IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

ASSET QUALITY ANALYSIS: A STUDY ON THE PRE AND POST MERGER PERFORMANCE OF NON-PERFORMING ASSETS OF ING VYSYA BANK AND KOTAK MAHINDRA BANK

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Abstract: In the recent years, the banking sector has witnessed a large number of mergers and acquisitions. These mergers are carried out with a motive of enhancing performance, sharing resources and eliminating competition. Banks also indulge in mergers and acquisitions to provide for non-performing assets in their organization. Non-performing assets are those that no longer earn income for the bank. Such assets hinder growth and development in the banking structure. In the light of this background, a study on the pre and post-merger performance of ING Vysya Bank and Kotak Mahindra Bank has been carried out. The motive behind this study is to understand the impact of the merger on the non-performing assets of the bank. The basic aim of this paper is to understand the background of this merger and to analyze the net NPA to advances ratio of ING Vysya Bank and Kotak Mahindra Bank. The scope of this paper is limited to the net NPA to advances ratio and net NPA to total assets ratio that would indicate a change in performance of the bank before and after merger in terms of its non-performing assets. The results of this study indicate a higher and improved performance of the bank after the merger. Thus, there is a significant difference between the pre-merger and post-merger performance of the bank in terms of the net NPA to Advances ratio and net NPA to total assets ratio.

Keywords: **Merger, Non-performing Assets, Net NPA, Net Advances, Total Assets**

INTRODUCTION

Banks play a pivotal role in economy. They enable, not only the movement of funds, but also ensure positive movement of economies. The banking sector enables trade and commerce in any economy. It ensures economic growth and development which is why the functions of banks make it the backbone of modern business *(Nilesh, Baban; 2014).* The banking industry in India has been in existence for over a century in various forms; in the way of moneylenders, loan sharks, and zamindars. The banking system in India was standardized or nationalized with the foundation of Bank of Hindustan in the year 1770. The banking system in India has evolved manifold since then *(Niraj; 2018).* Today, India is dominated by nationalized banks *(Nilesh, Baban; 2014).* India then witnessed the emergence of presidency banks under the charters of the British East India Company *(Vijay Kumar; 2017).*

Banks perform a variety of functions apart from acceptance of deposits and lending of loans. The functions of banks include:

a. Granting of letter of credit
b. Sale and purchase of stocks, funds and debentures
c. Sale and purchase of foreign exchange
d. Agency functions
e. Guarantee and indemnity *(Kolekar; 2016)*

Banks, like any other commercial institute, carry out the above functions to earn profits for themselves. Banks earn interest on loans and fees on all other activities carried out *(Nilesh, Baban; 2014).* It is generally accepted that a healthy banking system is necessary for economic growth. In the recent times, banks have been undergoing a massive amount of changes in terms of interest earnings, cost of funds, operating expenses and non-performing assets *(Malyadri, Sirisha; 2015).*

India's financial system has been negatively affected by non-performing assets since the past decade. The global financial crisis had its effect on India's banking sector such that all efforts by the Reserve Bank of India and the Indian Government seemed to be insufficient to bring the banking sector to its previous space *(Naina; 2018).* Asset deterioration calls for a reduction in profits and is therefore a vital parameter for performance evaluation. Non-performing assets (NPA) hinder survival and growth of banks and thus need to be closely monitored *(Avnesh Singh).*

Mergers and acquisitions in the banking sector are becoming increasingly common and can take various forms. Most banks merge or acquire in order to avail the benefits of improved management, better asset quality, enhanced reach in the market and sharing of essential resources *(Ruchita, Janaki; 2018).* Mergers and acquisitions are often carried out in order to enhance the overall performance of the bank. However, analysts suggest that mergers do not solve the issues of ow capital formation and high non-performing assets *(Economic Times; 2019).* Therefore, one can only expect an overall improvement in performance through mergers and acquisitions, and not necessarily a reduction in the volume and/or value of bad loans.

LITERATURE REVIEW

The banking and finance industry in India play an important role in the development of the economy as a whole. This role of banks in the economy has led various scholar to study the banking industry and individually analyze the profile of various banking institutions *(Malyadri, Sirisha; 2015).* The best indicator for the determination of the health of a bank is its non-performing assets *(Prasad, Veena; 2011).* Various researchers have studied the impact of non-performing assets on the health of the banks as well as the economy. The definition of non-performing assets; "a non-performing asset is an asset on the account of the borrower, which has been classified by a bank or a financial institution as sub-standard, doubtful, or loss asset as according to the directions or guidelines set for asset classification by the Reserve Bank of India *(Kapil; 2016).*

Asset quality and bank efficiency are highly correlated. The efficiency with which the banking system operated depends majorly on the assets it owns in terms of loans that have been let out and fetch interest for the banks. Such assets are those that create wealth for banks and the existence of non-performing assets often create a dearth of funds in such institutions thereby harming its overall efficiency *(Sira, Sudarshan; 2013).*

In order to avoid a situation of bad debts, it is necessary for bankers to consider the return on investment expected to be earned on any project it wishes to finance. The purpose of a project and its return on investment can enable a banker to identify the prospective gain or loss through upon indulging in such investments *(H.S; 2013).* Various studies have also concluded that each banking organization must have its own credit rating agency that could work towards identifying the repaying capacity of their borrowers before extending huge amounts of loans to them *(Gupta; 2012).*

A major issue with non-performing assets is that although they do not generate interest income for banks, these assets do for sure gain provisions from the current profits of the banks. This means that banks are required to maintain a certain percent of their current profits as a contingency reserve for the occurrence of bad debts *(Prasad, Veena; 2011).* The impact of non-performing assets is slightly different from one bank to another, generally involving a reduction in the spread of interest and shareholder value. The presence of non-performing assets also jeopardizes the viability of a bank *(Siraj, Sudarsanan; 2013).*

Non-performing assets contribute majorly to the intermediate costs and expenses of banks while disturbing the profitability of the institution *(Koeva; 2001).* It has been identified that higher levels of non-performing assets lead to economic crises as they hamper the flow of money in the economy and also set a barrier on the money multiplier system. Economic crises in many countries have occurred when the non-performing assets in banks have reached a level where they become equal to 10% of the country's gross-domestic product. *(Khan, Bishnoi; 2001).*

Non-performing assets have been classified in the following manner:

a. Standard assets – the asset that pays interest regularly
b. Sub-standard assets – assets that have not performed for a period of less than or equal to 12 months
c. Doubtful assets – assets that have not performed for a period of more than 12 months
d. Loss assets – assets that have been determined as losses upon inspection by the Reserve Bank of India *(Kapil; 2016).*

Non-performing assets have known to arise due to various internal and external factors. Although Non-performing assets cannot be entirely eliminated from the economy, they can definitely be brought into controllable limits, thereby securing the institution or the bank, and the economy from a crisis. Non-performing assets affect not just the bank issuing such loans, but also various other parties such as creditors, borrowers, and the industry. At a larger level, Non-performing assets (NPAs) block the formation of capital by reducing the flow of money from borrowers to the lenders, thereby slowing down economic activity *(Siraj, Sudarsanan; 2013).*

The various alternatives suggested to be at the disposal of banks in order to reduce the level of non-performing assets in their organizations include the establishment of an effective credit rating system and internal control measures. These, would allow banks to improve upon the quality of assets in the balance sheet *(Kavitha, Muthumeenakshi; 2016).* However, in such a situation of high NPA levels, it becomes difficult for banks to compete with other players in the industry. Therefore, banks need for focus on the dual objective of reduction of the level of non-performing assets and maintaining competitiveness *(Balasubramaniam; 2006).*

In the recent times, banks have started to indulge in mergers and acquisitions in order to improve and enhance the overall performance of the organization, to reduce costs, expand consumer reach and accelerate growth, thereby reducing competition *(Baser, Brahmabhatt; 2011).* Some researchers suggest that banks enter into mergers in order to avail tax benefits of a specific region or country *(Kuriakose, Raju; 2013).* However, it is quite evident that banks, turn to mergers and acquisitions in hope that it would reduce their burden of non-performing assets, which, as argued by some analysts, would not necessarily have any positive impact on their financial statements *(Economic Times; 2019).*

OBJECTIVES

The major objectives of this research are as follows:

a. To analyze the pre-merger and post-merger performance of ING Vysya Bank and Kotak Mahindra Bank in terms of net NPAs and net Advances
b. To analyze the pre-merger and post-merger performance of ING Vysya Bank and Kotak Mahindra Bank in terms of net NPAs and Total Assets

Data for this research has been collected through various secondary sources including reports submitted by various organizations, the annual reports of ING Vysya Bank and Kotak Mahindra Bank, and Moneycontrol.com.

RESEARCH METHODOLOGY

This research attempts to identify a relationship between pre-merger and post-merger performance of ING Vysya Bank and Kotak Mahindra Bank, in terms of the performance in these time periods. Data has been collected for the years 2010 through 2019 for the purpose of this analysis. In this study the measures of performance are the net NPA to Advances Ratio and the net NPA to Total assets ratio. The net NPA to Advances Ratio indicates the quality of loans issued by the bank. The net NPA to Total assets ratio indicates the amount of non-performing assets as compared to the bank's total assets.

Data has been collected from the annual reports of ING Vysya Bank and Kotak Mahindra Bank for the years 2010 to 2019. Data for non-performing assets, loans and advances and total assets has been sued for the subsequent analysis. An initial test of normality has been carried out in order to understand the distribution of data. A normal distribution is a symmetric bell-shaped curve which is defined by a mean and by its variability. Further, a one-sample T-test has been carried out to identify and analyze the performance of ING Vysya Bank and Kotak Mahindra Bank before and after its merger.

HYPOTHESIS

H0: there does not exist a significant impact between pre-merger and post-merger performance of Net NPA to Net Advances.
H1: there exists a significant impact between pre-merger and post-merger performance of Net NPA to Net Advances.
H0: there does not exist a significant impact between pre-merger and post-merger performance of Net NPA to Total Assets
H1: there exists a significant impact between pre-merger and post-merger performance of Net NPA to Total Assets

ANALYSIS

Normality test

Descriptive Statistics

			Statistic	Std. Error
Pre-Merger	Mean		.4600	.03240
	95% Confidence Interval for Mean	Lower Bound	.3569	
		Upper Bound	.5631	
	5% Trimmed Mean		.4594	
	Median		.4550	
	Variance		.004	
	Std. Deviation		.06481	
	Minimum		.39	
	Maximum		.54	
	Range		.15	
	Interquartile Range		.13	
	Skewness		.367	1.014
	Kurtosis		-1.040	2.619

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre-Merger	.178	4	.	.985	4	.931

Descriptive Statistics

			Statistic	Std. Error
Post-Merger	Mean		.8925	.04270
	95% Confidence Interval for Mean	Lower Bound	.7566	
		Upper Bound	1.0284	
	5% Trimmed Mean		.8939	
	Median		.9050	
	Variance		.007	
	Std. Deviation		.08539	
	Minimum		.78	
	Maximum		.98	
	Range		.20	
	Interquartile Range		.16	
	Skewness		-.753	1.014
	Kurtosis		.343	2.619

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Post-Merger	.192	4	.	.971	4	.850

As according to the above normality test using Shapiro-Wilk test, the calculated p-value is 0.931 for pre-merger data and 0.850 for post-merger data. The p-value is more than the significance level of 0.05, hence indicating that the test is not significant. The data, is thus, normal. Hence, every value above 0.05 indicates normality of data. Therefore the data is normally distributed.

One sample t-test

The one-sample t-test analyses if a given set of data is significantly different form the hypothesized mean. For the purpose of this research, a one-sample t-test has been carried out on the following sets of data:

a. Net NPA to Net Advances
b. Net NPA to Total Assets

Net NPA to Net Advances

This analysis indicates the pre-merger and post-merger analysis of non-performing assets of ING Vysya Bank and Kotak Mahindra Bank. In this analysis, the pre-merger Net NPA to Net Advances indicates an increasing trend, but at a rate slower than that post the merger. This showcases high and improved performance after ING Vysya Bank merged with Kotak Mahindra Bank. The overall pre-merger performance the highest Net NPA to Net Advances is recorded at 0.54 in the year 2013-14 against the highest post-merger performance recorded at 0.98 in the year 2017-18.

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Pre-Merger	4	.4600	.06481	.03240
Post-Merger	4	.8925	.08539	.04270

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Pre-Merger	14.196	3	.001	.46000	.3569	.5631
Post-Merger	20.904	3	.000	.89250	.7566	1.0284

The one-sample t-test indicates significant difference between the means among the pre-merger and post-merger performance of ING Vysya Bank and Kotak Mahindra Bank. The mean and standard deviation of pre-merger performance were found to be 0.46 and 0.0648 respectively. The calculated p-value of the test was recorded at 0.001. The mean and standard deviation of post-merger performance were found to be 0.8925 and 0.08539 respectively. The p-value for both pre-merger and post-merger performance was below 0.05, hence indicating the acceptance of the null hypothesis.

Net NPA to Total Assets

This analysis indicates the pre-merger and post-merger analysis of non-performing assets to total assets of ING Vysya Bank and Kotak Mahindra Bank. In this analysis, post-merger data of Net NPA to Total Assets indicates an increasing trend as compared to the pre-merger data of the same. This showcases high and improved performance after ING Vysya Bank merged with Kotak Mahindra Bank. The overall pre-merger performance the highest Net NPA to Total Assets is recorded at 0.28 in the year 2012-13 against the highest post-merger performance recorded at 0.63 in the year 2017-18.

NET NPA TO TOTAL ASSETS

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Pre-Merger	4	.2650	.03697	.01848
Post-Merger	4	.5400	.07257	.03629

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Pre-Merger	14.337	3	.001	.26500	.2062	.3238
Post-Merger	14.882	3	.001	.54000	.4245	.6555

The one-sample t-test indicates significant difference between the means among the pre-merger and post-merger performance of ING Vysya Bank and Kotak Mahindra Bank. The mean and standard deviation of pre-merger performance were found to be 0.2650 and 0.03697 respectively. The calculated p-value of the test was recorded at 0.001. The mean and standard deviation of post-merger performance were found to be 0.54 and 0.07257 respectively. The calculated p-value of the test was recorded at 0.001. The p-value for both pre-merger and post-merger performance was below 0.05, hence indicating the acceptance of the null hypothesis.

CONCLUSION

The banking sector is an essential sector in the Indian economy and is responsible for growth and development of the country. this paper, attempts to evaluate the quality of assets at ING Vysya Bank and Kotak Mahindra Bank, before and after their merger. Data for eight years has been analyzed for this purpose. Four years of pre-merger and four years of post-merger data has been considered for the study. This allows for equal duration and hence can monitor progress better. High levels of non-performing assets are a key challenge of the banking industry. It is therefore, crucial to reduce the level of non-performing assets in order to ensure better performance.

From the analysis, it is evident that Net NPA to Net Advances and Net NPA to Total Assets indicate a positive and increasing trend, thereby indicating better performance after the merger as compared to that before the merger. Therefore, through this research it is made evident that the bank enhanced its performance and asset quality after the merger. This means that the merger allowed ING Vysya Bank to bring into its system better management and control that ultimately improved performance.

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