

Empirical Evidence of the Impact of Mergers and Acquisitions on Wealth of Shareholders: A Study of Select Indian Banks Using Event Study Analysis

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Abstract

In the backdrop of the current hyperbolic globalization and development, myriad changes are stunningly emerging and turning heads. The ramifications stemming out from such mercurial changes are often uncanny and calls for greater adaptations on the part of organizations who are relentlessly trying to handle and sustain the impacts of such dramatic changes. The cut-throat competition prevailing has given the organizational think-tank plenty to mull over and come up with effective strategies to blunt the adverse effects percolating relentlessly. In this context, Mergers and Acquisitions (M&A's) are prodigiously being resorted to all across the globe amongst the organizations, even in a developing country like India with the sole objective of increasing the competitiveness of the firms. There are a plethora of priceless benefits obtained through M&A's like reduced business risks, entering new markets, expanding market base, economies of scale, increased market share, etc. The objective of the present research study is to examine and analyse the impact of decision of merger announcement of selected Indian banks on the wealth of the shareholders of the acquiring banks through the application of event study analysis. To serve this purpose, we have selected 6 Indian bank mergers having their merger dates announced during a period of 5 years, i.e. 2001-2006.

Keywords: Mergers and acquisitions; Indian banks; Event study analysis; Shareholders wealth

Introduction Contemplations

The present contemporaneous era is always in a state of flux due to the dramatic changes persistently percolating in it. The modernized world has posed a plethora of challenges which the society must effectively respond to. The prevailing competition is only increasing at an alarming rate and is proving to be a litmus test for all organizations across the globe. Organizations are continuously in the quest for gaining competitive edge and attain

economies of scale. To serve this purpose, organizations are actively engaged in merger and acquisition activities. In this light, the landscape of Indian banking sector has undergone wholesome metamorphosis through mergers and acquisitions of several banks thereby consolidating the Indian banking sector. In the 21st century world, banking sector is counted as one of the rapidly emerging sectors in India. The bewildering transformation of Indian banking sector from a sluggish business entity to a

remarkable industry has been a story of unprecedented success. The growth rate in this particular sector is quite stunning and it has established itself as a preferred destination for international investors. Truth to be told, mergers and acquisitions has been a nifty driving force in giving the banking sector of India a new dimension. The two words ‘Mergers’ and ‘Acquisitions’ are often used together and interchangeably but there lies a difference between the two terms. Merger can be defined as “a combination of two or more companies into a single company where one company survives and the other lose its existence. The survivor company acquire all the assets and liabilities of the merged company.” Acquisition on the other hand is a process of “taking over or purchase of a smaller company by a larger company where full ownership and control is gained by the acquiring company from the acquired company.” Mergers and Acquisitions remains an alluring inorganic ploy for the Indian banks in order to bolster growth in a fierce competitive market. However, M&A’s have often been criticized for its complexity and conundrums like uncertainty, lack of synergy, labour cuts, etc. It is noteworthy to mention that the study of Mergers and Acquisitions in the context of Corporate Financing has been jettisoned from the study of Mergers and Acquisitions in the context of Banking by Banking Valuations and Merger Financing. This has been ably supported by the data of Event Study for India where the gains stemming from mergers are not considered to be obfuscated by near zero or negative returns to the acquirers whilst the small target company is seen to be quietly walking away with gains. The present research study is an attempt to prove the fact that acquirers gain from Mergers and Acquisitions as is deflected in the wealth of the shareholders of the acquiring banks. Our current endeavour is purported to probe into the impact of announcement of merger decision on the shareholders’ wealth of the acquiring banks. For this purpose we have conducted an Event Study Analysis on 6 selected Indian banks whose merger dates were announced within the range of a 5 year period starting from 2001-2006.

Review of Associated Literature

Mergers and Acquisitions has grabbed considerable amount of attention for academicians and researchers in the past few years which makes this subject an interesting one for an in-depth study. Myriad researches conducted in the past have somewhat given us a rather mixed results when talking about gains stemming from M&A’s. Studies conducted by researchers, be it Firth in the early 1980’s, all have concluded with the fact that there will be significant positive returns for the shareholders of the acquiring firms for different event windows around the dates of announcement of mergers [1]. Similarly, a lot of studies done in the early 2000’s had opined that there are significant negative returns for varying windows around the dates when mergers are announced [2-4]. Have examined ARs relating to announcement

of M&A through event study analysis but failed to address the robustness of returns. One of the significant studies done on M&A [5]. Their study focused on Malaysian banking sector probing into the wealth of shareholders which were affected by merger announcement and the results were quite surprising as the bank mergers advocated by the Malaysian government actually dismantled the aggregate economic worth for the acquiring banks. As per the study conducted, it was found out that the value of shareholders actually increased by mergers and acquisitions in the banking sector. The study also found substantial proof of the fact that mergers and acquisitions enhance the performance of the merged institutions as well as reduces their operational costs [6-10].

Data and Methodology

A rigorous research has been conducted by making a balanced and robust use of both conceptual as well as numerical data. To make a strong theoretical foundation of the present research study, secondary data has been resorted to. Various authentic and reliable databases such as Google Scholar, INFLIBNET, J-Stor, BASE has been accessed for the purpose of doing an in-depth study on previous researches conducted in the domain of Mergers and Acquisitions of Banks. For the purpose of assessing the impact of the announcement of merger and acquisition on the wealth of the shareholders of the acquiring banks, the announcement of all the mergers between the banks for a financial period of 5 years (1st April, 2001- 31st March, 2006) has been taken into consideration. In the event of examining the acquisition of two banks successively within a period of one year, it is to be noted that we have taken into consideration only that particular merger which is larger in size in comparison to the other one. To this end, the numerical facts and figures form the fulcrum of our research and we have collected such numerical data from the website of National Stock Exchange of India. It is from here where we have collected all the details of our data relating to daily returns of individual stock of banks and market index [11,12]. The tool used for analysing the results is the Standard Event Study which is also known as the Market Model which has been applied in the Excel sheet containing the collected data about the selected banks (Table 1) [13-15].

Invented by Ball & Brown in the year 1968, Event Study is a unique statistical technique for assessing the impact of an event on the value of a firm. “An event study conducted on a specific company examines any changes in its stock price and how it relates to a given event. It is used as a macroeconomic tool as well analysing the influence of an event on an industry, sector or the overall market by looking at the impact of change in demand and supply (Figure 1).”

The standard event methodology has been successfully employed and hence has been depicted as follows:

$$R_{jt}^{\wedge} = \alpha_j + \beta_j \cdot R_{mt} + \epsilon_{jt}$$

Where, $R_{jt}^{\wedge}$ = return of the particular stock 'j' on the day 't'

α_j = intercept term measuring the return over a particular period which is not explained by the market

Table 1: List of selected Bank Mergers in India for our research study.

Sl. No.	Acquiring Banks	Acquired Banks	Date of Merger Announcement
1	Bank of Baroda (BOB)	Benaras State Bank Ltd.	24-10-2001
2	Oriental Bank of Commerce (OBC)	Global Trust Bank	14-06-2004
3	Centurion Bank (CB)	Bank of Punjab	20-06-2005
4	Federal Bank (FB)	Ganesh Bank of Kurundwad	10-01-2006
5	IDBI Bank Ltd. (IDBI)	United Western Bank	04-09-2006
6	Indian Overseas Bank (IOB)	Bharat Overseas Bank Ltd.	28-01-2006

Table 2: Alphas and betas of sample acquiring banks.

Acquiring name of bank	Alpha (α_j)	Beta (β_j)
Bank of Baroda (BOB)	-0.0015	0.8897
Oriental Bank of commerce (OBC)	-0.0012	1.2843
Centurion bank (CB)	0.0036	0.8358
Federal Bank (FB)	-0.0009	0.6698
IDBI Bank ltd. (IDBI)	-0.0023	1.2501
Indian Overseas Bank (IOB)	0.0002	0.6853

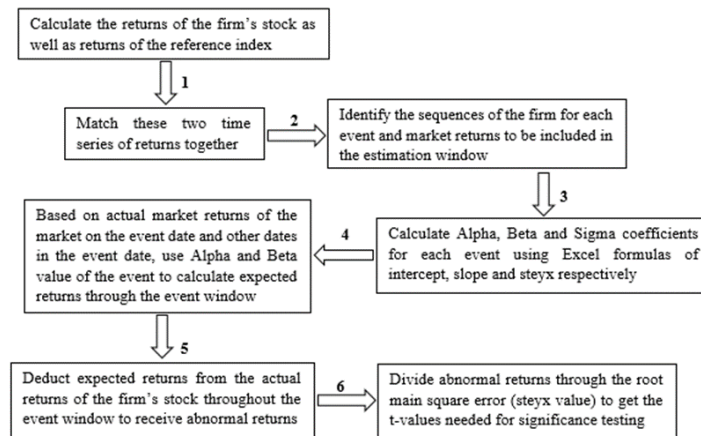


Figure 1: Pictorial depiction for event study technique (Self-developed by authors).

Table 3: Daily AAR and CAAR of the acquiring bank in the event window period.

Day	BOB	OBC	CB	FB	IDBI	IOB	AAR	CAAR	SD	t_CAAR
-20	-	-	-	0.006	-	0.004	-	-0.013	0.027	-0.478
	0.035	0.071	0.034		0.002		0.013			
-19	-	0.010	-	0.017	-	-	-	-0.023	0.029	-0.873
	0.085		0.003		0.025	0.002	0.010			
-18	0.029	0.010	-	-	-	-	0.021	-0.002	0.050	-0.076
			0.011	0.028	0.016	0.003				



SUNTEXT REVIEWS

-17	0.030	- 0.003	- 0.017	- 0.010	0.006	0.013	0.005	0.003	0.023	0.108
-16	- 0.009	- 0.010	- 0.003	0.002	0.041	0.013	0.003	0.005	0.016	0.365
-15	- 0.025	0.050	- 0.010	0.013	0.040	0.064	0.004	0.009	0.036	0.290
-14	0.026	0.024	0.002	- 0.007	0.005	0.079	0.015	0.024	0.025	1.023
-13	0.002	- 0.004	- 0.006	0.005	- 0.003	0.059	0.008	0.032	0.019	1.7777**
-12	0.005	- 0.037	0.028	- 0.002	- 0.001	- 0.004	- 0.001	0.031	0.017	1.648
-11	0.018	0.020	0.001	- 0.027	0.008	- 0.024	- 0.002	0.029	0.016	1.786
-10	0.004	0.083	- 0.009	0.027	- 0.018	0.003	0.011	0.040	0.028	3.3470*
-9	- 0.002	- 0.010	- 0.019	0.014	0.005	- 0.008	- 0.003	0.037	0.011	1.382
-8	- 0.025	- 0.040	- 0.009	0.017	-0.017	0.025	-0.002	0.035	0.021	3.2612*
-7	0.005	- 0.003	- 0.001	- 0.019	- 0.004	0.002	- 0.002	0.033	0.009	1.695
-6	0.006	- 0.001	0.000	- 0.010	0.002	- 0.002	- 0.007	0.026	0.014	1.728
-5	- 0.016	0.027	- 0.025	0.007	0.000	0.010	- 0.001	0.025	0.014	2.0086**
-4	0.010	0.024	- 0.001	- 0.012	0.014	- 0.018	0.002	0.023	0.012	1.522
-3	- 0.001	- 0.023	- 0.015	0.020	0.031	- 0.021	0.004	0.019	0.021	1.410
-2	0.008	- 0.029	0.024	- 0.015	-0.010	- 0.008	0.001	0.018	0.017	1.8402**
-1	0.001	- 0.021	- 0.018	0.002	- 0.003	0.010	0.001	0.017	0.026	1.270
0	- 0.032	0.018	0.055	- 0.006	- 0.005	- 0.013	- 0.006	0.011	0.027	1.010
1	0.001	0.020	0.024	-	0.009	-	0.005	0.006	0.016	2.0168**



				0.017		0.002				
2	0.012	- 0.013	- 0.034	- 0.006	0.015	- 0.007	- 0.005	0.001	0.016	1.605
3	0.000	0.035	- 0.037	- 0.004	- 0.011	- 0.035	0.001	0.002	0.024	1.150
4	0.007	0.015	- 0.001	0.033	0.001	- 0.022	0.005	0.007	0.023	1.9810**
5	- 0.015	0.038	- 0.009	0.024	-0.015	0.013	0.004	0.011	0.019	1.572
6	- 0.006	0.005	0.001	0.016	- 0.024	0.000	0.000	0.011	0.010	3.6435*
7	- 0.004	0.000	0.005	0.030	0.093	0.006	0.011	0.022	0.030	1.682
8	- 0.003	0.008	- 0.065	- 0.026	- 0.054	0.025	- 0.011	0.011	0.028	1.292
9	0.010	0.007	- 0.033	- 0.010	0.025	- 0.003	0.005	0.016	0.020	2.1389**
10	0.002	0.017	0.018	- 0.032	0.011	- 0.014	- 0.004	0.012	0.020	1.9293*
11	0.005	0.013	- 0.009	0.015	0.008	- 0.001	0.004	0.016	0.015	2.8799*
12	0.004	- 0.001	0.003	- 0.015	0.040	0.001	0.006	0.022	0.016	3.102**
13	- 0.004	0.010	- 0.015	0.000	0.001	- 0.023	- 0.007	0.015	0.009	4.4401*
14	0.004	- 0.002	- 0.008	0.000	- 0.015	0.001	- 0.002	0.013	0.007	1.3626
15	0.001	0.009	- 0.005	0.004	0.006	- 0.013	- 0.001	0.012	0.009	3.8696**
16	- 0.001	0.004	0.009	- 0.007	- 0.021	- 0.007	- 0.004	0.008	0.026	2.2334*
17	- 0.008	- 0.004	- 0.001	- 0.009	0.062	- 0.002	0.014	0.022	0.030	1.524
18	0.037	0.014	- 0.009	- 0.001	- 0.010	- 0.006	0.005	0.027	0.018	2.9616*
19	-0.021	0.011	- 0.035	0.001	0.007	0.015	0.001	0.028	0.019	2.8960*

20	0.010	0.017	0.034	0.123	0.018	0.026	0.021	0.049	0.039	2.0092**
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β_j = measuring the risk of the security of firm j's return to that of the market

R_{mt} = return on the NSE index on day t

ϵ_{jt} = unsystematic component of firm j's return

For applying the market model, firstly the date of merger of the 6 selected banks has been identified. Then for estimation of the two parameters α and β for the application of the market model we have considered a particular time frame. Hereafter, the estimated parameters have been used for computation of predicted returns of the individual securities of the 6 selected banks that have participated in mergers and acquisitions during the event period (-20 days to +20 days) (Table 2).

To this end, the residuals (surplus or abnormal returns) have been identified for each security by deducting the predicted returns from actual returns on a particular day during the study period. Subsequently, the Cumulative Average Abnormal Return (CAAR) is obtained by adding the average abnormal return in the window period. T-test is also conducted to find out the statistical significance of CAAR. The table below represents the daily average abnormal returns (AAR) and the cumulative average abnormal returns (CAAR) of the acquiring bank in the window period (-20, +20) days (Table 3).

Highlights of Findings and Deliberations

An intimate observation of the above depicted table will give us a very unique observation. Speaking in the broader sense, it can be said that albeit the observations in the table shows us a downward spiral in the bank stocks of the acquiring banks as they lost value in the initial days during the announcement of the merger, but ultimately it has proven to be beneficial and a positive AAR of 2.1% accrued to the investors on the 20th day of the announcement of the merger. This is not a co-incidence or a miracle as it can be argued that the initial wobbles faced by the acquiring banks were largely due to the banks they acquired which were financially weak, bearing the burden of huge non-performing assets (NPAs). This instantaneously triggered a negative reaction among the shareholders who were pessimistic about the cynics swirling the acquiring banks but gradually the expectation of long term benefits by the shareholders propelled an astounding comeback in the market by the banks which helped them to overcome the spiral and positive returns accrued to the shareholders of the acquiring banks. We have also conducted a T-test to probe into the statistical significance of CAAR. It has been found that CAAR is significant at 0.05 (5% level) on -10, -8, 6, 10, 11, 13, 14, 16, 18 and 19th day in the event period and at 0.10 (10% level) on -13, -5, -2, 1, 4, 9, 12, 15 and 20th day which provides substantial evidence that the announcement of merger

has made a significant impact on the wealth of the shareholders of the acquiring banks.

Constraining Factors

- The present research study has been conducted selecting only 6 banks within a specified time period of 5 years (2001-2006). Taking into consideration a longer time window beyond 2006 would have given us a more robust results as we more banks could have been taken into consideration.
- Application of a different methodology might give us different results which may be contradicting to the results of our study.

Conclusive Statements

In the current era of hypercompetitive business milieu, the Indian banks are mulling over restructuring strategies and fulfilling standard of capital requirements. The primary area of concern for Indian banks is probably the adoption of sophisticated technology and more wise decision making especially in the context of mergers and acquisitions as it a tremendous tool of corporate restructuring which helps to bolster the wealth of shareholders of the acquiring banks in the event window period. Albeit several research studies have opined that announcement of mergers do not have any impact on the wealth of the shareholders, but, through our current study we have proved that there is a positive impact on shareholders' wealth with the announcement of merger dates. We have proved the above statement by analysing our data through event study approach which bears a string testimony to this fact. The study though conducted on only 6 Indian banks still give us a positive result. The further ameliorate the present research study, an in-depth study on more Indian bank mergers is strongly recommended.

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