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The Impact of Mergers and Acquisitions on Shareholders Wealth: *Evidence from Pakistan*

[1]A. Bashir, [2]M.R. Sajid and [1]S.F. Sheikh

[1]Faculty of Management and Administrative Sciences, University of Gujrat, Pakistan
[2]Department of Statistics, University of Gujrat, Pakistan

Abstract: Mergers have been responsible for many important structural changes in different sectors. In fact mergers and acquisitions have substantially changed the environment in which organizations operate. During the last decade mergers and acquisitions (M&A) mania has hit almost every sector of life. This phenomenon was particularly true in USA and well developed Western countries. However, in Pakistan this activity is very negligible as compared to other countries of the world. Due to this lesser activity not a lot of work has been done in Pakistan in this area. This study investigated the performance record of forty five mergers and acquisitions (M&A) that took place during 2004 to 2010 in various sectors of Pakistan using event study methodology. Our findings indicated that overall during eleven day window period neither target nor acquirer firms created or destroyed value for shareholders.

Key words: Abnormal returns · Event study · Mergers and acquisitions · Shareholders · Wealth effects

INTRODUCTION

The modern world has seen the formation of firms as a mechanism of integration, which enables individuals to develop an enterprise and to combine capital and expertise from different individuals. Mergers, especially the mega-mergers, change the market structure. Mergers and Acquisitions (M&) have unparalleled capability to transform firms and supplement corporate renewal [1]. Research in M &A has been done taking into consideration a multitude of disciplines, e.g. finance, economics, law, business, strategy formulation, organization theory, human resource management and sociology. M&A becomes a real time phenomenon due to the attention it receives from different walks of life.

During the last nine years M&A activity in the American region only has an aggregate volume of $2.1 trillion [2]. By looking at this figure, one can argue about the causes associated with M&A. There is extensive literature available in this regard. Motives for M&A can be categorized into value maximizing (economies of scale, economies of scope etc.) and non value maximizing (managers appetite for controlling a larger organization, increasing job security etc.) activities [3]. Fundamental changes in regulation and technology are the main causes of M&A in financial sector [4]. Unpredictable economic environment can be described as the main reason for origination of consolidation phenomenon [5]. Maximization of share holders' wealth can be characterized as the main reason for M&A. However, technological progress, betterment in financial arrangement, financial distress in industry, global amalgamation of markets and removal of product and regional restrictions can be somewhat held responsible for the M&A trend [6].

Pakistan has seen a modest rise in the number of M&A deals in various sectors during the last decade. However, the figure of M&A deals is substantially lesser as compared to that of developed countries. Shallow industrial base, non significant synergistic operating economies, tedious procedure for mergers and takeovers and information constraint are mainly responsible for this low volume of activity [7].

Whenever the term "M&A" strikes one's mind, two categories are immediately brought to the limelight: mergers by consolidation and mergers by acquisition. Scholarly literature generally holds the term 'merger' to include both consolidation and acquisition activity, but this study uses the term M&A to deal with both fields. M&A has interchangeably been used as a single event in different fields [8]. In this study, M&A is considered as a single business phenomenon. This is not to ignore the differences between mergers, acquisitions and takeovers.

Corresponding Author: A. Bashir, Faculty of Management and Administrative Sciences, University of Gujrat, Pakistan

MATERIALS AND METHODS

The studies in the wealth creation area employ one of the two techniques

- Those, which pursue a direct assessment by analyzing the effects of mergers on real firm performance derived from internally generated accounting data, so-called ex-post studies; and
- The ones that assess merger performance indirectly by analyzing the reactions of the stock market to merger announcements, the so-called event studies or ex-ante studies [9].

This study analyzes the M&A shareholder wealth effects by using the model work [10]. The primary concerns which arise when deploying daily data when using an event study approach are also discussed in detail. Specifications of the Ordinary Least Squares (OLS) market model, which is a commonly used event study approach, are also specified.

Hypotheses Testing: Our Hypotheses for this Study Are:

- Mergers and acquisitions do create significant positive abnormal returns for target company shareholders.
- Mergers and acquisitions do create significant negative abnormal returns for acquired company shareholders.

Sample Selection and Data Description: The following basic criterion was used for selection of companies:

- Both the target and acquirer companies are listed on Karachi Stock Exchange (KSE).
- Merger date and sufficient share price was data available on KSE.

There were total seventy one publicly traded companies mergers during 2004- 2010. However, only forty five mergers meet the above criterion. Among these forty five mergers, twenty seven were in financial services and the rest occurred in nonfinancial sectors. All data has been gathered from Karachi Stock Exchange (KSE).

The OLS Market Model: To test for the existence of abnormal returns, a benchmark for normal returns is required. A parameter estimation period was used to calculate a stock's Beta value [10]. An 11 day event window fully captures the effects of an event of interest [1]. The window begins 5 days prior to the event date and ends 5 days after.

A parameter estimation period of 239 days is adequate since daily returns data for the days prior to the event date are sufficient in formulating a benchmark for normal returns [10, 11].

So the Time Interval in Our Case Is: Time t =0 is the event date or announcement date in calendar time event window = [-5, 5] estimation window is [-244,-6] days.

The following market model is employed for the parameter estimations:

$$Ar_{it} = R_{it} - E(R_{it})$$

Where,

Ar_{it} = Abnormal return for a stock i on day t.
R_{it} = Actual return of stock i at time t.
$E(R_{it})$ = Expected return on stock i at time t.

This is measured by the following equation:

$$E(R_{it}) = \alpha + \beta R_{mt}$$

Where,

α = Ordinary least squares estimate of the intercept of the market model regression.
β = Ordinary least squares estimate of the coefficient in the market model regression.

RESULTS AND DISCUSSION

Cumulative abnormal returns (CAR) are calculated as the sum of the daily AR over the period. For comparison we have used the event window of (3,-3). To accept or reject the hypotheses in this event study, we used the t-statistic to test for significance at the α = .05 level. Table 1 shows the results for target firms. Here, we can see that target firm suffer loss in the eleven day window. The loss becomes greater in case of seven days event window. However, both these values are statistically insignificant.

If we turn attention to acquired companies, Table 2, below, it reveals identical picture. Here, acquired firms show modest gain in eleven days event window. The gain becomes slightly higher in case of seven day window. Like target firms these results are also not significant.

Table 1: Target Company Cumulative Abnormal Returns

CAR	Target	T Test
(-5,5)	-7.11%	-1.376
-3,3)	-0.34%	-0.081

Table 2: Acquired Company Cumulative Abnormal Returns

CAR	Target	T Test
(-5,5)	1.47%	0.342
(-3,3)	2.68%	0.780

Table 3: Target Company Average Abnormal Returns

Event Day	Average Abnormal Return	T Statistics
-5	-1.29%	-0.828
-4	0.61%	0.392
-3	1.00%	0.640
-2	-1.77%	-1.138
-1	0.10%	0.063
0	-0.05%	-0.034
1	-0.43%	-0.275
2	0.72%	0.465
3	0.10%	0.062
4	-2.84%	-1.820**
5	-3.26%	-2.094*

** Statistically significant at 0.01 level

* Statistically significant at 0.05 level

Table 4: Acquired Company Average Abnormal Returns

Event Day	Average Abnormal Return	T Statistics
-5	-0.68%	-0.522
-4	1.03%	0.796
-3	1.07%	0.828
-2	0.65%	0.504
-1	1.25%	0.965
0	-0.73%	-0.561
1	1.14%	0.881
2	-0.74%	-0.567
3	0.02%	0.015
4	-1.9%	-1.462
5	0.34%	0.259

A careful examination of data in at Tables 1 and 2 reveals that both the hypothesis stand rejected, i.e., that target firm enjoy substantial gain, while that of acquired suffer significant loss.

The findings of this study are different from those of majority of the studies in this area. According to our findings target firm suffer insignificant loss, while acquirers enjoy insignificant gain. One possible explanation for this is that M&A activity in Pakistan could be to take advantage of synergy. However, it did not materialize. Another reason for consolidation is to comply with the requisite regulation. This was particularly true in financial sector where State Bank of Pakistan (SBP) directed all locally incorporated banks to raise their minimum Paid up Capital [12].

Average abnormal returns (AAR) are calculated as the sum of abnormal return divided by the no. of days, over which average abnormal results are to be calculated. Table 3 shows the AAR for target companies. Here, on event day target firms suffer very modest loss of (-0.05%). The only significant loss is on fifth day after announcement.

With respect to the AAR for acquired companies, on event date the companies suffered a loss of -0.73%. However, the returns are positive on either side of the event date.

CONCLUSION

In modern countries M&A is a regular feature. However, in Pakistan, M&A activity is still in its early stage and the number of total deals completed is very little in contrast to developed countries. The paper evaluates the short-term value creation effect of mergers and acquisitions of Pakistan from 2004 to 2010. The wealth for the shareholders of target and bidder firms is examined by estimating the cumulative abnormal returns for an 11-day period surrounding the merger announcement. Our findings indicate that overall during eleven day (-5, 5) window period target firm suffer insignificant loss, while that of acquirer's enjoy statistically insignificant increase in value. Our findings are in disagreement to majority of studies in this area, which indicate the gain to target shareholders while loss to acquired companies.

This is one of pioneers study in this important area of finance. There is great potential of research in this field. Although we have used OLS model, however, one could argue about the other models. These different models include Consumption and Inflation Capital Asset Pricing Model, Standard CAPM and APT models. Moreover impact of M&A involving longer events can also be analyzed.

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