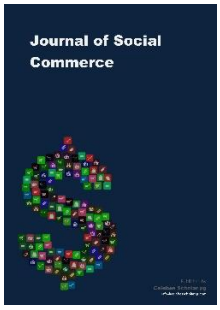

ISSN 2809-929X (Print)
ISSN 2809-9303(Online)

Journal of Social Commerce

Vol. 2 No. 3, 2022 (Page:135-143)
DOI: https://doi.org/10.56209/jommerce.v2i3.33

A Case Study on Gross and Net Non-performing Assets of State bank of India

Shanaliya Hetalben Jayantilal[1]

[1]Research scholar, Saurashtra University Rajkot, Gujarat, India

Article History

Submitted: 15 July 2022,
Revised: 30 August 2022,
Accepted: 15 September 2022

Keywords

Non-performing Assets (NPA),
Gross NPA,
Net NPA,
Chi-square Test,
Time Series Analysis,
Banking Sector

Abstract

The main objective of present study is to examine Gross non-performing assets and net non-performing assets of State Bank of India. For the present case study researcher has select five years period of study started from 2015-16 to 2019-20. Researcher has selected five NPA ratios; Gross NPA, Net NPA, Provision coverage ratio, Cash deposit ratio and Interest spread ratio. Chi- square test; time series analysis (Manually calculated) is applied on selected ratios of non-performing assets of State Bank of India. The study found out that there is no significant association in all selected ratios of state bank of India. It means in all the selected financial years ratios of non-performance assets is similar and null hypothesis is accepted. In this era banking sector has major suffer from non-performing assets. State bank of India is oldest bank with higher market capital. The paper investigates NPA of State Bank of India. This study helps to investors & managerial board for decision making.

Introduction

In recent years, the financial services sector has experienced tremendous expansion; concurrently, the complexity of the challenges it faces has also significantly increased. The financial services sector is very important to the economy of our nation, and these years have seen tremendous expansion in the sector (Scott et al., 2017; Byrne, 2020; Zachariadis & Ozcan, 2021). The evaluation of active loans should be carried out on a regular basis, and the process and recovery mechanism of the non-performing asset (NPA) are very significant for the continued success of the banking sector in the long run. Additionally, the quality of the assets held by banks, especially those owned by public sector banks, is continuously decreasing, which exerts a burden on the management of bankers, regulators, and the economy of India as a whole (Bardhan et al., 2019; Casu et al., 2017).

This will have an impact on the overall performance of the banking sector as a whole when a bank is unable to reclaim a loan that it has given out or when it is not earning regular interest on such a loan (Richard et al., 2019). The loans that are given out by banks and other financial

[1]Corresponding Author: Shanaliya Hetalben Jayantilal, Address: Saurashtra University Campus, Munjka, Rajkot, Gujarat 360005, India

institutions, but the recipients do not keep up with their payments of the main amount or the interest on the loan. The problem with the NPA is not just problematic for individual banks; rather, it is problematic for the economy of the nation as a whole (Kadanda & Raj, 2018).

Review of Literature

(Akter & Roy, 2017; Lafuente et al., 2019) explain that the purpose of the research was to investigate and evaluate the data on non-performing loans held by public and private sector financial institutions between the years 2010 and 2015. A researcher came to the conclusion that the ratio of gross nonperforming assets (NPA) to gross advances was growing for public banks in comparison to private banks after conducting an analysis of the data using methods and tools such as the least square method and ANOVA. However, the researcher discovered through the results of the ANOVA that there is no evidence to conclude that there is a significant difference between the NPA of public and private sector banks (Chavda et al., 2022).

(Sharma et al., 2019; Mishra & Rath, 2021) explain that the research aimed to assess the changes in the NPA bank-wise and sector-wise, and it also wanted to measure the link between the NPA and GDP. These were the aims of the study. A researcher came to the conclusion that the non-performing assets (NPA) of private sector banks rose in tandem with those of non-priority sector banks, and that the NPA of priority sector banks is higher than those of non-priority sector banks. Researchers have also come to the conclusion that the NPA does not have a substantial impact on GDP or inflation (Syed & Tripathi, 2020).

(Tandon et al., 2017; Bag & Islam, 2017) suggest that the research aimed to assess the trend of non-performing loans (NPAs) in private sector banks as well as the influence of NPAs on the profitability of private sector banks. The other purpose of the study was to examine the measure the effect of NPAs on the profitability of private sector banks. For the purpose of study, the researcher used secondary data that spanned 15 years, as well as correlation and regression analysis as statistical tools. A researcher has reached the conclusion that NPAs and ROA have a connection that is unfavorable to one another (Manu & Maheshwari, 2018).

(Almaqtari et al., 2019; Kavitha & Muthukrishna, 2019) explain that the amount of non-performing loans (NPA) in public and private sector banks, as well as the effect of NPA on profitability, were the foci of the research project. A researcher has gathered data from 10 financial institutions that have the largest NPA, and in the statistical tool that they have employed, they have utilized standard deviation and a liner regression model. One researcher came to the conclusion that while NPA and profitability have a negative association, net NPA has a favorable influence on profitability (Gaur & Mohapatra, 2021).

Research Methodology

The primary objective of this research is to get information on the State Bank of India's gross NPA and net NPA levels of non-performing assets (Agarwala & Agarwala, 2019). This involves analyzing the cash deposit ratio of State Bank of India, investigating the provision coverage ratio of State Bank of India, and researching the interest spread ratio of State bank of India. This study makes use of qualitative research methods and a case study format. The data that were looked at in this study were secondary data that were acquired from a report that was issued annually (L. Haven & Van Grootel, 2019; Rashid et al., 2019). The statistics were compiled from reports that were released between the years 2015 and 2019. This information comes from all of India's financial institutions. In order to acquire and choose the data that will be analyzed, this research makes use of a basic random sampling technique. As a result of this, all of the sample units picked came from state banks in India. We used a statistical method called the chi-square test in conjunction with the time series analysis in order to examine the

data. Ration Analysis was the accounting tool that was used (Ratios of Non-performing assets) (Okheshimi, 2020; Ogachi et al., 2020).

Results and Discussion

Data Analysis & Interpretation

Gross NPA Ratio = Gross NPA/Gross Advances× 100

Table 1. Gross NPA Ratio, State Bank of India (Amt. In Crores)

Year	Gross NPA	Gross Advances	Gross NPA Ratio (in %)
2015-16	98172.80	1463700.42	6.7
2016-17	112342.99	1571078.38	7.1
2017-18	223427.26	1934880.19	11.5
2018-19	172753.60	2185876.92	7.9
2019-20	149091.85	2325289.56	6.4

Source: Annual Published Report of State Bank of India

The Gross Non-Performing Asset ratio of SBI Bank is shown in the table above. The table that is shown above, which compares Gross NPA to Gross Advances. The overall average of this ratio during the course of the research is 7.9%. In the 2015-2016 fiscal year, the Gross NPA came in at 6.7%. In the 2016-17 school year, there was a rise of up to 7.1%. There was also a rise to 11.5% in the fiscal year 2017-2018, which is not good for the SBI Bank's health.

However, this figure dropped to 7.9% for the fiscal year 2018–19, which is a positive development for SBI Bank. There is also expected to be a reduction to 6.4% in the year 2020, which indicates that the bank asset quality is in excellent condition. As a result, one might get the conclusion that the non-performing assets of SBI Bank are going down. Therefore, this will be good for the bank, and the bank management need to keep this stance while also attempting to reduce the NPA for the benefit of the SBI bank. An extremely high gross nonperforming asset ratio indicates that the quality of the bank's assets is in very bad health.

Table 2. Chi-square test on Gross NPA Ratio

Oi	Ei	Oi-Ei	$(Oi-Ei)^2$	$(Oi-Ei)^2/Ei$
6.7	7.88	-1.18	1.39	0.18
7.1	7.9	-0.8	0.64	0.08
11.5	7.92	3.58	12.82	1.62
7.9	7.94	-0.04	0.0016	0.002
6.4	7.96	-1.56	2.43	0.31
Total				**2.19**

Sources: Calculated with the help of Time series Analysis

At the 5% level of significance, the value of the chi-square test that was computed for this instance is 2.19, and the table value of the chi-square test is 9.488. Since the estimated number is lower than the value in the table, we can conclude that the null hypothesis is correct and that there is no statistically significant correlation in the Gross NPA of SBI Bank over the time period under consideration.

Net NPA Ratio

Net NPA Ratio = Net NPA/Net Advances× 100

Table 3. Net NPA Ratio of State bank of India

Year	Net NPA	Net Advances	Net NPA Ratio (in %)
2015-16	55807.02	1463700.42	3.8
2016-17	58277.38	1571078.38	3.7
2017-18	110854.70	1934880.19	5.7
2018-19	658947.40	2185876.92	3
2019-20	51871.30	2325289.56	2.23

Source: Annual Published Report of State Bank of India

The information about the Net NPA Ratio of State Bank of India is shown in the table that can be seen above. The table provides a percentage breakdown of the trend from 2015–2016 to 2019–2020. In general, the Net NPA Ratio is 3.69 percent. In the specified time period of 5 years, the Net NPA Ratio displays a pattern that is both positive and negative. The ratio is 3.8% in the year 2015-16, however it will go down to 3.7% in the next year, 2016-17. Following that, it will rise to 5.7% in the year 2017-2018. During the 2018–19 fiscal year, the Net NPA Ratio fell by 2.7%, reaching 3% from its previous level. In addition, the ratio will be lower in the year 2019-20, coming in at 2.23%. Therefore, it is reasonable to assert that the health of the bank is excellent. In this case, the Net NPA Ratio is advantageous for SBI Bank since it has nearly decreased over the last 5 years; as a result, the bank should continue to adhere to the criteria. The Net Non-Performing Asset Ratio is a more accurate measure of the state of the SBI Bank.

Table 4. Chi-square test on Net NPA Ratio

Oi	Ei	Oi-Ei	$(Oi-Ei)^2$	$(Oi-Ei)^2/Ei$
3.8	4.45	-0. 65	0.42	0.09
3.7	4.07	-0. 37	0.14	0.03
5.7	3.69	2.01	4.04	1.09
3	3.31	-0. 31	0.10	0.03
2.23	2.93	-0. 7	0.49	0.17
Total				**1.41**

Sources: Calculated with the help of Time series Analysis

When applied to these data, the computed value of the Chi-square test is 1.41, and the Table value of the X2 test is 9.488 when applying a significance threshold of 5%. Since the table value is higher than the computed value, the null hypothesis may be safely assumed to be true. Therefore, it is plausible to assert that the Net NPA of State Bank of India during the time under consideration does not exhibit any significant associations.

Provision Coverage Ratio

Table 5. Provision Coverage Ratio = NPA Provision/ Total Gross NPA×100

Year	Net Provision	Total Gross NPA	Provision Coverage Ratio (in %)
2015-16	42365.78	98172.80	43.15%
2016-17	54065.61	112342.99	48.13%
2017-18	112572.46	223427.26	50.38%
2018-19	-486193.8	172753.60	61.86%
2019-20	97220.55	149091.85	65.21%

Source: Annual Published Report of State Bank of India

The information about the Provision Coverage Ratio is shown in the table and chart that can be seen above. The Provision Coverage Ratio is typically about 53.75 percent on average. Throughout the course of the investigation, the ratio kept climbing higher. The provision coverage ratio was 43.15% in the fiscal year 2015-16, but it increased by 4.98% the following year, reaching 48.13% in the fiscal year 2016-17. The provision coverage ratio went risen by an additional 50.38 percent in the fiscal year 2017–18, and it will go up by an additional 11.48% in the next fiscal year, 2018–19. When it was 61.86% of the total. The provision coverage ratio reached a new high of 65.21 percent in the 2019-20 fiscal year. A high Provision Coverage Ratio (ideally one that is more than 70 percent) indicates that the majority of asset quality concerns have been resolved, and as a result, the SBI Bank is not at risk. As a standard practice, SBI Banks would put aside some of their income to act as a cushion against defaulted loans.

Table 6. Chi-Square test on Provision Coverage Ratio

Oi	**Ei**	**Oi−Ei**	**$(Oi-Ei)^2$**	**$(Oi-Ei)^2/Ei$**
43.15	42.17	0.98	0.96	0.02
48.13	47.96	0.17	0.03	0.0006
50.38	53.75	-3.37	11.36	0.21
61.86	59.54	2.32	5.38	0.90
65.21	65.33	-0. 12	0.01	0.0001
Total				**1.13**

Sources: Calculated with the help of Time series Analysis

Under these circumstances, the value of the chi-square test that was computed is 1.13, and the value of the chi-square test that was tabulated was 9.488. This was done using a significance threshold of 5%. The value in the table is more than the value that was computed. Therefore, we must accept the null hypothesis. As a result, we are in a position to assert that the Provision Coverage Ratio of the State Bank of India during the course of the research period did not display any significant differences.

Table 7. Cash Deposit Ratio

Year	**Total Advances**	**Total Deposit**	**CD Ratio (in %)**
2015-16	1463700.42	1730722.44	84.57
2016-17	1571078.38	2044751.39	76.83
2017-18	1934880.19	2706343.29	71.49
2018-19	2185876.72	2911386.01	75.08
2019-20	2325289.56	3241620.73	71.73

Source: Annual Published Report of State Bank of India

The information about State Bank of India's credit deposit ratio is shown in the table and chart below. The table that may be seen above displays total advances in comparison to total deposits. The ratio of deposits to credit is, on average, 75.94%. The ratio exhibits persistent declines from the 2015–2016 to the 2017–2018 time periods. In the 2015-2016 school year, the percentage is at 84.57%. The ratio reached a new low of 76.83% in the 2016–2017 academic year. The percentage will drop even more to 71.49% in the next school year 2017-2018. The ratio went risen by 3.99% for the 2018-2019 school year, reaching 75.08% overall. In the year 2019-20, the ratio will be 3.35% lower than what it was the previous year, which was 71.73%. A high credit-deposit ratio is indicative of an overstretched balance sheet, and it may also be an indication that there are problems with capital sufficiency. If a bank has a low credit deposit ratio, it indicates that the bank is not earning as much as it possibly may be.

Table 8. Chi-Square test on Cash Deposit Ratio

Oi	Ei	Oi−Ei	$(Oi-Ei)^2$	$(Oi-Ei)^2/Ei$
84.57	81.42	3.15	9.92	0.12
76.83	78.68	-1.85	3.42	0.04
71.49	75.94	-4.45	19.80	0.26
75.08	73.2	1.88	3.53	0.05
71.73	70.46	0.57	0.32	0.005
Total				**0.48**

Sources: Calculated with the help of Time series Analysis

In this instance, the computed value of the chi-square test is 0.48, and the table value of the chi-square test is 9.488 when using a significance level of 5%. The value in the table is more than the value that was computed. Therefore, we must accept the null hypothesis. Therefore, it is plausible to assert that there is a discernible change in the credit deposit ratio of SBI Bank during the course of the research period.

Table 9. Interest spread ratio

Year	Interest Earned	Interest Expenses	Interest Spread Ratio (in %)
2015-16	163998.30	106803.49	153.55
2016-17	175518.24	113658.50	154.42
2017-18	220499.32	145645.60	151.39
2018-19	242868.65	154519.78	157.17
2019-20	257323.59	159238.77	161.60

Source: Annual Published Report of State Bank of India

The data about the interest spread ratio of State Bank of India is shown in the chart and table that can be seen above. The table provides a percentage breakdown of the trend from 2015–2016 to 2019–2020. The interest spread ratio displays a mixed pattern during the length of time that was supplied. The interest Spread Ratio has an average value of 155.63%. The percentage is at 153.55% for the year 2015-2016. In the year 2016–17, it was at a level of 154.42%, and it has since increased by 0.87%. The ratio went down by 3.03% from the previous year, coming in at 151.39% in 2017-2018. The ratio reached a new high of 157.17% in the 2018-2019 school year after posting a gain of 5.78%. The ratio reached 161.60% towards the end of the 2019-20 fiscal year after another rise of 4.43%.

Table 10. Chi-Square test on Interest spread ratio

Oi	Ei	Oi-Ei	$(Oi-Ei)^2$	$(Oi-Ei)^2/ei$
153.55	151.85	1.7	2.89	0.01
154.42	153.74	0.68	0.46	0.002
151.39	155.63	-4. 24	17.98	0.12
157.17	157.52	-0. 35	0.12	0.0007
161.60	159.41	2.19	4.80	0.03
Total				**0.16**

Sources: Calculated with the help of Time series Analysis

In this case, the result of the chi-square test that was computed is 0.16, and the value that was found in the table was 9.488 when the significance level was set to 5%. The value in the table is more than the value that was computed. Therefore, we must accept the null hypothesis.

Therefore, it is possible to draw the conclusion that there is a considerable gap between the Interest Spread Ratio of the State Bank of India over the studied period.

Conclusion

It is common knowledge that nonperforming assets (NPA) play an important part, and it is also common knowledge that the management of NPA is essential, not only for banks but also for the economy of the country as a whole. As a result of doing the analysis described above, the researcher came to the conclusion that there is no evidence to explain that there is a substantial difference in the SBI's gross and net NPA throughout the time period under review. The interest coverage ratios have been notably different throughout the course of the study period, in contrast to the cash deposit ratios, which have not changed much over the course of the research period.

References

Agarwala, V., & Agarwala, N. (2019). A critical review of non-performing assets in the Indian banking industry. *Rajagiri Management Journal*, *13*(2), 12-23. https://doi.org/10.1108/RAMJ-08-2019-0010

Akter, R., & Roy, J. K. (2017). The impacts of non-performing loan on profitability: An empirical study on banking sector of Dhaka stock exchange. *International Journal of Economics and Finance*, *9*(3), 126-132. https://doi.org/https://doi.org/10.5539/ijef.v9n3p126

Almaqtari, F. A., Al-Homaidi, E. A., Tabash, M. I., & Farhan, N. H. (2019). The determinants of profitability of Indian commercial banks: A panel data approach. *International Journal of Finance & Economics*, *24*(1), 168-185. https://doi.org/10.1002/ijfe.1655

Bag, S., & Islam, S. (2017). Non-Performing Assets a Biggest Challenge in Banking Sector-a Comparative Study Between India and Bangladesh Banking Sector. *ICTACT Journal on Management Studies*, *3*(4), 620-624. https://doi.org/10.21917/ijms.2017.0084

Bardhan, S., Sharma, R., & Mukherjee, V. (2019). Threshold effect of bank-specific determinants of non-performing assets: An application in Indian banking. *Journal of Emerging Market Finance*, *18*(1_suppl), S1-S34. https://doi.org/10.1177/0972652719831546

Byrne, M. (2020). Generation rent and the financialization of housing: A comparative exploration of the growth of the private rental sector in Ireland, the UK and Spain. *Housing Studies*, *35*(4), 743-765. https://doi.org/10.1080/02673037.2019.1632813

Casu, B., Deng, B., & Ferrari, A. (2017). Post-crisis regulatory reforms and bank performance: lessons from Asia. *The European Journal of Finance*, *23*(15), 1544-1571. https://doi.org/10.1080/1351847X.2016.1177566

Chavda, D., Mistry, D., & Deshpande, S. (2022). Analysis of Performance of Public and Private Sector Banks in India. *Vidya-A Journal of Gujarat University*, *1*(1), 38-43. https://doi.org/10.47413/vidya.v1i1.80

Gaur, D., & Mohapatra, D. R. (2021). Non-performing assets and profitability: Case of Indian banking sector. *Vision*, *25*(2), 180-191. https://doi.org/10.1177/0972262920914106

Kadanda, D., & Raj, K. (2018). Non-performing assets (NPAs) and its determinants: a study of Indian public sector banks. *Journal of Social and Economic Development*, *20*(2), 193-212. https://doi.org/10.1007/s40847-018-0068-0

Kavitha, N., & Muthukrishna, V. (2019). Impact of non-performing assets on the profitability in Indian scheduled commercial banks. *African Journal of Business Management*, *13*(4), 128-137. https://doi.org/10.5897/AJBM2018.8683

L. Haven, T., & Van Grootel, D. L. (2019). Preregistering qualitative research. *Accountability in research*, *26*(3), 229-244. https://doi.org/10.1080/08989621.2019.1580147

Lafuente, E., Vaillant, Y., & Vendrell-Herrero, F. (2019). Conformance and performance roles of bank boards: The connection between non-performing loans and non-performing directorships. *European Management Journal*, *37*(5), 664-673. https://doi.org/10.1016/j.emj.2019.04.005

Manu, K. S., & Maheshwari, R. (2018). Relationship between Non-Preforming Assets (NPA) and Profitability of Development Banks: The Case of India. *Asian Journal of Research in Banking and Finance*, *8*(6), 99-111. https://doi.org/http://dx.doi.org/10.5958/2249-7323.2018.00047.0

Mishra, B., & Rath, S. S. (2021). A Comparative Study of Non-performing Assets Using Non-Parametric Test: Indian Scheduled Commercial Banks. *Arthaniti: Journal of Economic Theory and Practice*, 09767479211027874. https://doi.org/10.1177/09767479211027874

Ogachi, D., Ndege, R., Gaturu, P., & Zoltan, Z. (2020). Corporate bankruptcy prediction model, a special focus on listed companies in Kenya. *Journal of Risk and Financial Management*, *13*(3), 47. https://doi.org/10.3390/jrfm13030047

Okheshimi, E. N. (2020). Monetary Policy and Commercial Banks Assets Quality in Nigeria: Panel Data Analysis. *American International Journal of Economics and Finance Research*, *2*(1), 54-71. https://doi.org/10.46545/aijefr.v2i1.198

Rashid, Y., Rashid, A., Warraich, M. A., Sabir, S. S., & Waseem, A. (2019). Case study method: A step-by-step guide for business researchers. *International journal of qualitative methods*, *18*, 1609406919862424. https://doi.org/10.1177/1609406919862424

Richard, O., Michael, A. A., & Samuel, G. G. (2019). Impact of credit risk on corporate financial performance: Evidence from listed banks on the Ghana stock exchange. *Journal of Economics and International Finance*, *11*(1), 1-14. https://doi.org/10.5897/JEIF2018.0940

Scott, S. V., Van Reenen, J., & Zachariadis, M. (2017). The long-term effect of digital innovation on bank performance: An empirical study of SWIFT adoption in financial services. *Research Policy*, *46*(5), 984-1004. https://doi.org/10.1016/j.respol.2017.03.010

Sharma, S., Rathore, D. S., & Prasad, J. (2019). Empirical assessment of management of non-performing asset (NPA) in the public and private sector banks. *Journal of Statistics and Management Systems*, *22*(3), 587-601. https://doi.org/10.1080/09720510.2019.1575601

Syed, A., & Tripathi, R. (2020). Nonperforming Loans in BRICS Nations: Determinants and Macroeconomic Impact. *Indian Journal of finance*, *11*(2),22-35. *Available at SSRN 3528097*. https://dx.doi.org/10.2139/ssrn.3528097

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. https://doi.org/10.1504/IJBCG.2017.087529

Zachariadis, M., & Ozcan, P. (2017). *The API economy and digital transformation in financial services: The case of open banking*. Swift Institute. https://dx.doi.org/10.2139/ssrn.2975199