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An Analytical Study on NPA of Bank of Baroda

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Abstract

Purpose – Indian Banking sector has been facing the challenge of ever-growing non-performing assets (NPA) for the last 2 decades which adversely impacts the profitability and liquidity of the banks and the economy as a whole. This study has attempted to compare the performance of the Bank of Baroda (BOB) vis-à-vis nationalized banks group and establish the correlation between NPA and financial performance of Bank of Baroda and the nature of the relationship.

Methodology – Bank of Baroda which is 2nd leading public sector bank in India had been selected for this study. Data from 2010-11 to 2019-20 had been collected from secondary sources. For data analysis, the Balance sheet and profit & loss account of BOB were analyzed using various ratios, Gross NPA and Net NPA comparison with nationalized banks has been performed apart from performing a correlation analysis of Gross NPA and Net NPA with net profits.

Conclusion – All nationalized banks including the Bank of Baroda have been facing high NPA during the period of study. Further, it was found that NPA negatively affected the profitability of the Bank of Baroda and is highly correlated with the net profits of the bank.

Originality Value – This research had been conducted specifically focused on Bank of Baroda whereas past researches involving BOB has been generally performed in comparison with other banks or the researches were based on various bank groups but not solely focusing on BOB.

Keywords: Bank of Baroda, Correlation, Non-Performing Assets, NPA, Profitability

1. Introduction

Banking sector has a pivotal role to play in development of any economy by channelizing the funds from unproductive savings in the form of deposits to funding various needs of society like housing, agriculture, education and commercial projects. Banking sector in India has witnessed a tremendous growth after liberalization started in 1900s which contributed to growth of economy as a whole. Initially banks were mainly focused on growth of portfolio, widening network of branches, priority sector lending and generating jobs etc. and assets quality was not a focus area. With aggressive lending, the assets quality started to get compromised and banks started facing a problem of rising non-performing assets which has become a huge problem for the economy at present (Singh, 2016).

As NPA has turned into a monstrous problem for Indian banks in the last two decades. Reserve Bank of India (RBI) alongwith other governing bodies have taken a lot of initiatives to control NPA as banks have either reported a quarterly spike in NPA or have kept it undisclosed, which have been later detected by RBI like some large banks including banks like SBI & Punjab National Bank were found to be guilty of under-reporting NPA provisioning during the year 2018-19. This is not only limited to PSBs but even to private sector banks like Yes

Bank, UCO Bank and Union Bank were also involved in underreporting NPA (Livemint, 2019). There is every possibility that many other banks are also underreporting their NPA, hence the magnitude of NPA maybe even higher. CARE rating agency published a report which discovered that India was fifth on the raking table of nations with the highest level of NPA, only next to Greece, Italy, Portugal, and Ireland. The report also stated that India has the highest NPA ratio with 9.9 percent among the BRICS nations. In a report named "Bank NPA: June 2019" published on careratings.com (2019), CARE noted that: 1) 17 of the 36 Indian banks had NPA ratio of above 10% in Jun-2019, of them 16 were Public Sector Banks (PSB) and only one was a private bank. 2) Four of the PSB had NPA ratio of 20% and above including **IDBI** Bank, UCO Bank & Indian Overseas Bank 3) Three PSBs had NPA ratio of less than 10% (SBI, Indian Bank, and Canara Bank), eleven private sector banks had NPA less than 2.5% and five had NPA between 5-10% Government of India has brought many legislations to bring the issue of rising NPA under control which include RDDBFI Act, 1993; SARFAESI Act, 2002 & IBC code, 2016.

Understanding Non-Performing Assets

Performing assets are those loans given by a bank to its customers which produce income for the bank in normal course of business & the repayment of principle and interest is regular. A loan asset becomes a non-performing asset when the customer does not pay the due interest and principle for a prolonged period and the bank ceases to generate any income on such asset alongwith risk of non-recovery of principle amount. Such an assets is classified as non-performing assets as it ceases to earn income for the bank. Regulators all over the world issue guidelines governing classification and recognition of such non-performing assets in banking industry.

As per Master Circular regarding classification of advances dated 30th Aug 2001 issued by Reserve Bank of India, loans given can be classified as : **Standard assets** as those NPA which have been past due for less than 12 months, these assets carry normal risk level. **Sub-standard asset** are assets those remain NPA for more than 12 months but less than 18 months. These assets carry more risk than standard assets. Banks generally make partial provisions against these assets as banks are not fully sure about the recoverability of these assets. **Doubtful asset** are the assets which has been classified as NPA for more than 18 months as there are very slim chances of recovery. These assets carry severe risk. **Loss Asset** – when an assets remains classified as non-performing assets for a period exceeding 36 months, these are considered as **loss assets**. As per guidelines issued by RBI, banks must provide full provision against loss assets after reducing the assets pledged with the bank (RBI, 2001). So, loss assets have direct impact on profit & loss account. These are generally written off from balance sheets as well over a period of time.

NPA is considered as serious threat to banking sector in India due continuously increasing volume in past few years as it impacts financial stability, liquidity and profitability along with reducing further lending ability of the banks as funds get blocked. Further, willful defaulters do not repay the loans hence prevent the banks from lending to rightful borrowers, resulting in a slowdown of the credit cycle and reduction of credit rotation An increase in NPA becomes a big obstacle in social and economic progress of the whole economy.

Bank of Baroda

Bank of Baroda (BOB) is a public sector bank headquartered in Vadodara, Gujrat which was founded in 1908 and nationalized in 1969 alongwith with 13 other banks and designated as public sector undertaking (PSU) by the Government of India. BOB is second largest public sector bank in India after State Bank of India. BOB has gone through many mergers and acquisitions like it acquired New Citizen Bank in 1961, acquired Surat Banking Corporation in 1963 and finally merged with Dena Bank and Vijaya Bank in 2019 to become 3rd largest bank in India after SBI and HDFC Bank. At the end of FY 2019-20, the bank has over 9500+ branches, 84000+ employees and more than 12 crore customers.

2. Review of Literature

In a comparative study on SBI & BOB, Ojha & Jha (2018), concluded that increase NPA has impacted profitability of both the banks. A casual analysis of profitability and NPA of 9 selected Indian commercial banks including SBI, BOB, PNB, ICICI Bank was performed by Sharma et. al. (2020) by employing correlation and regression analysis on secondary data for a period of 13 years and found that NPA affect the profitability of the bank adversely alongwith adverse impacts on liquidity and solvency position of the banks. Valliammal and Manivannan (2018) examined the impact of NPA on the profits of the selected public sector such as SBI, BOB, Canara Bank & UBI banks by analyzing the profitability trends and correlation between NPA vs. net profits and found that there exists a very strong relationship among decreasing profits and increasing NPA. Banks must emphasize more in handling the problem of NPA with respect to their financial assets to improve their profitability.

A study by Banerjee and Mitra (2018) on scheduled commercial banks noted that NPA directly impact the financial performance and liquidity, and identified that growing NPA is a main problem for the Indian banking industry. Tandon et. al. (2017) selected 35 public and private banks from 2007 to 2016 using multivariate analysis and established that NPA management required more attention in Public Sector Banks to improve its profitability and financial position. Prasad and Veena (2011), in their paper dealing with the understanding of the concepts of NPA, its magnitude and major causes for an asset converting to a NPA, and main approaches for management of NPA in Indian banks, stated that NPA does not generate any income and at the same time banks have to make provision against the principle amounts from their operational profits. Hence NPA has an adverse impact on the ROA and it limits the recycling of the funds a well.

Khanna (2012) performed comparative analysis on selected Indian banks which include State Bank of India, ICICI Bank, Axis Bank, etc. and noted that the main role of banks is to provide funds to different sections of economy including agricultural loans, housing loans, personal loans and business loans etc., but due to problem of NPA related to loans given, banks have become very cautious in sanctioning loans as NPA is a major factor affecting their financial performance of banks. High NPA leads to a higher number of loans turning into bad loans hence affecting the profitability and net worth of the banks.

Pham's (2013)'s study on Vietnamese banks, weighed the impact of NPA on the net profits of banks during a period of 8 years upto 2012, highlighted that NPA adversely impacts the profitability of banks. Kaaya and Pastory's (2013)'s research on the association between performance of banks and credit risk of Tanzanian Banks suggested that there is an adverse correlation amongst credit risks and profitability by measuring the impact on ROA. Madishetti and Rwechungura's (2013)'s study analyzed various determinants of profitability and examined the influence of credit risk on Tanzanian commercial banks. The study revealed that increasing NPA reduced the profitability of banks in Tanzania. Felix and Claudine (2008) examined the relationship between credit risk and performance of banks and inferred that ROE and ROA were inversely related to the NPA to total loans ratio of financial institutions, hence increasing NPLs (non-performing loans) leading to a decline in profits of banks.

Roman and Tomuleasa (2013) studied the impact of various factors for large number of commercial banks operating in the European Union nations using econometric estimation analysis and t-test on the profitability of the banks in European Union countries covering the period of 8 years from 2003 to 2011, found that increase in NPA has an adverse impact on the financial results of the banks.

Epure and Lafuente (2012) scrutinized the link between the bank's performance and NPA during 1998-2012 of the Costa-Rican banking industry, which showed that non-performing assets adversely affected the ROA, whereas the capital adequacy ratio had a positive impact on the net interest. The research paper also showed that performance improvement is directly impacted by regulatory changes. A study titled "Advances – Issues and Problems" by Alo (1995) covering Nigerian Banks emphasized that NPA had a direct impact on the failure of banks. In the author's opinion, trading risk, when poorly managed, can result in sinking a bank very quickly as evidenced by the failure of some of the largest banks due to bad loans. This was also confirmed by Nwankwo (1990) in his study on Nigerian Banks who pointed out that a high level of NPA is mainly responsible for bank failures. The effect of NPA on the economy can be devastating, if not properly tackled, it can lead to bank failures hence resulting in shaking the confidence of the general public.

From the above review of past literature, it can be noted that there are many studies conducted for analyzing the NPA of banking including BOB but none of the studies, solely focused on Bank of Baroda, had been conducted. Hence to fill this gap, this study has been undertaken.

The study has been undertaken to conduct a detailed analysis of performance of Bank of Baroda with respect to management of NPA and its impact on profitability of the bank. The study also attempted to establish whether a statistically significant relationship between profitability and NPA exists for BOB.

3. Research Methodology

In the present study, a detailed analysis of Balance sheet and profit & loss of BOB for past 10 years i.e. from 2010-11 to 2019-20 has been performed alongwith analysis of trends of NPA & net profits and correlation analysis to establish relationship between NPA and profitability. The analysis has been performed on the basis of secondary data collected from various internet sources like RBI website, financial websites and annual reports of Bank of Baroda taken from the website of the bank.

4. Analysis and Interpretation

For the purpose of analyzing the financial performance, a summary comparative balance sheet and profit and loss account is given below:-

Table 1 – Balance Sheet of BOB - Comparative (2019-12 vs. 2010-11)

	2019-20	**%age**	**2010-11**	**%age**	**CAGR**
Equity & Liabilities					
Share Capital	925.37	0.1%	392.81	0.1%	9.99%
Reserves & Surplus	70,931	6.1%	20,650.73	6.0%	14.69%
Deposits	945,984	81.7%	305,439.48	82.1%	13.38%
Borrowings	93,069	8.0%	22,307.85	8.7%	17.20%
Other Assets	47,006	4.1%	9,606.31	3.2%	19.29%
Total Liabilities & Equity	**1,157,916**	**100.0%**	**358,397.18**	**100.0%**	**13.92%**
Assets					
Cash & Cash Equivalents	121,901.12	10.5%	49,934.07	12.9%	10.43%
Advances	690,120.73	59.6%	228,676.36	59.4%	13.06%
Investments	274,614.61	23.7%	71,396.59	22.7%	16.15%
Fixed Assets	8,889.29	0.8%	2,299.72	0.7%	16.21%
Other Assets	62,389.76	5.4%	6,090.44	4.3%	29.50%
Total Assets	**1,157,915.51**	**100.0%**	**358,397.18**	**100.0%**	**13.92%**

Source – Annual Reports of Bank of Baroda for respective years

From table 1 above, it may be noted that the size of balance sheet of BOB has grown 3 times during the period of study. Advances have tripled with a cumulative annual growth rate (CAGR) of 13.06% similar to growth of deposits with a CAGR of 13.28%. Advances given forms 59.6% of total assets and investments forms 23.7% of total assets which are revenue generating assets. Hence bank has invested 84% of total assets in income generating assets.

Table 2- Profit & Loss Account of BOB - Comparative (2019-12 vs. 2010-11)

	2019-20	**%age**	**2010-11**	**%age**	**CAGR 2010-11 to 2019-20**
Interest Income	75,984	88.0%	21,886	25.4%	14.8%
Other Income	10,317	12.0%	2,809	3.3%	15.6%
Total Income	**86,301**	**100.0%**	**24,695**	**28.6%**	**14.9%**
Interest Expenses	48,532	56.2%	13,084	15.2%	15.7%
Operating Expenses	18,077	20.9%	4,630	5.4%	16.3%
Provisions & Contingencies	19,145	22.2%	2,740	3.2%	24.1%
Operating Profit	**85,755**	99.4%	**20,453**	23.7%	17.3%
Net Profit	**546**	0.6%	**4,242**	4.9%	-20.4%

Source – Annual Reports of Bank of Baroda for respective years

From table 2 above, it can be noted that the bank's revenue has grown 3.5 times during 2010-11 to 2019-20 with a CAGR of 14.8%. However, the net profit during the same period has reduced with a negative CAGR of 20.4% as the provision and contingencies during this period has increased from 3.2% in 2010-11 to 22.2% in 2019-20. Hence, provisions which mainly includes provisions against NPA have resulted in lower profitability of the bank.

Analysis of Non-performing Assets of BOB

Table 3 below demonstrates trends of Gross NPA (GNPA), Net NPA (NNPA) for nationalized banks and Bank of Baroda and Net Profits for Bank of Baroda:-

Table 3 – NPA Trends – Nationalised Banks vs. Bank of Baroda

YEAR	**Natinalised Banks**				**Bank of Baroda**				
	Gross NPA	**Net NPA**	**GNPA %**	**NNPA %**	**Gross NPA**	**Net NPA**	**GNPA %**	**NNPA %**	**Net Profit**

2011	44,271	21,264	2.0%	1.0%	3,153	791	1.4%	0.3%	4,242
2012	69,625	39,155	2.8%	1.6%	4,465	1,544	1.5%	0.5%	5,007
2013	102,227	61,936	3.3%	2.0%	7,983	4,192	2.4%	1.3%	4,481
2014	148,457	88,820	4.1%	2.5%	11,876	6,035	2.9%	1.5%	4,541
2015	204,959	122,673	5.3%	3.1%	16,261	8,069	3.7%	1.8%	3,398
2016	417,988	251,481	10.7%	6.4%	40,521	19,406	10.0%	4.8%	(5,396)
2017	506,922	286,157	13.0%	7.3%	42,719	18,080	10.5%	4.4%	1,383
2018	895,601	454,473	14.6%	7.4%	56,480	23,483	12.3%	5.1%	(2,432)
2019	739,541	285,123	11.6%	4.5%	48,233	15,610	9.6%	3.1%	434
2020	678,317	230,918	10.3%	3.5%	69,381	21,577	9.4%	2.9%	546
CAGR	**35%**	**30%**	**20%**	**15%**	**41%**	**44%**	**24%**	**27%**	**-20%**
Mean	**380,791**	**184,200**	**7.8%**	**3.9%**	**30,107**	**11,879**	**6.4%**	**2.6%**	**1,620**
SD	**295,315**	**132,573**	**4.5%**	**2.3%**	**22,873**	**8,217**	**4.1%**	**1.7%**	**3,263**
CV	**78%**	**72%**	**58%**	**58%**	**76%**	**69%**	**64%**	**64%**	**201%**

Source – Statistical Tables from Reserve Bank of India Website

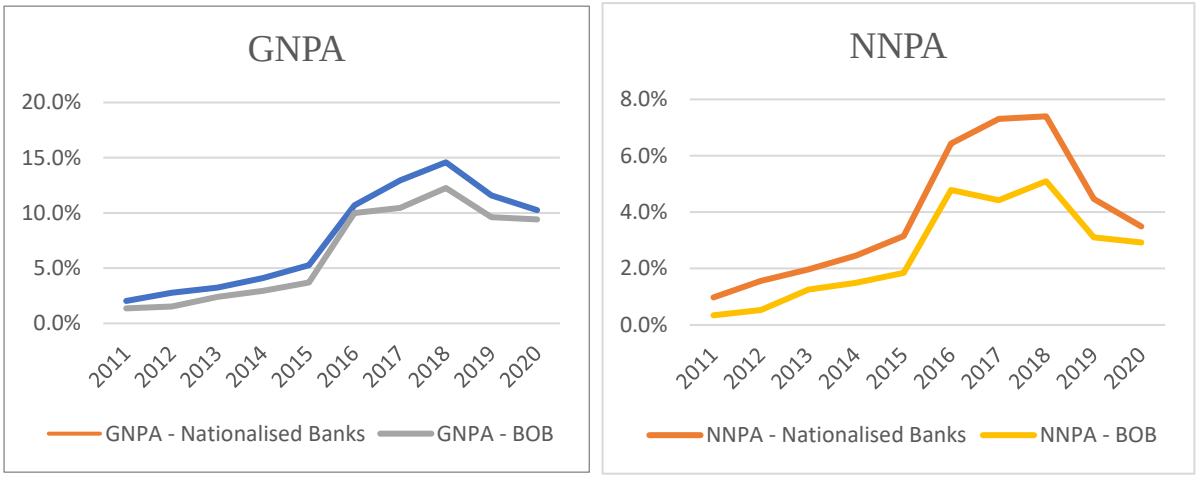

Figure 1 - GNPA & NNPA Comparison

Table 3 above alongwith figure 1 shows that NPA of both nationalized banks and Bank of Baroda have been continuously increasing over past 10 years. Average GNPA of BOB is lower at 6.4% vs. nationalized banks at 7.8% which indicated the banks in general have faced high NPA during the period of study. Coefficient of Variance of BOB is similar to that of nationalized banks hence performance of BOB is similar to that of other nationalized banks. The above graphs shows that GNPA and NNPA of BOB and nationalized banks have been moving in tandem during the period of study hence there is not much difference in performance of BOB and nationalized banks as a whole.

Correlation Analysis

For the purposed of establishing weather NPA affects the profitability of the banks, correlation analysis has been performed between GNPA, and Net Profits & NNPA and Net profits as show below in table 4:-

Table 4 – Correlation Analysis of Bank of Baroda

YEAR	Net Profit	GNPA	NNPA
2011	4,242	3,153	791
2012	5,007	4,465	1,544
2013	4,481	7,983	4,192
2014	4,541	11,876	6,035
2015	3,398	16,261	8,069
2016	(5,396)	40,521	19,406
2017	1,383	42,719	18,080

2018	(2,432)	56,480	23,483
2019	434	48,233	15,610
2020	546	69,381	21,577
Correlation		(0.731)	(0.843)

Source – Annual Reports of Bank of Baroda for respective years

From the above correlation analysis, the following has been noted:-

- Gross NPA & Net Profits are highly correlated as shown by the correlation coefficient of 0.731. Further, negative value shows that the relationship is adverse. Hence, an increase in Gross NPA will result in decrease of net profits and vice versa.

- Net NPA & Net Profits are highly correlated as shown by the correlation coefficient of 0.843. Further, negative value shows that the relationship is adverse. Hence, a decrease in Net NPA will result in increase of net profits and vice versa.

5. Conclusion

From the analysis performed in analysis and interpretation section above, it can be noted that, BOB alongwith other nationalized banks have been facing increasing NPA during the period of study. From the correlation analysis, it can be concluded that NPA negatively impacts profits of the banks as seen from the high negative correlation coefficient for GNPA at 0.731 and for NNPA at 0.843. Similar conclusions have been drawn by studies on Indian banks various banks performed by researchers like Ojha & Jha (2018), Sharma et. al. (2020), Banerjee and Mitra (2018), Prasad and Veena (2011) and various researches all over the world by researcher like Kaaya and Pastory's (2013), Madishetti and Rwechungura's (2013), Epure and Lafuente (2012) to name a few.

Due to the fact that NPA negatively impact profits of the banks, the banks must take various preventive steps like strengthening credit appraisal, conducting post-disbursement reviews and independent audits of funds utilization as well as various corrective steps like recovery through various recovery channels like Lok Adalats, Debt Recovery Tribunals and advanced recovery steps under SARFAESI Act, 2002 and newly passed insolvency legislation IBC code, 2016 which even gives power to RBI to directly intervene in settling bad loan cases(Livemint, 2017).

This research is limited to quantitative analysis of secondary data for a period of 10 years for Bank of Baroda. Further analysis with wider coverage in terms of period and number of banks can be performed. Further, various qualitative factors like quality of loans given, type of customers of the banks, priority lending regulations, economic cycle etc. can be included in future researches

References

[1] Alo, V. O. (1995). Advances - Issues and Problem. The Stallion Magazines Vol. 38.

[2] Banerjee R, Mitra R (2018). Non-Performing Assets of the Indian Banking System: A Critical Evaluation. Asian Journal of Research in Banking and Finance 8(6):1-16

[3] Bank of Baroda (2011), Annual Report 2010-11. https://www.bankofbaroda.in/annual-report.htm

[4] Bank of Baroda (2012), Annual Report 2011-12. https://www.bankofbaroda.in/annual-report.htm

[5] Bank of Baroda (2013), Annual Report 2012-13. https://www.bankofbaroda.in/annual-report.htm

[6] Bank of Baroda (2014), Annual Report 2013-14. https://www.bankofbaroda.in/annual-report.htm

[7] Bank of Baroda (2015), Annual Report 2014-15. https://www.bankofbaroda.in/annual-report.htm

[8] Bank of Baroda (2016), Annual Report 2015-16. https://www.bankofbaroda.in/annual-report.htm

[9] Bank of Baroda (2017), Annual Report 2016-17. https://www.bankofbaroda.in/annual-report.htm

[10] Bank of Baroda (2018), Annual Report 2017-18. https://www.bankofbaroda.in/annual-report.htm

[11] Bank of Baroda (2019), Annual Report 2018-19. https://www.bankofbaroda.in/annual-report.htm

[12] Bank of Baroda (2020), Annual Report 2019-20. https://www.bankofbaroda.in/annual-report.htm

[13] Careratings.com (2019), Bank NPA: June 2019, BFSI Research,

[14] Epure, M. and Lafuente, I. (2012). Monitoring Bank Performance in the Presence of Risk, Barcelona GSE Working Paper Series No.61

[15] Felix, A.T and Claudine, T.N (2008). Bank Performance and Credit Risk Management, Unpublished Masters Dissertation in Finance, University of Skovde

[16] Kaaya, I. and Pastory, D. (2013). Credit Risk and Commercial Banks Performance in Tanzania: a Panel Data Analysis, Research Journal of Finance and Accounting, 4 (16), pp. 55-63. Available at: www.iiste.org.

[17] Khanna, P. (2012), 'Managing nonperforming assets in commercial banks', Gian Jyoti E-Journal, Volume 1, Issue 3 (Apr - Jun 2012) ISSN 2250-348X

[18] Livemint. (2019), SBI gets a ?11,932 crore bad loans jolt from RBI. Retrieved from livemint: https://www.livemint.com/industry/banking/sbi-under-reported-bad- loans-by-rs-11-932-crore-in-fy19-finds-rbi-report-11575964010444.html

[19] Livemint (2017); Banking Regulation Act: Ordinance gives RBI powers to directly intervene in bad loan cases , livemint.com retrieved from https://www.livemint.com/Industry/aKUzlJVWIZkEmLxkhgEoRN/ Banking-ordinance-to-empower-RBI-to-deal-directly-with-loan.html

[20] Madishetti, S., & Rwechungura, K. A. (2013). Determinants of bank profitability in a developing economy: empirical evidence from Tanzania. Asian Journal of Research in Banking and Finance, 3(11), 46.

[21] Nwankwo, G. O. (1990). Prudential Regulation of Nigeria Banking, the Nigeria Bankers.

[22] Ojha, Avani & Jha, Hem. (2018). A COMPARATIVE STUDY REGARDING IMPACT OF NON-PERFORMING ASSETS (NPA) ON WORKING OF THE STATE BANK OF INDIA (SBI) AND THE BANK OF BARODA (BOB). 5. 1-21.

[23] Pham, T. (2013). Effect of bad debts on bank profitability. Economic Research, 424, 34-39.

[24] Prasad, G.V.B. & Veena, D. (2011), 'NPAs Reduction Strategies for Commercial Banks in India', IJMBS Vol. 1, Issue 3

[25] RBI (2001), Master Circular- Prudential Norms on Income Recognition, Asset Classification- Pertaining to Advances dated 30 Aug 2001. The Reserve Bank of India, retrieved from https://www.rbi.org.in/scripts/BS_ViewMasCirculardetails.aspx%3FId%3D449#N4

[26] Roman, A., and Tomuleasa, I. I. (2013). Analysis of Profitability Determinants: Empirical Evidence of Commercial Banks in the New EU Member States

[27] Sharma, S, Kothari, R, Rathore, D.S., Prasad, J (2020), CAUSAL ANALYSIS OF PROFITABILITY AND NON-PERFORMING ASSET OF SELECTEDINDIAN PUBLIC AND PRIVATE SECTOR BANK, Journal of Critical Reviews, Vol 7, Issue 9, 2020

[28] Singh,Vivek Rajbahadur (2016), "A Study of Non-Performing Assets of Commercial Banks and it's recovery in India" , Annual Research Journal of SCMS, Pune Vol. 4, March 2016.

[29] Tandon D, Chaturvedi A, Vidyarthi H (2017). Non-performing assets and profitability of Indian banks: an econometric study. International Journal of Business Competition and Growth 6(1):60-76.

[30] Valliammal M, Manivannan SK (2018). A Study on Non-Performing Assets and Its Impact on Public Sector Banks in India.