An Overview And Analysis Of Merger Of Bank Of Baroda & Dena Bank

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Abstract
The banking industry plays a pivotal role in any economy and rapidly expanding in India. Competition is fierce, and public and private banks, regardless of the threat posed by foreign and local competitors, seek competitive advantage via mergers and acquisitions. Therefore, it is common to see companies merge or acquire one another. Reorganizing businesses via mergers and acquisitions (M&A) may improve their efficiency, competitiveness, and value to shareholders. There has been unprecedented consolidation in the banking sector because of the widespread idea that doing so would result in immeasurable benefits in the form of lower operating costs, more vital market positions, more stable profitability, and larger economies of scale. They have seen the regulatory landscape shift drastically, off-balance-sheet risk management and financial instruments explode in popularity, e-commerce, and online banking emerge, and the financial services sector undergoes massive consolidation. As a result of these factors, competition in India's banking sector is fierce. This article assesses how combining Bank of Baroda (BOB) with Dena Bank & Vijaya Bank might affect the company's stock price, profitability, and overall performance.

Keywords: Economic Reform, Merger & Acquisition, Synergy, Stock Price.

INTRODUCTION

Since banks in today's free market economies must constantly adapt to stay competitive, mergers and acquisitions (M&A) have become a worldwide phenomenon. The banking business has grown more global, transcending national borders. Unlike the closure of a factory, the collapse of a bank may have far-reaching effects. In addition, regulators and lawmakers have implemented several new measures, with bank mergers emerging as a top option. The banking sector may be consolidated in several different ways. Banks tend to use mergers more than any other strategy. Compared to encouraging internal development, a merger between two weaker banks or between a good bank and a poor bank might be seen as a speedier and less expensive strategy to boost profitability. Pursuing economies of size and breadth is a crucial driver of mergers and acquisitions in the banking sector. It aids in product variety, which in turn lowers overall risk. Therefore, government regulatory and legislative initiatives in the public interest have boosted bank consolidations and mergers in many nations, including India.

REVIEW OF LITRATURE

Many scholars have investigated non-performing assets (NPAs) in the banking sector, and many studies are accessible on the topic. Some examples are as follows.

Mehta, M., & Gupta, S. [2022]. Opined in their paper “Pre-merger and post-merger performance analysis of Bank of Baroda-A camel analysis.” that merger of Bank of Baroda with Dena Bank & Vijaya Bank had helped in better management of the capital. Along with the merger, these banks' governance and management should undergo necessary adjustments. Due to the merger, the service area has finally been expanded. The merger has had a good effect on Bank of Baroda.

V. Raveendra Saradhi, Areej A. Siddiqui [2021], The authors of "The Impact of NPAs on Profitability of Public Sector Banks in India" investigated the non-performing asset (NPA) situation facing Indian PSU banks in the wake of the 2008 financial crisis.

Valliammal and Manivannan (2018), The authors of "A Study on Non- Performing Assets and Its Impact on Public Sector Banks in India," analysed the profitability trends and the association between NPA and net profits to determine the effect of NPA on the profits of the chosen public sector banks. They discovered a strong correlation between the growth of these assets and a decline in earnings, suggesting that banks pay more attention to managing their financial holdings to boost their bottom line.

DrPradeep Bhardwaj, Dr Isha Chaudhary [2018], Based on their findings the authors of "A Study of Non-performing Assets of Commercial Banks and its Recovery in India" conclude that the percentage of Non-Performing Assets in banks in the public sector is very high. While the government has taken measures to lower the number of NPAs, much more must be done. Selected banks still have a higher percentage of non-performing loans than their global counterparts.

Shanabhogara Raghavendra (2018), The study's authors, examine the effects, root causes, and fallout of NPAs in commercial banks. To fix the current system of wilful defaulters in India and around the world, this study recommended several measures, including the restructuring of banks and other financial institutions, the improvement of financial deepening, the modernization of appropriate skills for upgrading the creditworthiness of borrowers, and the improvement of staff efficiency.

Suvitha K Vikram, Gayathri G (2018), The authors of "A Study on Non-Performing Assets in the Indian Banking Sector," examined the non-performing assets (NPAs) issue in the Indian banking sector and attempted to identify its root causes as well as potential solutions. The report indicated that in comparison to private sector banks, public sector banks have much more non-performing loans (NPAs).The root causes, severity of NPA, and preventative methods were also examined. According to the report, banks' and deliberate defaulters' approaches to monitoring credit risk may be at the heart of the escalating NPAs problem.

Banerjee and Mitra (2018), examined the "Non-performing Assets of the Indian Banking System: A Critical Evaluation." Their research showed that non-performing loans have a negative effect on banks' bottom lines and liquidity and that this is a significant issue facing the Indian banking sector today.

Payel Roy and Dr Pradip Kumar Samanta (2017), According to this study, all banks' aggregate non-performing asset (NPA) status has declined for many years. The results showed a strong negative connection between GPA and NP, with profits declining steadily as GNPA increased. In addition, you could mention that most banks' profits have dropped significantly. The financial institutions have also suffered losses. Only by making precautions against NPA may losses from a rise in NPA be prevented. It was hypothesized that Provisioning might be used to absorb losses from non-performing assets (NPAs) but that it shouldn't be seen as a permanent fix for the expanding NPAs experienced by the chosen PSBs. Lending institutions should exercise extreme caution by investigating the borrower's financial history and enforcing stricter repayment terms.

Shiralashetti A.S. and Lata.N.Poojari (2016), looked at what leads to non-performing assets and how it affects a bank's bottom line. The research revealed no significant difference between sector-wise NPA and discovered a modest association between the Gross NPA and Net profit of the syndicate bank. The report offered advice to the authorities.

Ombir and Sanjeev Bansal (2016), Their research looked at how various types of Indian banks have fared recently in terms of their NPAs. It is assumed that public sector banks have a higher NPA ratio; hence research on the role of ownership structure in setting the NPA ratio is conducted. However, substantial empirical data still needs to back up this view. Their study indicated that public sector banks were equally profitable as private sector banks, but international banks were better than their local equivalents. A more significant proportion of non-performing loans has been shown to reduce a bank's earnings.

Kumar (2013), According to the author of "A Comparative Study of Non-performing Assets of Old Private Sector Banks and Foreign Banks," NPAs have been a source of frustration and anxiety for the Indian banking industry for a while now. In the late 1990s, the buildup of massive non-performing assets (NPAs) was one of the primary concerns confronting the performance of commercial banks.

Angela Roman andloana lulianaTomuleasa (2013), an increase in non-performing assets (NPA) has a negative effect on banks' financial results, according to a study that used econometric estimation analysis and a t-test to analyze the impact of various factors on a large sample of commercial banks operating in European Union nations over the eight years from 2003 to 2011.

Kaur K. and Singh B. (2011) found that "Non-performing Assets of Public and Private Sector Banks" (a comparative research study) used NPAs as a critical metric by which to evaluate the efficiency and solvency of the banking industry. One factor affecting the banking industry's health and expansion is the ratio of non-performing loans to total loans.

OBJECTIVES

Objective 1: To strategically evaluate the impact of Return of Market on the Return of the Acquirer bank Bank of Baroda.
Objective 2: To critically analyze the impact of mergers on the financial performance of the firm.

METHODOLOGY

Exploratory research is used in this study to better comprehend the expansion pattern of merger & acquisition in Indian banking industries. Secondary sources were combed through for this report, including Bank of International Settlement

and RBI announcements and circulars, as well as working papers and published research papers. The collected data has allowed for identifying the potential benefits and drawbacks merger & acquisition process. Event study along with Regression Analysis with MS Excel have been used as research tool.

Objective 1: To strategically evaluate the impact of Return of Market on the Return of the Acquirer bank Bank of Baroda.

Analysis of the study: - The National Stock Exchange (NSE) website was used as the trusted source for the information used in this study. The Sample consists of

Name of the Acquirer Bank	Targeted Bank	Dt of Acquisition	Effective date
BANK OF BARODA	DENA BANK & VIJAYA BANK	02-01-2019	01-04-2019

The model is expressed functionally as:
Actual return of bank = f (Expected change in Market return)
The econometric model is expressed as follows:
$R_{it} = \beta_0 + \beta_1 R_{mt}$

Where:
R_{it} = Actual return of bank 'i' at the time 't'
R_{mt} = Market return portfolio 'm' at time 't'
β_0 = Constant
β_1 = Coefficient of the parameter estimate.

The linear correlation between the expected return of the security and the market portfolio is explained by this equation.

Results of Regression tool:
Objective 1: To strategically evaluate the impact of Return of Market on the Return of the Acquirer bank i.e. Bank of Baroda.

Hypothesis:
Ho1: There is no significant impact of changes in the Return of Market on the Return of the Merging bank.
H11: There is significant impact of changes in the Return of Market on the Return of the Merging bank.
Interpretation of Bank of Baroda with Dena Bank and Vijaya Bank on 02/01//2019:

Estimation window:
Table 2.1

R	R Square	Adjusted R Square	Sig.
0.46	0.215	0.211	0
Model		Unstandardized Coefficients	
1	(Constant)	-0.001	
	Rm	1.624	

The value of R is equal to 0.463 showing that there is a relation between the two variables i.e. Return of Bank and Return of the market. Further the value R2 (R Square) is calculated as 0.215 which can be theoretically explained that 21.50% of the variance in Return of Bank can be explained by the changes in the Return of market during the Estimation window of the Event . Again the sig. value = 0.000 which is less than 5% indicating that The null hypothesis should be rejected since the independent variable has a significant influence on the dependent variable, and the alternative hypothesis should be accepted.

The econometric model of the Event of Bank of Baroda merger during the estimation window is as follows:
Rit = (-0.001) + (1.624) Rmt
Return on Bank = (-0.001) + (1.624) Return on market

The regression equation summarizes that a variation of Re.1 in Return on market shall result in an increase of Re.1.624 in the Return on bank. There is a positive relation between the two variables.

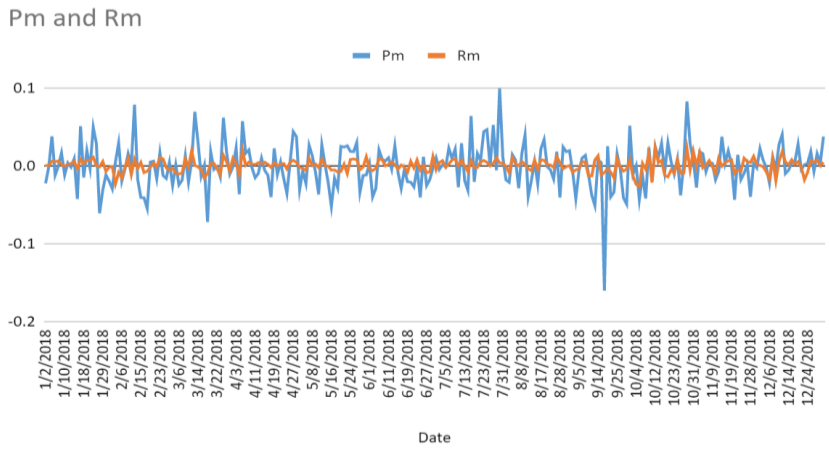


Chart 2.2

An analysis of chart 2.2 exhibits that the impact of both the returns ie. Return on Bank and Return on Market are positively related and move in the same direction . A change in the Return of Market shows an intense variation in the positive direction in the Return of bank . This further can be interpreted that the change in market index of NSE results in the co-related positive change in the Banks Share prices.

Event window:

Table 2.3

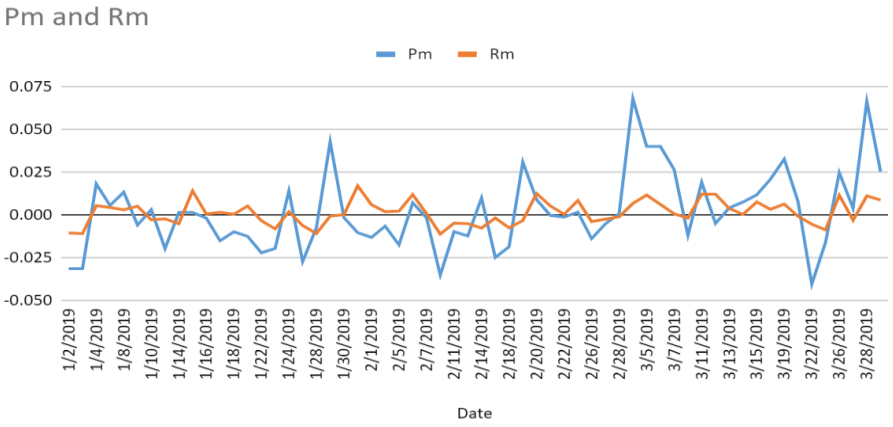
R	R Square	Adjusted R Square	Sig.
0.534	0.285	0.272	0
Model		Unstandardized Coefficients	
1	(Constant)	0	
	Rm	1.723	

The value of R is equal to 0.534 showing that there is a relation between the two variables i.e. Return of Bank and Return of the market. Further the value R2 (R Square) is calculated as 0.285 which can be theoretically explained that 28.50% of the variance in Return of Bank can be explained by the changes in the Return of market during the Event window of the Event .Again the sig. value = 0.000 which is less than 5% indicating that The independent variable has a sizable influence on the dependent variable, hence the null hypothesis should be rejected and the alternative hypothesis should be accepted. The econometric model of the Event of Bank of Baroda merger during the Event window is as follows:

Rit = (0.000) + (1.723) Rmt

Return on Bank = (0.000) + (1.723) Return on market

The regression equation summarizes that a variation of Re.1 in Return on market shall result in an decrease of Re.1.723 in the Return on bank. There is a positive relation between the two variables.



An analysis of chart 1.2 exhibits that the impact of both the returns ie. Return on Bank and Return on Market are positively related and move in the same direction. A change in the Return of Market shows an intense variation in the positive direction in the Return of bank. This further can be interpreted that the change in market index of NSE results in the co-related positive change in the Banks Share prices.

Post Event window :

Table 1.3

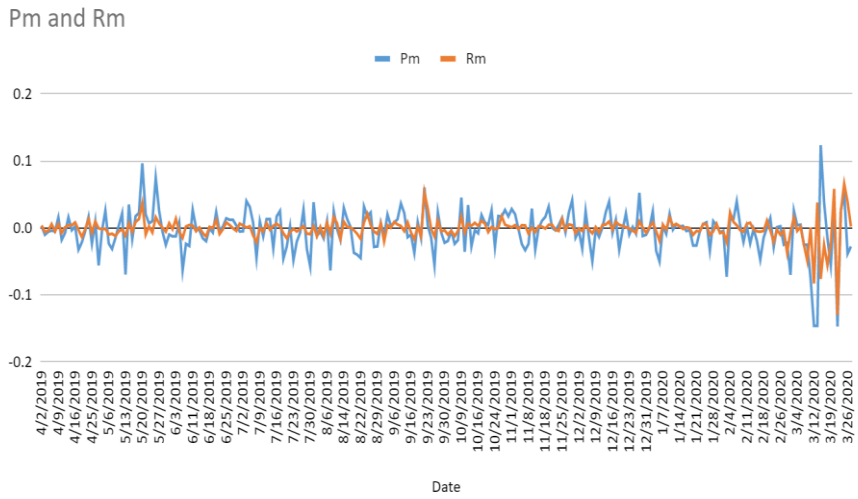
R	R Square	Adjusted R Square	Sig.
0.452	0.204	0.201	0
Model		Unstandardized Coefficients	
1	(Constant)	-0.003	
	Rm	0.847	

The value of R is equal to .452, showing that there is a relation between the two variables i.e., Return of Bank and Return of the market. Further the value R^2 is calculated as 0.204 which can be theoretically explained that 20.40% of the variance in Return of Bank can be explained by the changes in the Return of market during the Post event window of the Event . Again, the sig value = 0.000 which is less than 5% indicating that The independent variable has a large influence on the dependent variable, hence the null hypothesis should be disregarded and the alternative hypothesis should be accepted. The econometric model of the Event of Bank of Baroda merger during the post event window is as follows:

R_{it} = (-0.003) + (0.847) R_{mt}

Return on Bank = (-0.003) + (0.847) Return on market

The regression equation summarizes that a variation of Re.1 in Return on market shall result in an increase of Re.0.847 in the Return on bank. There is a positive relation between the two variables.



An analysis of chart 1.2 exhibits that the impact of both the returns ie. Return on Bank and Return on Market are positively related and move in the same direction . A change in the Return of Market shows an intense variation in the positive direction in the Return of bank . This further can be interpreted that the change in market index of NSE results in the correlated positive change in the Banks Share prices

Objective 2: To critically analyze the impact of mergers on the financial performance of the firm.

Hypothesis:

Ho2: There is no significant impact of mergers on the financial performance of the firm.

H12: There is significant impact of mergers on the financial performance of the firm.

Table 1.8

	Post event Window	Event Window	Estimation Window
Interest Spread	5.95	6.26	6.195
Adjusted Cash Margin(%)	2.58	2.47	0.375
Net Profit Margin	1.17	0.79	-1.15
Return on Net Worth(%)	1.07	0.85	-1.085
Interest Expended / Interest Earned	59.13	63.37	66.21
Other Income / Total Income	14.92	11.595	13.515
Selling Distribution Cost Composition	0.12	0.235	0.245

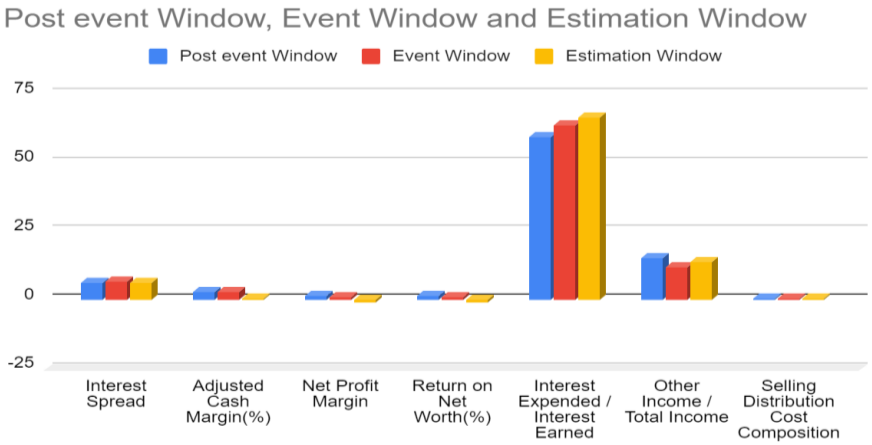


Chart 1.9

An analysis of the table 1.8 and chart 1.9 shows that the Interest Spread has shown a small but steady increase over the transition period from the estimate to event to Post event window of the merger . The adjusted cash margins were greatly impacted due to the announcement and event of merger resulting in the upward of the figures from 0.375% to 2.47% but the post event mergers showed a recovery by reaching a figure of 2.58 %. The net profit margin has shown a continuous rise from -1.15% to 0.79% (Event window) to finally 1.17% in the post event window thus explaining a positive impact of the merger on the profitability of the acquiring Bank. The return on net worth ratio has shown a continuous rise from -1.15% to 0.79% (Event window) to finally 1.17% in the post event window thus explaining a positive impact of the merger on the profitability of the acquiring Bank. Further return on other income / Total income has shown a fall from 13.515 % to 11.595% (Event window) to finally a good increase to 14.92% in the post event window thus explaining a positive impact of the merger on the profitability of the acquiring Bank. The expense ratio - Interest Expended / Interest Earned shows a steady fall from 66.21% to 63.37% (Event window) to finally 59.13% . Again further the Selling Distribution Cost Composition shows a steady fall from 0.245% to 0.235% (Event window) to finally 0.12% . Both these decrease can be interpreted as rise of management efficiency over the period of merger transition due to economies of large scale.

CONCLUSION & SUGGESTION

Objective 1.

Pre- Merger Period:

Changes in the Return of the market during the Estimation window of the Event may be shown to account for 21.50% of the variation in the Return of the Bank. According to the regression equation, if you change the Return on the market by 1 Rs, the Return on the bank will increase by 1.6241 Rs. The two variables are positively related to one another.

An analysis of the estimation window shows the effect of both returns, i.e., Bank yield and market yield are positively connected and trend in the same direction. There is a drastic shift in the positive direction of the bank's Return due to a shift in the market's Return. This further can be interpreted as the change in market index of NSE results in the co-related positive change in the Banks Share prices.

During Merger Period: -

It is evident that 28.50% of the variance in Return of Bank can be explained by the changes in the Return of market during the Event window of the Event. Based on the regression equation, we may conclude that for every 1 Rs change in the Return on the Market, the Return on Bank will fall by 1.723 Rs. The two metrics have a negative correlation.

In an analytical estimation window, we may see how both returns (i.e., Bank yield and market yield are positively connected and trend in the same direction. The Return of the Market fluctuates strongly in the positive direction, indicating a variance in the bank's Return. This might be seen as evidence that the NSE market index correlates positively with banks' share prices.

Post Merger Period:-

Changes in the Return of the market during the Post event window of the Event account for 20.40 percent of the variation in the Return of the Bank. The regression equation shows that for every 1 rupee change in ROME, ROB will grow by 0.8471 rupees. The two variables are positively related to one another.

An examination reveals the effect of both returns (i.e., There is a positive correlation between ROB and ROM, and they both go upwards. The Return of the Market fluctuates strongly in the positive direction, indicating a variance in the bank's Return. This may be seen as more evidence that banks' share prices move in tandem with the NSE market index.

Summary
This paragraph compares the pre-merger, merger, and post-merger returns on bank and market investments. According to the data, the two variables have a positive correlation across all three-time intervals. Therefore, if the Return on the market shifts, the Return on the bank will shift similarly.

Suggestion
The research indicates that investors should consider the market return when deciding where to put their money in banks. This is due to the correlation between the Return on the market and the Return on the bank.

Conclusion
In conclusion, the paragraph demonstrates that the Return on the bank and the Return on the market are positively correlated. This connection is genuine throughout all three-time intervals considered. When deciding which banks to invest in, potential investors should consider the rate of Return on the market.

Objective 2
Summary
The table and chart demonstrate that the Interest Spread has shown a tiny but continuous growth when looking at the estimate to event to Post event window of the merger. Due to the merger's announcement and subsequent occurrence, adjusted cash margins took a significant hit but have since rebounded. As a result of the merger, the acquiring bank's net profit margin and return on net worth ratio have increased steadily from the event window through the post-event window. Though it has decreased from the event window to the post-event window, the Return on other income as a percentage of total revenue is still above the estimate window. The consistent decline in the expenditure ratio and Selling Distribution Cost Composition from the event window to the post-event window suggests that management efficiency has increased throughout the merger transition period, perhaps due to economies of scale.

Suggestion
The report recommends that the acquiring bank keep an eye on the merger's progress for the foreseeable future. The bank might increase its profits by exploring opportunities like expanding into new markets or creating innovative goods and services.

Conclusion
The research shows that the merger has increased the acquiring bank's profitability. The financial institution must monitor its numbers and take action to boost profits.

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