Journal Homepage: -www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI:10.21474/IJAR01/17095
DOI URL: http://dx.doi.org/10.21474/IJAR01/17095

RESEARCH ARTICLE

A STUDY ON EFFICIENCY OF MERGER AS A TOOL FOR FINANCIAL DISTRESS IN INDIAN PUBLIC SECTOR BANKS

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Manuscript Info

Manuscript History
Received: 15 April 2023
Final Accepted: 19 May 2023
Published: June 2023

Key words:-
Merger, Financial Distress, Non-Performing Assets And Indian Public Sector Banking Industry

Abstract

Merger has become an efficient tool to cop up with financial difficulties in all the industries. In past few years Indian banking Industry is going through so many merger and the recent merger which has been taken place is of bank of Baroda, Dena Bank and Vijaya Bank. This study has been conducted to know the effectiveness of Merger to cope up which financial distress in these selected banks in terms of their Non-Performing Assets. The study has two objectives one is to understand the concept of Non-Performing Assets of Indian banks and second is to examine the impact of merger on financial performance of selected Indian public sector banks. For the analysis for factors i.e. Gross NPA, Net NPA, Percentage of Gross NPA, Percentage of Net NPA and Net Profit or Loss have been considered for the period of ten financial years which was divided into before and after merger period as the merger of selected banks was took place in 2019. The results of the study show that there is a significance difference between the before merger performance and after merger performance of the selected banks.

Introduction:-

Commercial banks play a vital role in regulation of economy of any country. After the execution reforms measures in banking industry, there is a large change in the philosophy and functioning of commercial banks. So the banks are being expected to manage the large inflows and outflows of financial resources of the economy. By the process of consolidation, merger or acquisition a strong banking system is required. Under present scenario there is a need to study the impact of merger on efficiency and Non-performing assets of Indian public sector Banks.

Merger

A merger is a combination of two or more entities into one, which not only results in merger of all the assets and liabilities of all en (Singhal 2017) (Singhal 2017)tities into one but also to achieve several other benefits such as, economies of scale, acquisition of new technology, attaining position in the market with holding companies. In merger all merging entities combines to be in existence as a single surviving entity.

A merger is always a voluntary fusion of two or more companies into one new company. Merging firms shares the equal position in terms of size, scale of production, customers, market etc. this is most commonly done to increase profit, expand new territories, grow revenues, reduce cost of operation, increase market shares, combine common products or all the things which are beneficiary for shareholders of firm. So after the merger, share of new formatted company are distributed among existing shareholders of all original companies.

Causes of Merger

Some important causes of merger are as follows:

- Enhancing the performance of company and refining a better growth.
- For Economy of scale
- Financial collaboration for lower cost of capital
- For technological changes
- For divergence of risk
- Lower burden of Tax
- To increase market share
- Diversification of business for growth
- To cope up with financial hardship or distress

Ways of Merger

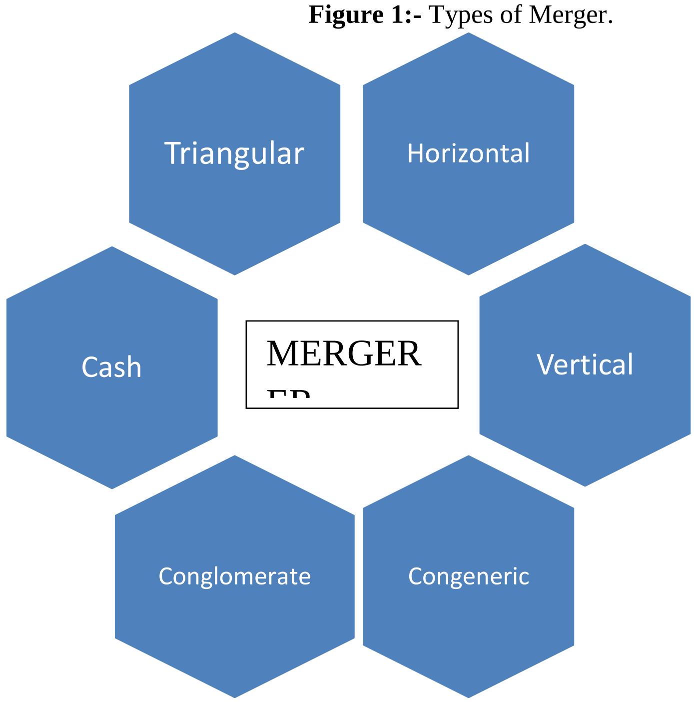
Merger of companies can be take place by any of the following:

- By purchasingthe assets
- By purchasing common shares
- By exchanging of shares for assets
- By exchanging share for share

Types of Merger

Depending on therequirement of merging entities, merger can be of many types. Some main types are as follows:

Figure 1:- Types of Merger.



1. Horizontal Mergers

When companies from same industry merge together it is called Horizontal Merger. Horizontal merger is a combination of business between the companies those are involved in same operation. It often occurs between the competitors offering same products. Example of this type of merger is Coca-Cola and Pepsi. The motive for this merger was to create a larger organisation with more market shares.

2. Vertical Merger

When companies from different industry merge together called vertical merger. Companies involved in providing different kind of services combine as vertical merger. They commonly merge to combine operation of different level within an industry. Two companies those are not competitors to each other but involved in same supply chain of one industry. For example automobile companies providing different parts would join as vertical merger. It will help the new company to obtain better pricing and better manufacturing process.

3. Congeneric Mergers

When companies from same or interrelated industry with no common customer supplies merge together called congeneric merger. Companies use this type of merger for better resulting ability to use same sales and distribution channels for reaching the customer of both the companies. For example a merger between a bank and a leasing company.

4. Conglomerate Mergers

Two companies from unrelated industry combine to form a conglomerate merger. The aim of this type of merger is to utilize financial resources, increase the value of outstanding shares by enhancing leverage and earning per share, enlarging debt capacity and majorly by reducing the cost of capital. It also helps new different companies to reduce the start-up cost. Example of this type of merger is L&T and Voltas Ltd.

5. Cash Merger

In this acquiring company buys the stock of other companies in cash to form a merger. This type of merger take place when the shareholder of companies do not want to be the part of new merged company, as the shareholder of each company get the grant on the basis of relative valuation of all original companies. This merger is also known as cash-out merger. Example of this merger is

6. Triangular Merger

This merger commonly take place for regulatory and Tax reasons. This is a tripartite arrangement in which the target merges with subsidiary of acquiring firm. Triangular merger can be forward or reverse, which depends on Survivor Company after merger. When a company merges to its subsidiary and subsidiary company survives, it is called forward triangular merger. When subsidiary company merges to target company and target company survives it is called reverse merger.

Non- Performing Asset (NPA)

A nonperforming asset refers to the classification of loans or advances used by financial institutions have been defaulted or in the arrears. A loan or advance is considered to be default when the debtor is unable to pay the installment and lender considers the loan agreement as broken. In other words loans or advances on which the principal is due and no interest payment have been made in respect to them for a specific period of time.

In practices any loan becomes NPA when the installment has not been paid for 90 days or more. So a loan is considered to be non-performing asset when it is not being repaid by the borrower. Which shows that the particular loan which is asset for the lender is no longer generating any income, as the no interest is being paid by the borrower.

Amount of non-performing assets for a specific period are recorded on the balance sheet of financial institution or bank. When loans are not repaid for a prolonged period of time, bank enforces the borrower to liquidate any of their assets which were pledged or taken as a security by the bank at the time of lending the loan. When borrower is not able to liquidate any asset or no asset were pledged, than the loan to be considered as bas debt and the sell the asset to the collection agency which will recover the loan at a concession amount.

Features of NPA

1. Nonperforming assets are recorded in balance sheet of bank or financial institution after the prolonged period of non-payment by the borrower which is generally of 90 days.
2. NPA considered as financial burden on the bank. A consecutive number of NPAs shows the distress financial condition of a bank.
3. Non-performing assets can be broadly understood by the classification on the basis of the period of time of overdue and probability of repayment, are;

- Standard assets

- Substandard assets
- Doubtful asset
- Loss asset

4. Lender of loan or bank can recover the losses incurred by NPAs by taking possession on the borrower's assets or selling off the loans to a collection agency.

Types of Non-performing Asset
NPAs canbe classified into four types on the basis of time period of overdue and probability of repayment. Those are as follows:

1. Standard Assets
NPAs considered as standard assets when they have been due for 90 days to 12 months, and with a normal risk level of repayment.

2. Substandard assets
NPAs considered as substandard assets when they have been due for more than 12 months. They comparatively have a higher risk level of repayment of full amount.

3. Doubtful asset
NPAs in this category have been due for at least 18 months. In such cases the probability of repayment is very low. Banks have serious doubt that borrower will ever pay the full loan.

4. Loss asset
In this category those NPAs are considered which have extended period of non- payment. In this case banks have to accept that the particular loan will never be repaid and the whole amount will be considered as a loss in the balance sheet.

Significance of Non-Performing Assets
A non-performing asset is important to both the borrower and the lender to be acknowledged.

As for the borrower if his loan has become non-performing than it can adversely affect their growth and can reduce the chances of attaining loan in the future from any bank or financial institutions.

Whereas for the lender as loans are the main assets and interest is the main source of profit for the bank, when interest is not earned NPAs will adversely affect the generation of profit as well as liquidity and growth.

Financial Distress
Financial distress is a condition in which a company or an individual is cannot to generate revenue or income because it is unable to meet or pay its financial obligations or debt. The most commonly used term for financial difficulty are bankruptcy, insolvency, failure, default and most often use as sick or financially distressed.

According to sick Industrial Companies (Special Provisions) Repeal Act, 2003
"Sick Industrial Company means an industrial company which has at the end of any financial year accumulated losses exceeding 50 per cent of maximum net worth during the last four years or has failed to repay installment of its debts or it is a creditors in three consecutive quarters. Any of the above two conditions is sufficient to consider a company as sick."

Financial distress in Banking Industry
Financial distress is commonly known as industrial sickness. For banking industry an increased level of Non-performing assets is considered as financial distress as loans and advances are the assets for banks on which they generate profit in the form of interest, when these loans and advances become non- performing means borrower is unable to pay the installment and repay the loans it is considered to be as non-performing after a certain period of time. So any bank is considered as financially distressed if its net non-performing assets are more than 10% against the total advances given by the bank for that particular financial year. When net NPA goes over to 10% of total advances it is considered as the category of prompt corrective actions. In which banks try to cope up with its situation of financial hardship.

For any industry merger is a common tool to cope up with the situation of financial distress. In present scenario merger has become a major tool for the banks to resolve their problem related to financial obligations or Non-performing assets.

Profile of Selected Banks

For the purpose of study three Indian public sector banks have been selected which were merged recently. Government of India proposed the amalgamation of Dena Bank and Vijaya Bank with the Bank of Baroda on 17 September 2018. The Union Cabinet and the boards of all three banks approved the merger on 2 January 2019. Under the regulation of the amalgamation, shareholders of Dena Bank and Vijaya Bank received 110 and 402 equity shares of the Bank of Baroda, respectively, of face value ₹2 for every 1,000 shares they held. This amalgamation became effective from 1 April 2019.The aim of this merger was to create the country's third largest bank after State Bank of India (SBI) and ICICI Bank.

1. Bank of Baroda

Bank of Baroda is an Indian Multinational public sector banking and financial services company. It is the third largest public sector bank in India. And second largest public sector undertaking bank of India. Maharaja SayajiraoGaekwad III, maharaja or Baroda in Gujarat set up bank of Baroda in 1908. After two years Bank of Baroda established its first branch in Ahmedabad. The bank was nationalized on 19 July 1969 by the government of India along with thirteen other major commercial banks of India.

2. Dena Bank

Dena Bank ltd was an Indian public sector bank, which was founded on 26 may 1938 by the family of DevkaranNanjee, Under the name of DevkaranNanjee Banking Company. When it was incorporated as public company in December 1939 it was adopted by a new name as Dena (DevkaranNanjee). It was nationalized by government of India in July 1969 hence became a public sector bank constituted under the banking companies Act, 1970. It had its headquarter in Mumbai and had 1,874 branches.

3. Vijaya Bank

Vijaya bank was a public sector bank of India and had its corporate office in Bengaluru, Karnataka. It was established by a group of farmers led by AttavarBalakrishna Shetty on 23 October 1931 in Mangaluru, Karnataka. This bank was established on the day of Vijayadashami (a Hindu festival) so it was named as Vijaya Bank. Vijaya Bank became scheduled bank in 1958 and was nationalized on 15 April 1980. It had 2031 branches throughout the country.

Objectives of Research:-

1. To understand the concept of Non-Performing Assets of Indian banks.
2. To examine the impact of merger on financial performanceof selected Indian public sector banks.

Review of Literature:-

1. Suresh Kumar in his study **"Impact of Bank Mergers on the Efficiency of Banks: A Study Of Merger Of Bharat Overseas Bank With Indian Overseas Bank" (2013)** in this study the researcher has attempted to compare the pre and post-merger performance of Bharat Overseas Bank and Indian Overseas Bank by comparing different efficiency parameters like Profit Per employee, Business Per Employee, Investment and Advances, Interest Income, Net performing Assets, Return on Assets etc. the study shows a positive result that after the merger there was an enhancement in all the parameters of banks.

2. Rao S. Durga and Kumar R Prasantha in their study "**Financial Performance Evaluation of Indian Commercial Banks during Before and After Mergers (2013)"** tried to verify the impact of merger on financial performance of commercial banks that were merged during the years 2001 to 2010. The study is based on financial reports of merged banks. The Researcher has used financial ratios; capital adequacy ratio, credit deposit ratio, Non- performing assets Ratio, and return on Assets for the purpose of study. Financial performance of banks has been compared by taking the average of data of three years before and three years after the merger. And the researcher found that after the merger financial performance was increased by 34%.
3. JyotiSinghal in her study "**Consolidation/ Mergers and Acquisitions of Banking Sector for Profitability and Efficiency" (2017)** examined the effects of merger and acquisition on the performance of banks pre and post-

merger and consolidation. This study considered four merger happened in the year 2007, 2009, 2010 and 2015. For the purpose of analysis researcher has considered return on Assets, Return on Equity and Non-performing assets as major tools for examining performance of selected banks. This study revealed that merger has neither enhanced financial performance nor improved financial efficiency. It has also been seen after the research that overhead efficiency ratio has increased after merger of banks which shows that expenses of banks are increasing or revenue are decreasing.

4. KratiRajoria in her study "**The Consolidation Of Public Sector Banks: A Ray of Hope To The NPA Problem In India (2018)"**has tried to find out that whether bank consolidation improves bank healthiness and stabilized the banking system. Researcher has also tried to find out reasons for the rising NPA in public sector banks. Study concluded that there is huge scope for consolidation among public sector banks which have been proven very successful in dealing with rising NPA.

Need and Significance:-

In the present scenario where a number of Indian banks are getting merged, it has become more specific to know the various reasons behind their merger andthe difference in the performance of bank after the merger. This is study is also mainly considering the impact of merger of Bank of Baroda, Dena Bank and Vijaya Bank on their financial Performance.

1. This study is helpful for the stakeholders before taking the financial decision related to these banks.
2. The study also comprises of insight of status of NPA before and after the merger, which can be helpful to the Government to know the health of bank and take necessary actions.

Research Methodology:-

Type of Research
The research is exploratory and descriptive in nature

Scope of the Study
The study includes three Indian public sector banks; Bank of Baroda, Dena Bank and Vijaya Bank.

Sampling Technique
Banks have been selected on the basis of event of merger occurred recently in Indian Public sector banks.

Type of data
Secondary data has been used for the purpose of study.

Sources of data
The data required for the study have been collected from the official websites of selected Indian Public sector banks.Data has been collected from the financial reports of selected banks for pre-merger and post-merger period for four quarterly results before the merger and four quarterly results after the results.

Tools for the study
Non-performing assets, Return on Equity and Return on Advance has been used as the measure tool to analyze the efficiency of selected Indian public sector banks.

Hypotheses for the study
Two hypotheses have been developed considering Gross NPA and Net NPA, these are:
H01: there is no significance difference between the Gross NPA of before merger and after merger period.
H02: there is no significance difference between the Net NPA of before merger and after merger period.

Duration of study
Study has included tenfinancial years, fiveyears before the merger and five years after the merger from 2013-2014 to 2022- 2023.

Data Analysis:-

For the purpose of examining the impact of merger on the financial performance of selected bank, ten financial year financial data has been collected through the annual reports of selected banks. Ten years of data is further divided into before merger and after merger period to analyze the impact.For the purpose of comparative analysis Gross NPA, Net NPA, Percentage of Gross NPA, Percentage of Net NPA and Net Profit or Loss of selected banks for the selected period has been considered.

Table 1:- Performance of Bank of Baroda before Merger.

Particulars (in crores)	**2014**	**2015**	**2016**	**2017**	**2018**
Gross NPA	11875.9	16261.44	40521	42719	56480
Net NPA	6033.76	8069.49	19407	18080	23483
% of Gross NPA	3%	4%	9.99%	10.46%	12.26%
% of Net NPA	1.52%	1.89%	5.06%	4.72%	5.49%
NET profit/ loss	4541.08	3398.44	-5396	1383.1	-2431.8

Table 2:- Performance of Dena Bank before Merger.

Particulars (in crores)	**2014**	**2015**	**2016**	**2017**	**2018**
Gross NPA	2616.03	4393.04	8560.49	12618.73	16361
Net NPA	1819	1372.22	3322.32	7735.12	7839
% of Gross NPA	3%	5%	10%	16%	22%
% of Net NPA	2%	4%	6%	11%	12%
NET profit/ loss	551.66	265.48	-935.32	-863.62	-1923.15

Table 3:- Performance of Vijaya Bank before Merger.

Particulars (in crores)	**2014**	**2015**	**2016**	**2017**	**2018**
Gross NPA	1985.86	2443.21	6027.07	2443	7526.09
Net NPA	1262.37	1659.81	4276.82	1660	5021.24
% of Gross NPA	2%	3%	7%	3%	6%
% of Net NPA	2%	2%	5%	2%	4%
NET profit/ loss	415.91	439.41	381.8	750.49	727.02

Table no. 1, 2 and 3 are showing the five year financial performance of selected bank before the merger.

Table 4:- AveragePerformance of three Banks before Merger.

Particulars (in crores)	**2014**	**2015**	**2016**	**2017**	**2018**
Gross NPA	5492.6	7699.23	18369.52	19260.24	26789.03
Net NPA	3038.38	3700.51	9002.05	9158.37	12114.41
% of Gross NPA	2.67%	4%	9%	10%	13.42%
% of Net NPA	1.84%	2.63%	5.35%	6%	7.16%
NET profit/ loss	1836.22	1367.78	-1983.17	423.32	-1209.31

Table no. 4 is showing average performance of BOB, Dena Bank and Vijaya Bank before merger. The averages have been calculated by comprising data of three banks of same years.

Table 5:- Performance of Merged Bank (Bank of Baroda) after Merger.

Particulars (in crores)	**2019**	**2020**	**2021**	**2022**	**2023**
Gross NPA	48233	69381.43	66671	54059.39	36763.68
Net NPA	15609	21576.6	21800	13364.64	8384.32
% of Gross NPA	9.61%	9.41%	8.87%	6.61%	3.79%
% of Net NPA	3.33%	3.13%	3.09%	1.72%	0.89%
NET profit/ loss	433.5	546.2	828.95	7272.28	14109.62

Table no. 5 is showing performance merged bank after the merger as the merger of three Banks took place in year 2019. For conducting the comparative analysis, the averages of all parameters for three banks has been calculated for all years before the merger to compare with parameters of after merger period.

H01: There is no significance difference between the Gross NPA of before merger and after merger period.

For testing the above hypothesis Single factor ANOVA has been processed on Microsoft Excel. Following table is showing the results of analysis.

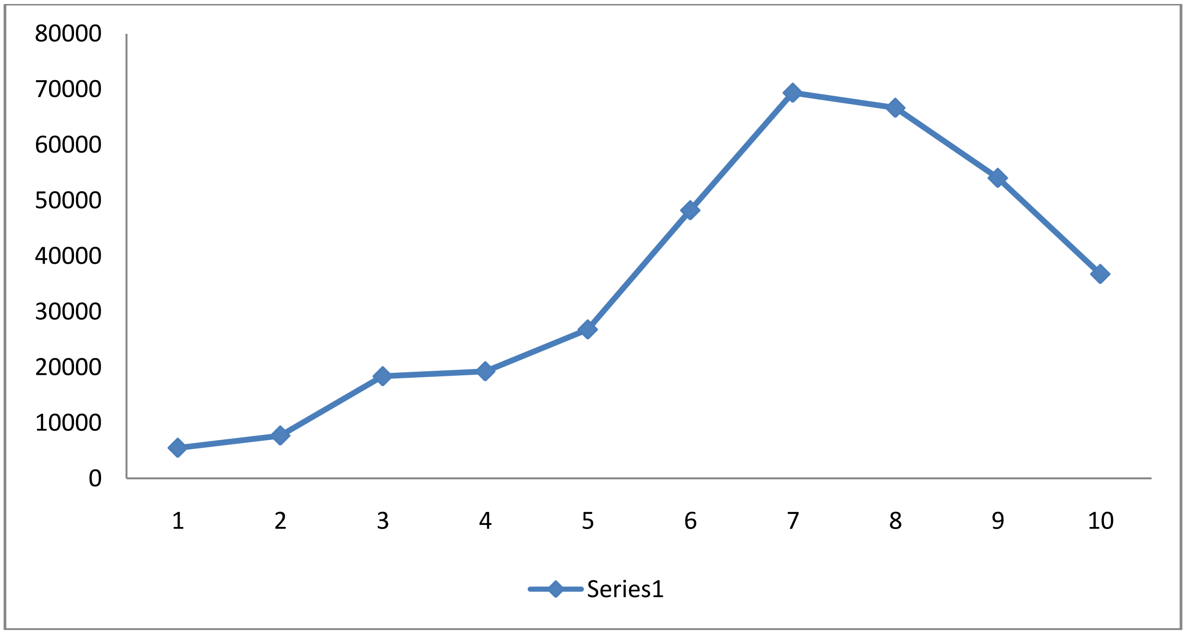
Table 6:- Single Factor ANOVA on Gross NPA.

Source of Variation	SS	df	MS	F	P-value
Between Groups	3.9E+09	1	3.9E+09	30.20488	0.000577
Within Groups	1.03E+09	8	1.29E+08		
Total	4.93E+09	9			

Source: MS Excel Output

The output of single factor ANOVA applied on Gross NPA shows the p value is 0.000577 which is very less than the value of alpha (0.05) so the null hypothesis is rejected and there is a significant difference between the Gross NPA before and after merger period.

Chart 1:- Trend of Gross NPA.



The above chart no. 1 is showing the trend of Gross NPA for selected ten years. By the analyzing the above trend it can be conclude that Gross NPA of selected Banks were higher in 7^{th} year which is 2020 and then gradually decline after and minimize in year 2023.

H02: There is no significance difference between the Net NPA of before merger and after merger period.

For testing the above hypothesis Single factor ANOVA has been processed on Microsoft Excel. Following table is showing the results of analysis

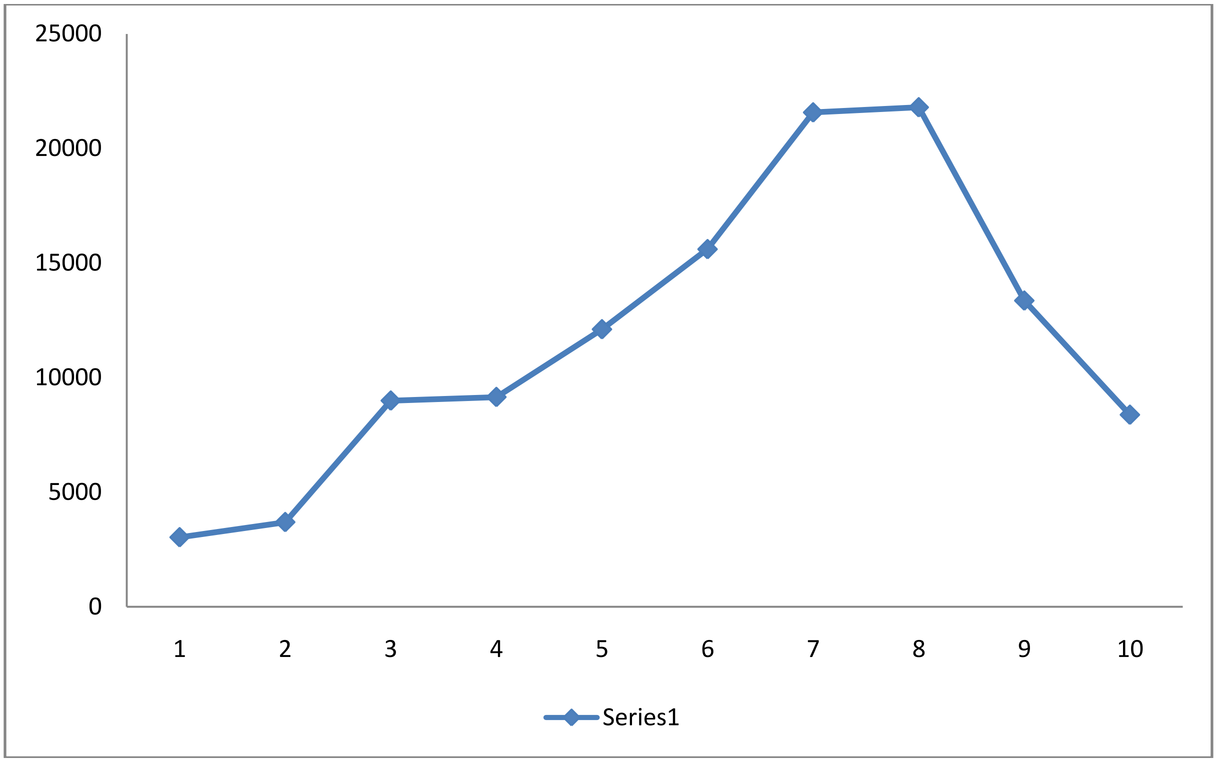
Table 7:- Single Factor ANOVA on Net NPA.

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1.91E+08	1	1.91E+08	8.03489	0.021994	5.317655
Within Groups	1.9E+08	8	23790143			
Total	3.81E+08	9				

Source: MS Excel Output

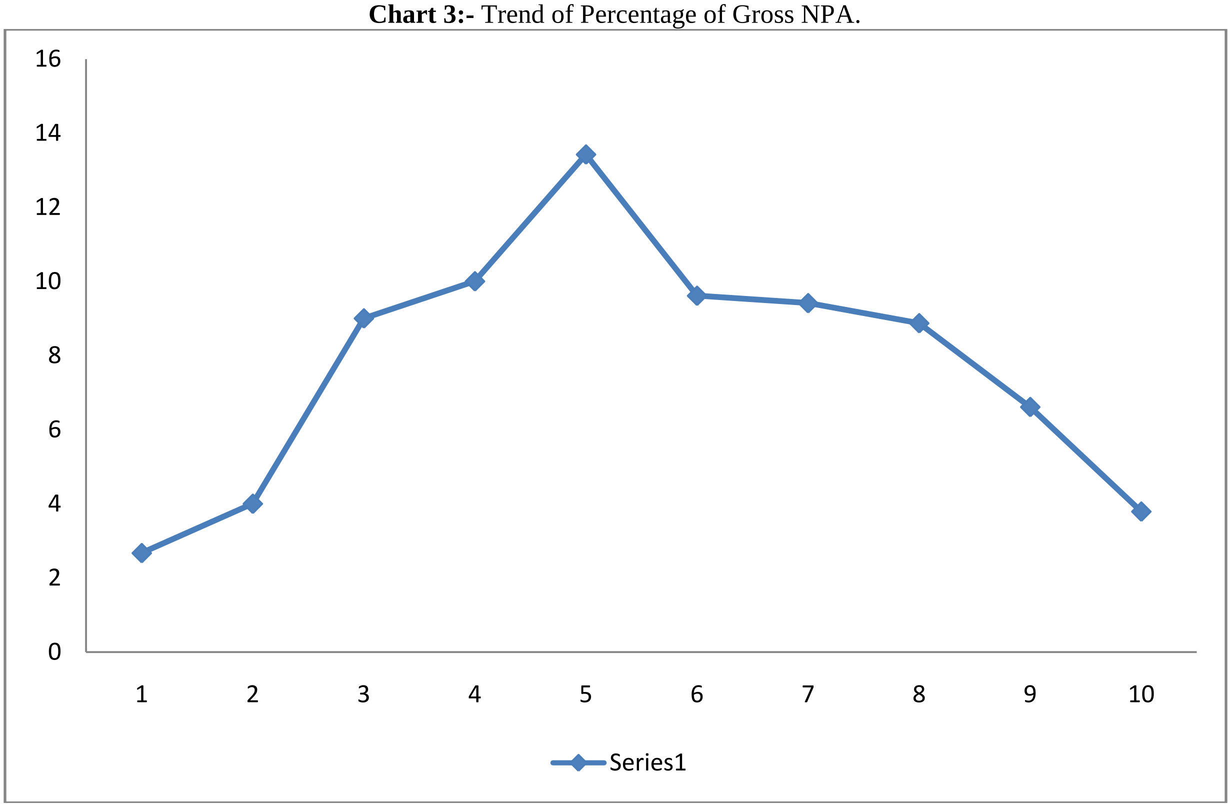
The output of single factor ANOVA applied on Net NPA shows the p value is 0.02 which is less than the value of alpha (0.05) so the null hypothesis is rejected and there is a significant difference between the Net NPA before and after merger period.

Chart 2:- Trend of Net NPA.



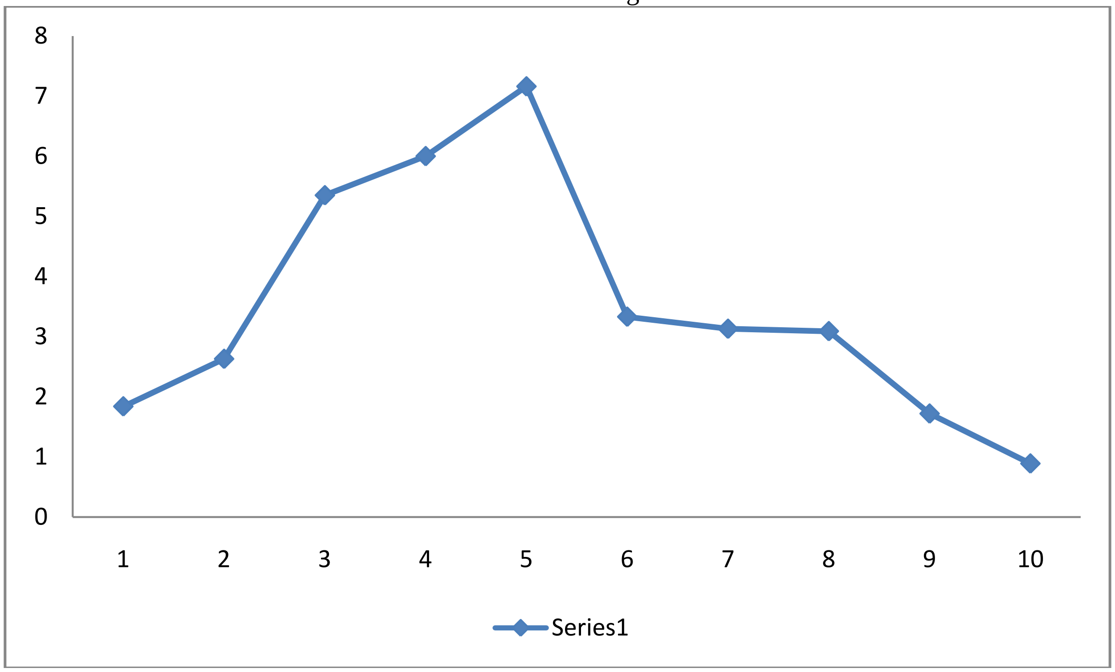
The above chart no. 2 is showing the trend of Net NPA for selected ten years. It shows that the Net NPA was higher in 7th and 8th year which is 2020, 2021 and then gradually decline and minimum in year 2023.

Chart 3:- Trend of Percentage of Gross NPA.



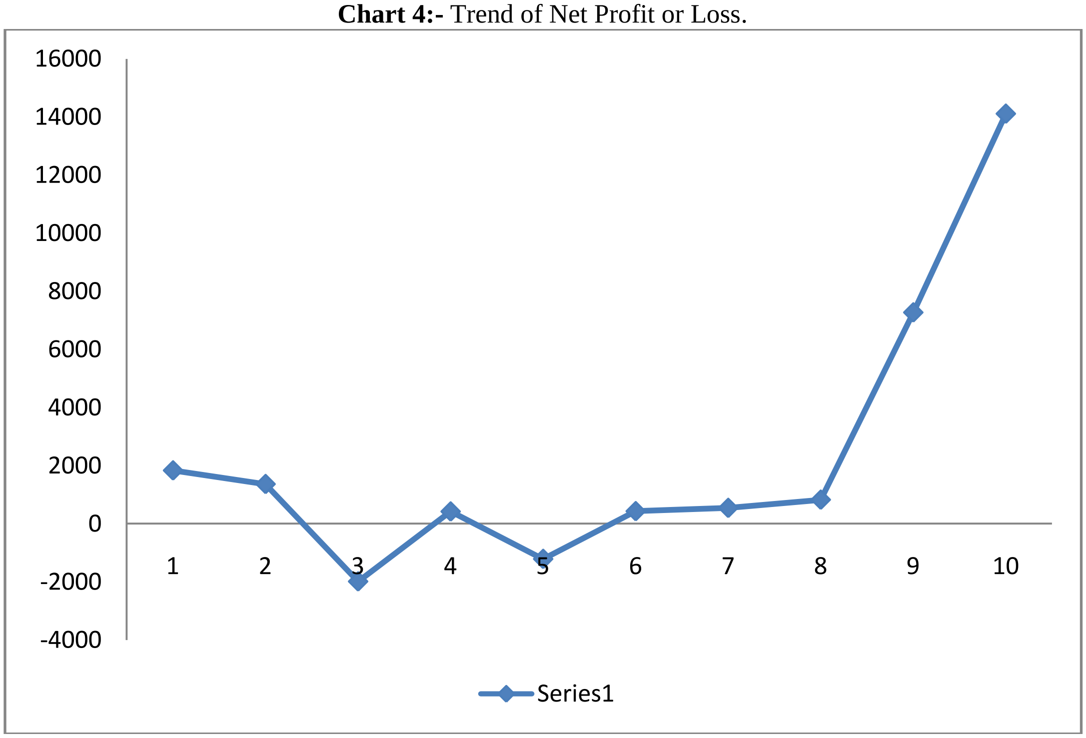
The above chart no. 3 shows the trend of percentage of Gross NPA for selected ten years. It shows that the percentage of Gross NPA was at peak in 5th year which is 2018 and then gradually decline and minimum in the year 2023.

Chart 4:- Trend of Percentage of Net NPA.



The above chart no. 4 shows the trend of percentage of Net NPA for selected ten years. It shows that the percentage of Net NPA was higher in 5th year which is 2018 and then decline and minimum in year 2023.

Chart 4:- Trend of Net Profit or Loss.



The above chart no. 4 is showing trend of Net Profit or loss for the selected ten years. It shows that banks have very low profit or even loss in year 2016 and 2018 but after the merger the profit increased and at a great position in 2022 and 2023.

Findings and Conclusion:-

Findings:-

The study has following major findings:

By the analysis it has been found that there is a significance difference between Gross NPA of Before merger and after merger period. And by observing the trend it has been found that Gross NPA is minimum in year 2023

By the analysis it has been found that there is a significance difference between Net NPA before merger and after merger period. And by observing the trend it has been found that Net NPA is minimum in year 2023.

By observing the trend it has been found that Percentage of Gross NPA was at peak in year 2018 and then gradually decline and minimum in the year 2023.

By observing the trend it has been found that Percentage of Net NPA was higher in year 2018 and then decline and minimum in year 2023.

By observing the trend it has been found that banks have very low profit or even loss in year 2016 and 2018 but after the merger the profit increased and at a great position in 2022 and 2023.

Conclusion:-

From the analysis and study the various concepts NPA is can be conclude that NPA is the basic tool to analyze the financial performance of any bank. By this study it is being concluded that merger has been proven a good measure to cope up with the situation of financial distress in selected public sector banks, as the analysis shows a significant difference in all selected parameters for before and after merger period.

By the analysis it also can be conclude that the causes behind the Higher NPA in selected banks was due to **demonetization in 2016 and COVID pandemic period in 2019.** But after the merger the banks somehow managed to reduce their NPA levels and earn a good profit.

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