.1000 currency notes. The Prime Minister said that the main reason for taking this step of demonisation was to stop corruption in the country, eradicate black money and stop funding of terrorist activities. But demonetization has caused a lot of trouble to the people. Because people had to stand in line to get new currency notes and deposit old currency notes in the account, besides having insufficient new currency notes, people also had difficulty in getting the necessities of daily life. The impact of demonetisation has been felt in every sector of the country, but the biggest impact has been seen in the banking sector. In this research paper, the researcher has tried to know how demonetisation has affected the banking sector, how demonetisation has affected the bank's non-performing assets.

Key-Words: Demonetisation, Non-Performing Assets

1. **Introduction:** Our country is more than 70 years old and our country is still one of the developing countries due to its basic problems like poverty and unemployment. The year 2014 saw a revolution in the NDA government and the people of the country won by a landslide with the hope that the NDA government would do good in the country. The NDA government led by Prime Minister Narendra Modi has taken a lot of historic steps to instil confidence in the people that our country will be counted among the developed countries. Prime Minister Shri Narendra Modi has made a name for himself in his 6-7 years of tenure by taking historic decisions like GST, demonetisation, Article 370 and Ram Mandir, of which demonetisation is the most important decision taken by any Prime Minister of India. Demonetization has been carried out in the country with the aim of reducing corruption, controlling black money, reducing terrorist activity and transforming the country's current economy into a cashless economy. The impact of demonetisation has affected not only the parallel economy but the entire economy.

The demonetisation was announced by the Hon'ble Prime Minister on 8th November 2016. Due to demonetisation, 500 and 1000 notes ceased to exist in the country. Demonetization has had its effects in every sector of the country and has had a devastating effect on the country's economy. Every sector in the country such as automobile sector, banking sector, agriculture sector, etc. saw a huge impact on the sector. The demonetisation had both positive and negative effects on the banking sector. For example, the bank had sufficient cash to reduce its liquidity risk, while demonetisation caused the banking staff to work overtime and the banks faced negative things like long lines of customers etc. The main purpose of this research paper by the researcher is to know how the biggest problem of the banking sector has affected demonetisation on non-performing assets. Because the money has been deposited in the accounts of the people who have not repaid the loan till now in the bank, the question arose for the bank to manage such loan. So, there is an attempt to find out what kind of impact demonetisation has had on public sector banks.

2. **Review of Literature:**

Bharat Kumar Mehar (2017)¹, Presented Research paper on "Impact of demonetization on NPA position of Indian Banks". He has researched in his research paper how the demonetisation has affected the banking sector. He has been given a conclusion about the positive and negative effects of demonetisation on the banking sector. He has researched in his research paper how demonetization has affected the banking sector.

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He has been given a conclusion about the positive and negative effects of demonetisation on the banking sector. He concludes that demonetisation as a short-term benefit is currently leading to a decline in banking sector NPAs. But in the long run, if banks do not manage NPAs properly and do the necessary checking at the time of disbursement, these rates will start rising again. This strategic step of demonetisation will have a major contribution towards the establishment of a sound and effective banking system in the country.

V. Vidhya and Dr. I. Carmel Mercy Priya (2017)², Presented Research paper on “Impact of demonetization over NPA”. He concludes in his research paper that demonetisation has ensured that the notes held by the public as black money outside the banks are now deposited inside the bank i.e., in the customer's account. Due to demonetisation, black money has been eliminated to a maximum extent. The government's campaign for digital payments has also been successful due to demonetisation. Banks can earn extra income by keeping a portion of the money deposited with them as a reserve and lending the rest of the deposit. They also conclude that the losses incurred by banks due to NPAs have also come down and in the coming years those losses will be nil and banks will be making profits. Banks will also be clarified about their net capital soon.

The Economics Times (2017)³, presented an Article on “Demonetisation has not impacted war on NPAs: SS Mundra RBI”. They have suggested that in their article was that demonetisation has not had a direct impact on NPAs. The motives for demonetization were different. The main reason for demonetisation has never been the reduction of NPAs. But he also states in his article that demonetisation has indirectly affected the bank's NPAs. He also said that it was true that the demonetized bank employees were distracted from the demonetisation work but they said that demonetisation had not hampered the work related to NPAs. In short, it states that demonetisation has no effect on NPAs.

The Hindustan Times (2017)⁴, presented an Article on “Demonetisation has led to higher bank deposits but why won't companies borrow”. They have concluded that in their article was rising in NPAs and sluggish economic growth sparked a 60% decline in corporate borrowing over the last six years, according to an IndiaSpend analysis of Reserve Bank of India (RBI) data, inhibiting the anticipated lending bonanza to companies from banks after demonetisation.

YOURSTORY (2017)⁵, presented an Article on “Bank flush with funds post demonetisation, But NPAs keep them away from lending”. They have concluded that in their article was that according to analysts the proportion of NPAs i.e. bad loans has been increasing for the last 3 years. The reason for banks not giving loans is not demonetisation but the increase in the ratio of NPAs before and after demonetisation is an important reason. It also concludes that the NPAs ratio, which was 9.6% in 2017 after demonetisation, will increase to 10.2% in 2018.

3. Objective of the Study:

- I. To Know the Prudential norms of Public Sector Banks Pre & Post Demonetisation.
- II. To study the impact on Gross NPAs of Public Sector Banks Pre & Post Demonetization.
- III. To study the impact on Net NPAs of Public Sector Banks Pre & Post Demonetization.

4. Statement of Problem:

The banking sector accounts for a very large share of India's service sector. The impact of demonetisation has been felt in all sectors but it has had a huge impact on the banking sector. The banking sector has been troubled by the question of NPAs since the early 20th century. The proportion of NPAs in any private as well as public sector bank in the country has been steadily increasing every year. After the Great Depression of 2008, the bank's NPA increased and banks started going into liquidation. So, banks have been facing questions about NPAs for years. This paper seeks to understand the impact of the historic decision of

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demonetisation on banks' NPAs. In addition, the government's decision is an attempt to find out whether the NPA increased or decreased after demonetisation.

5. Significance of the Study: Banks have been plagued by difficulties related to NPAs and their recovery for years. The NPA rate of any private or public bank in India is increasing every year and the bank and the government are implementing new policies every year for the recovery of NPAs. The researcher's research entitled "The Impact of Demonetisation on Non-Performing Assets of Public Sector Banks of India: A Comparative Study" will be useful to banks in the future, as well as provide information on where and to what extent the bank has increased its NPA. This research paper will also help the government in the future as it will know whether important steps like demonetisation should be taken in future and also what kind of policy should be adopted by banks and the government for recovery of NPAs after demonetisation.

6. Research Methodology: Research methodology is the specific procedures or techniques used to identify, select, process, and analyse information about a topic.

I. **Population of the Study:** The main purpose of the research has been to investigate the impact of demonetisation on the banking sector. But since the sample is to be taken only from private sector banks, the population here will include all the public sector banks of India.

II. **Sample of the Study:** For the study researcher has select following sample by using convenient sampling method. The sample for the study is given below: (All are Public Sector Banks)

1. Bank of Baroda
2. Bank of India
3. Punjab National Bank
4. State Bank of India
5. Union Bank of India

III. **Methods of Data Collection:** To achieved stated above objective, the researcher has collected secondary information from 3-3 years before and after demonetisation (i.e., 3 years before demonetisation in 2013-2016 and 3 years after demonetisation in 2017-2020) from RBI's official website rbi.org.in. Information related to GNPA's, NNPA's, and Gross Advances of banks has been collected for analysis and complete the research.

IV. **Methods of Data Analysis:** For the above purpose, the researcher has obtained the information of 3 years before and after demonetisation of 5 banks which have been selected as samples by the researcher. Researcher has used ratio analysis as an accounting tool for its analysis while Average and T-test have been used as a statistical tool by the researcher.

V. **Hypothesis:**

➤ **Null Hypothesis:**

- 1) There is no significant difference between **Average Gross NPAs to Advance ratio** in selected public sector banks before and after demonetization.
- 2) There is no significant difference between **Average Net NPAs to Advance ratio** in selected public sector banks before and after demonetization.

➤ **Alternate Hypothesis:**

- 1) There is significant difference between **Average Gross NPAs to Advance ratio** in selected public sector banks before and after demonetization.
- 2) There is significant difference between **Average Net NPAs to Advance ratio** in selected public sector banks before and after demonetization.

VI. **Limitation of the Study:**

The researcher's research has many advantages as well as some limitations which are as follows.

1. This research is prepared from secondary information so all the limitations of secondary information apply to this research.
2. This research only applies to public sector banks so it cannot be applied to private sector banks.
3. This research covers the period of demonetisation so the results of this research may be in vain as time goes by and government policy changes.

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7. **Data Analysis:** Data Analysis is the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap, and evaluate data. According to Shamoo and Resnik (2003) various analytic procedures “provide a way of drawing inductive inferences from data and distinguishing the signal (the phenomenon of interest) from the noise (statistical fluctuations) present in the data”

7.4 Gross NPAs to Advances Ratio: These ratios represent the relationship between Gross NPAs and Gross/Total Advances. If the percentage of these ratios is high then the financial capacity of the bank is interpreted as weak and if the percentage of these ratios is low then the financial capacity of the bank is interpreted as good. This means that this is a negative ratio. So, the bank is always trying to reduce this ratio so that its financial capacity can be improved.

$$\text{Formula Gross NPAs to Advances Ratio} = \frac{\text{Gross NPAs}}{\text{Total Advances}} \times 100$$

7.1 Average Gross NPAs to Advances Ratio of Selected Public Sector Banks:

Table 7.1 Average Gross NPAs to Advances Ratio of Selected Public Sector Banks Before and After Demonetization:

BAN K NAME	BEFORE DEMONETIZATION YEARS (AMT. IN CRORES)			TOT AL	AVE RAGE
	2014	2015	2016		
BOB	2.94	3.72	9.99	16.65	5.55
BOI	3.15	5.39	13.07	21.61	7.20
PNB	5.25	6.55	12.90	24.70	8.23
SBI	4.95	4.25	6.50	15.70	5.23
UBI	4.17	5.10	9.04	18.31	6.10
TOT AL	20.46	25.01	51.50	96.97	32.32
AVE RAGE	4.09	5.00	10.30	19.39	6.46

BAN K NAME	AFTER DEMONETIZATION YEARS (AMT. IN CRORES)			TOT AL	AVE RAGE
	2017	2018	2019		
BOB	10.46	12.26	9.61	32.33	10.78
BOI	13.22	16.58	15.84	45.64	15.21
PNB	12.53	18.38	15.50	46.41	15.47
SBI	6.90	10.91	7.53	25.34	8.45
UBI	11.77	17.10	16.41	45.28	15.09
TOT AL	54.88	75.23	64.89	195.00	65.00
AVE RAGE	10.98	15.05	12.98	39.00	13.00

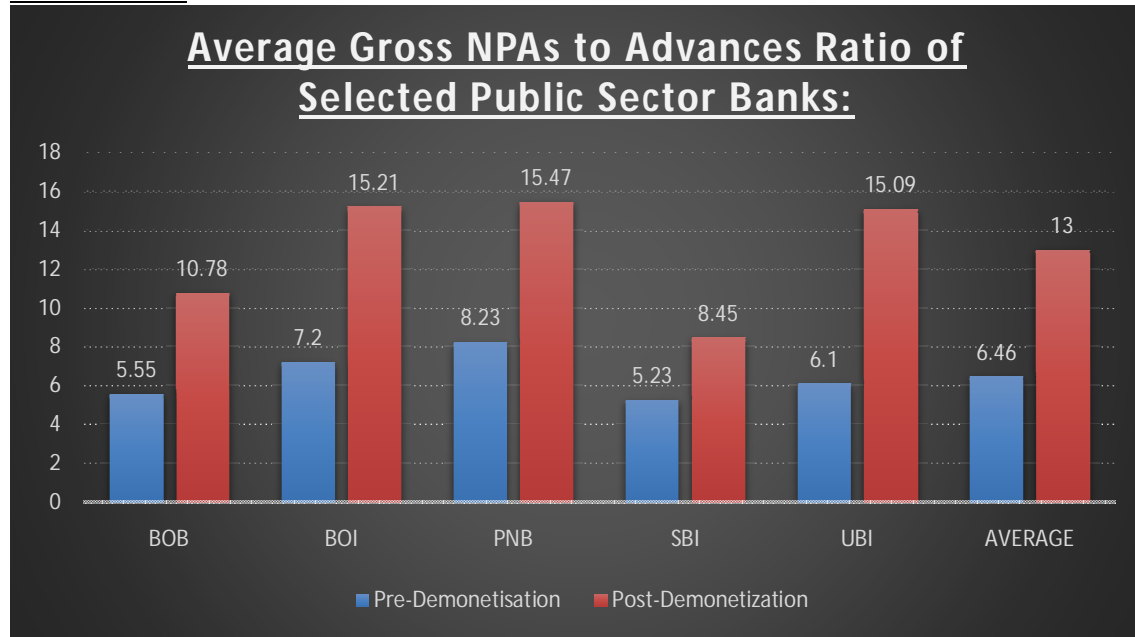
(Source: <https://dbie.rbi.org.in>)

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Chart 7.1 Average Gross NPAs to Advances Ratio of Public Sector Banks Before and After Demonetization:



➤ **Analysis:**

The above table and Chart show the average ratio of Gross NPAs to Gross Advances of Public Sector Banks before and after Demonetization for the study period 2014-2016 (Pre-Demonetization Period) and 2017-2019 (Post Demonetization Period).

The chart and table show that the average gross NPAs to advances ratio has almost doubled after demonetization (increased from 6.14% to 13%). Looking at the individual gross NPAs to advances ratio of each bank, it is clear that the ratio of Bank of Baroda, Bank of India, and Punjab National Bank has almost doubled after demonetization. While Union Bank of India's ratio has increased almost two and a half times. While the ratio of State Bank of India has increased 1.6 times in comparison to other banks. That is, it is clear from the chart and the table that after demonetization, State Bank of India has taken a tougher stance on NPAs and the recovery of its NPAs has also increased after demonetization.

It can therefore be said from the data that a significant difference is observed in the post-demonetization ratios in comparison of the pre-demonetization Gross NPAs to Advance ratios.

4.14 Net NPAs to Advances Ratio: These ratios represent the relationship between Net NPAs and Gross/Total Advances. If the percentage of these ratios is high then the financial capacity of the bank is interpreted as weak and if the percentage of these ratios is low then the financial capacity of the bank is interpreted as good. This means that this is a negative ratio. So, the bank is always trying to reduce this ratio so that its financial capacity can be improved.

$$\text{Formula Net NPAs to Advances Ratio} = \frac{\text{Net NPAs}}{\text{Total Advances}} \times 100$$

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7.2 Average Net NPAs to Advances Ratio of Selected Public Sector Banks:

Table 7.2 Average Net NPAs to Advances Ratio of Selected Public Sector Banks Before and After

Demonetization:

BANK NAME	BEFORE DEMONETIZATION YEARS (AMT. IN CRORES)			TOTAL	AVERAGE
	2014	2015	2016		
BOB	1.49	1.85	4.79	8.13	2.71
BOI	1.97	3.28	7.34	12.59	4.20
PNB	2.76	3.92	8.18	14.86	4.95
SBI	2.50	2.07	3.70	8.27	2.76
UBI	2.33	2.71	5.25	10.29	3.43
TOTAL	11.05	13.83	29.26	54.14	18.05
AVERAGE	2.21	2.77	5.85	10.83	3.61

BANK NAME	AFTER DEMONETIZATION YEARS (AMT. IN CRORES)			TOTAL	AVERAGE
	2017	2018	2019		
BOB	4.43	5.10	3.11	12.64	4.21
BOI	6.43	7.50	4.99	18.92	6.31
PNB	7.40	10.33	5.93	23.66	7.89
SBI	3.58	5.41	2.87	11.86	3.95
UBI	6.57	8.42	6.85	21.84	7.28
TOTAL	28.41	36.76	23.75	88.92	29.64
AVERAGE	5.68	7.35	4.75	17.78	5.93

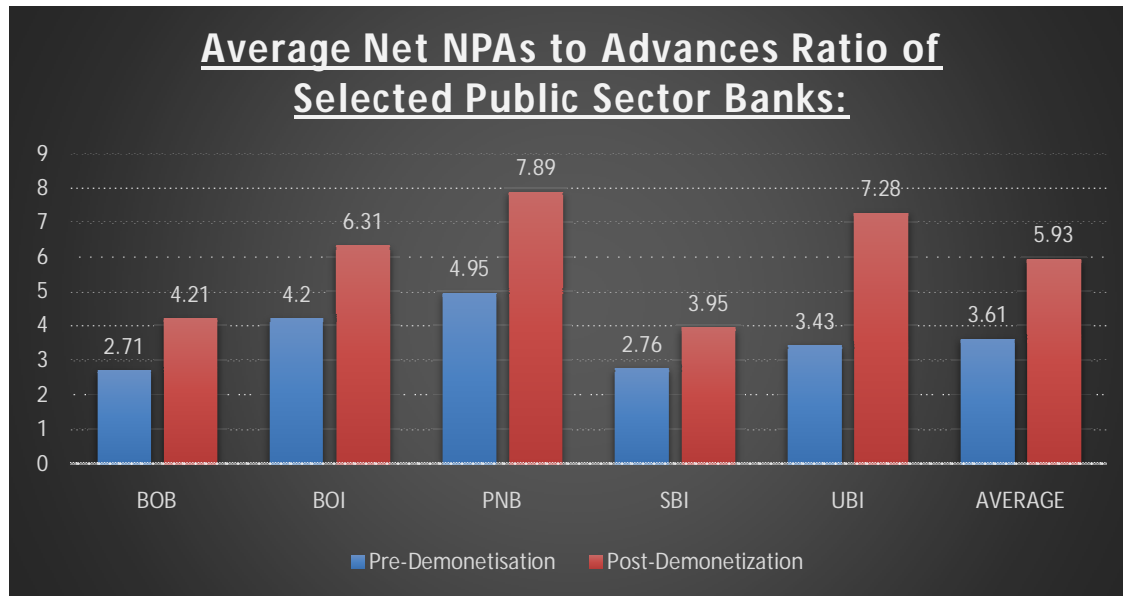
(Source: <https://dbie.rbi.org.in>)

Chart 7.2 Average Net NPAs to Advances Ratio of Public Sector Banks Before and After Demonetization:

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➤ **Analysis:** The above table and Chart show the average ratio of Net NPAs to Gross Advances of Public Sector Banks before and after Demonetization for the study period 2014-2016(Pre-Demonetization Period) and 2017-2019 (Post Demonetization Period).

The chart and table show that the average Net NPAs to advances ratio has increased almost 1.6 times after demonetization (increased from 3.61% to 5.93%). Looking at the individual Net NPAs to advances ratio of each bank, it is clear that the ratio of Bank of Baroda, Bank of India, and Punjab National Bank has increased almost 1.5 times after demonetization. While Union Bank of India's ratio has increased almost double. While the ratio of State Bank of India has increased 1.4 times in comparison to other banks. That is, it is clear from the chart and the table that after demonetization, State Bank of India has taken a tougher stance on NPAs and the recovery of its NPAs has also increased after demonetization.

It can therefore be said from the data that a significant difference is observed in the post-demonetization ratios in comparison of the pre-demonetization Net NPAs to Advance ratios.

8. **Hypothesis Testing:**

8.1 **Hypothesis Testing for Average Gross NPAs to Advances Ratio of Selected Public Sector Banks Before and After Demonetization:**

➤ **Null Hypothesis:**

There is no significant difference between **Average Gross NPAs to Advances ratio** in selected public sector banks before and after demonetization.

➤ **Results:**

Particular	Sample Size (N)	Mean (\bar{x})	S.D. (s)	D.F	t_{cal}	t_{tab}
Pre	5	6.46	1.24	N-1=4	6.32	2.77
Post	5	13	3.208			

➤ **Student's t-test Analysis:**

$$t_{cal} = 6.32$$

$$t_{tab} = 2.77 \text{ (at 5\% level of D.F. = 4)}$$

Here, calculated value of t is higher than the tabulate value of t ($t_{cal} > t_{tab}$). That means null hypothesis(H_0) stands rejected and alternative hypothesis(H_1) is accepted. Hence, t-test indicates that there is

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significant difference between average Gross NPAs to advances ratio among selected public sector banks before and after demonetization.

8.2 Hypothesis Testing for Average Net NPAs to Advances Ratio of Selected Public Sector Banks Before and After Demonetization:

➤ **Null Hypothesis:**

There is no significant difference between **Average Net NPAs to Advances ratio** in selected public sector banks before and after demonetization.

➤ **Results:**

Particular	Sample Size (N)	Mean (\bar{x})	S.D. (s)	D.F	t_{cal}	t_{tab}
Pre	5	3.61	0.96	N-1=4	4.77	2.77
Post	5	5.93	1.78			

➤ **Student's t-test Analysis:**

$$t_{cal} = 4.77$$

$$t_{tab} = 2.77 \text{ (at 5\% level of D.F. = 4)}$$

Here, calculated value of **t** is higher than the tabulate value of **t** ($t_{cal} > t_{tab}$). That means null hypothesis (H_0) stands rejected and alternative hypothesis (H_1) is accepted. Hence, t-test indicates that there is significant difference between average Net NPAs to advances ratio among selected public sector banks before and after demonetization.

9. Findings & Suggestions:

1. From the results of the chart, table and t-test, the researcher finds that the Gross NPAs to Advances Ratio have almost doubled after demonetization. The ratio of BOB, BOI and PNB in the 5 public sector banks selected by the researcher has doubled after demonetization and UBI has increased 2.5 times. Only SBI has increased after demonetization but indicates a decrease compared to other banks and SBI has increased 1.5 times after demonetization. Therefore, the data shows that SBI Bank has adopted strict stance on Recovery of Gross NPAs after demonetization as compared to other banks and also concludes that all public sector banks have seen a significant increase in Gross NPAs to Advances Ratio after demonetisation.

2. From the results of the chart, table and t-test, the researcher finds that the Net NPAs to Advances Ratio have increase almost 1.6 times after demonetization. The ratio of BOB, BOI and PNB in the 5 public sector banks selected by the researcher has increased 1.5 times after demonetization and UBI has increased 2 times. Only SBI has increased after demonetization but indicates a decrease compared to other banks and SBI has increased 1.4 times after demonetization. Therefore, the data shows that SBI Bank has adopted strict stance on Recovery of Net NPAs after demonetization as compared to other banks and also concludes that all public sector banks have seen a significant increase in Net NPAs to Advances Ratio after demonetisation.

10. Conclusion:

On November 8, 2016, the NDA government completely abolished the existence of 500 and 1000 notes in the country and announced demonetisation in the country. Demonetization can be said to have started a new evolution in the bank. As people showed interest in the work of the bank employees, in addition to the increase in the number of new customers in the bank, the banks received a large number of deposits and the biggest problem for the banks was the temporary improvement in the NPA. But the researcher will point out here that the decline in NPAs has been observed only as a short-term benefit after demonetisation. Over the next three years, NPAs have continued to grow, with short-term gains having a positive effect on NPAs, but the long-term demonetisation effect being negligible.

11. References:

I. Articles:

1. http://ijasret.com/VolumeArticles/FullTextPDF/116_IJASRET-Impact of Demonetization on NPA position of Indian Banks
2. https://www.researchgate.net/publication/329916541_Impact of Demonetization on NPA Position of Indian Banks

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E-Journal of Research

ISSN NO: 2395-339X

3. <https://www.financialexpress.com/industry/banking-finance/demonetisation-Impact-bank-npas-mount-to-rs-614872-crore-set-to-rise-further/558916/>
4. <http://aayvagam.journal.thamizhagam.net/issues/2017/Feb%202017%205D/7%20Article%20Feb%202017%205D>
5. <http://www.iibf.org.in/documents/final-thesis-16.4.18>
6. <https://www.inspirajournals.com/uploads/Album/1870654830>
7. <http://ijrar.org/papers/IJRAR190I027>
8. <http://www.iosrjournals.org/iosr-jbm/papers/Conf.17021-2017/4.%2020-2>

II. Websites:

1. www.dbie.rbi.org.in