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A Study on the Impact of Mergers and Acquisitions on share price

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Abstract:

The study aimed at studying the impact of mergers and acquisitions on share price volatality. The sampling design used for this study is the descriptive research design and sampling technique that was adopted was non-probability sampling. The mergers and acquisitions during the year 2010 were selected for the study. The parameters like the rate of volatility of the share price; the overall performance of the company and market capitalization, before and after merger was examined. Likewise the security return to the target and acquiring entity shareholders during the premerger period was also scrutinized. The above parameters were analyzed using T-Test.

The study found that mergers and acquisitions do not bring about any major change in the overall performance of the company or in market capitalization. The rate of volatility also does not undergo any significant change. There is no major difference between the security return to the target entity and acquiring entity shareholders.

I. INTRODUCTION

In today's globalized economy and competitive environment companies are increasingly using Mergers and Acquisitions (M&A) for entering new markets, asset growth, to gain complementary strengths and competencies and to become more competitive in the market place.

. Mergers and takeovers are prevalent in India right from the post independence period. But Government policies of balanced economic development through introduction of Industrial Development and Regulation Act-1951, MRTP Act, FERA Act etc. made these activities almost impossible and only a very few M&A and Takeovers took place in India prior to 90s. But liberalization in 1991 allowed business houses to undertake without restriction any program of expansion either by entering into a new market or through expansion in an existing market. The past five years have seen Indian corporate in several international acquisition deals in developed and emerging markets.

This paper is an attempt to study how mergers and acquisitions affect the stock price movement of the respective entities and its impact on the overall performance of the corporate. The past five years have seen Indian corporate in several international acquisition deals in developed and emerging markets

1.1OBJECTIVES OF THE STUDY

The objectives of the study are

- To examine the impact of the Mergers and Acquisitions on the rate of volatility of the stock price during premerger and post merger periods.
- To analyse the impact of the mergers on the overall performance of the amalgamated company
- To observe the stock price movement during the premerger and post merger periods.

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1.2 SCOPE OF THE STUDY

This study is confined to Indian companies. In this study it is proposed to highlight the impact of M&A on the share price movement and on the overall performance of the company.

1.3LIMITATIONS OF THE STUDY

The number of years chosen to select the sample should have been wider and sample size is small. The cross-border M&A have been excluded from the sample.

II.LITERATURE REVIEW

M&A have received significant attention from researchers across the world. An empirical study done on the basis of stock market prices in the US shows that average return to target firms shareholders are about 30%. In contrast the shareholders of the acquiring firms generally show returns that range from slightly negative to modestly positive. (H.R. Machiraju, page 170).

Berkovitch and Narayanan (1993) conducted a study on the gain and concluded that total gains from M&A are always positive and synergy appears.

Swaminathan (2002) compared the pre- and post-takeover performance, using financial ratios, for a period of three years immediately preceding and succeeding the merger. The study found that Gross profit margin, Return on capital employed and Asset turnover ratio declined significantly in the post-takeover period, suggesting that both profitability and efficiency of merging companies declined in post-takeover period.

Marina Martynova and Luc Renneboog (2006) investigated the long-term profitability of corporate takeovers in the UK, using four measures of operating performance based on EBIT, Taxes, Depreciation and Amortization and found that both the acquiring and target companies outperformed the peers prior to the takeover, but the profitability of the combined firm decreased significantly following the takeover. A general conclusion is that most mergers reduce profitability.

III.RESEARCH METHODOLOGY

3.1DESCRIPTIVE RESEARCH DESIGN

Descriptive research design includes surveys and fact-finding enquires of different kinds. The major purpose of descriptive research is description of the state of affairs, as it exists at present. The main feature of this is that the researcher has no control over the variables but he can only report as to what has happened or what is happening.

3.2 SAMPLING DESIGN

A sampling design is a definite plan for obtaining a sample from a given population. It refers to the technique the researcher would adopt in selecting items for the sample.

Sampling technique is the process of selecting a sample from the population.

In this research simple random sampling method of probability sampling is used (i.e.) *T*he total number of M&A in the year 2010 was 854. But the numbers of M&A were both the target entity and the acquiring entity were listed on Bombay Stock Exchange (BSE)/ National Stock Exchange (NSE) was 20 out of which a sample size of 10 was chosen for this study.

3.3DATA COLLECTION

In this research secondary data was collected through the method of literature review. List of companies involved in mergers during 2009-2010 were compiled from ‘Mergers and Acqusitions’ monthly report of Centre for Monitoring Indian Economy (CMIE). The screening criteria described earlier were applied to arrive at the first set of list. Then the merged entities are classified on the basis of the sector to which they belong. A set of five sectors was chosen and a sample of two companies from each of the sectors was selected randomly to arrive at the final sample list.

IV. STATISTICAL TOOLS

The statistical tool used in this project is T-Test. The samples are dependent so two tailed T-Test at 95% confidence level was conducted.

TREND OF THE BETA

Table No.4.1

S.No	PREMERGER BETA X1	POSTMERGER BETA X2	TREND OF BETA
1	1.701314	0.289829	-
2	0.713127	0.476876	-
3	-1.12893	1.065067	+
4	0.764571	0.870752	+
5	1.28964	1.3227701	+
6	1.406385	0.856852	-
7	2.683201	1.833011	-
8	0.74742	1.99665	+
9	-0.41415	1.828659	+
10	1.217119	1.328099887	+
	AVG=0.8979697	**AVG**=1.1868565	**6 -** Increase, **4-** Decrease

4.1 T - TEST FOR BETA

Formulation of Hypothesis:

Null Hypothesis (Ho) **:** There is no significant difference in the rate of volatility due to merger.

Alternative Hypothesis (H1**):** There is a significant difference in the rate of volatility due to merger.

Level of significance:

Here for this study the Confidence level is taken as 95%. Thus the Level of significance = 0.05. But before conducting t-test the conditions of normality and homogeneity has to be checked. So the test of normality and homogeneity was conducted and the results are displayed below.

4.2 TEST OF NORMALITY FOR BETA

Formulation of Hypothesis:

Null Hypothesis(Ho) : The beta is significantly normally distributed.

Alternative Hypothesis(H1) : The beta is not significantly normally distributed.

Level of significance:

Here for this study the Confidence level is taken as 95%. Thus the Level of significance = 0.05.

TEST STATISTICS:

Table No. 4.2

Tests of Normality

	PERIOD	Kolmogorov-Smirnov[a] Statistic	df	Sig.	Shapiro-Wilk Statistic	df	Sig.
BETA	PREMERGER	.225	9	.200*	.960	9	.794
	POSTMERGER	.149	11	.200*	.955	11	.708

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

INTERPRETATION:

In the Kolmogorov-Smirnov / Shapiro-wilk tests carried out to measure the normality of distribution of Beta the test statistic is greater than the level of significance 0.05. Thus we have to accept the null hypothesis (i.e.) the beta is significantly normal.

4.3 TEST OF HOMOGENEITY FOR BETA

Formulation of Hypothesis:

Null Hypothesis(Ho) : There is homogeneity of variances in the distribution of Beta.

Alternative Hypothesis(H1) : There is no homogeneity of variances in the distribution of Beta.

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Level of significance:

Here for this study the Confidence level is taken as 95%. Thus the Level of significance = 0.05.

TEST STATISTICS:

Table No. 4.3

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
BETA	Based on Mean	2.349	1	18	.143

INTERPRETATION

In the Levene statistic test conducted to measure the homogeneity of variances of distributions of Beta the test statistic 0.143 is greater than the level of significance 0.05. Thus we have to accept the Null hypothesis (i.e.) there is homogeneity of variances in the distribution of Beta. As the Beta is fulfilling the requirements of normality and homogeneity T – Test can be conducted for it.

TEST STATISTICS

Table No. 4.4

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	PREMERGER BETA - POSTMERGER BETA	-.28889	1.232317	.3896927	-1.1704	.592659	-.741	9	.477

INTERPRETATION:

Here the paired samples T-test compares the means of two variables that represent the same group at different times (i.e.) before and after merger. The test statistic 0.477 is greater than the level of significance 0.05. Thus we have to accept the null hypothesis (i.e.) there is no significant difference in the rate of volatility due to merger.

4.4 OVERALL SECURITY RETURN ANALYSIS

Table No. 4.5

S. No	Reurn On Target Entity(In %) Share Holders (A)	Return On Aquiring Entity(In %) Share Holders (B)	(A) When Compared To (B)
1	15.100745	0.9776973	HIGH
2	0.25419412	-4.562919524	HIGH
3	3.81166477	0.086124559	HIGH
4	-3.48737311	3.10192566	LOW
5	11.41304922	-3.531139646	HIGH
6	-5.130174014	24.00681624	LOW
7	3.010560868	17.76882937	LOW
8	2.470133469	3.073512725	LOW
9	-0.545189178	-3.032874109	HIGH
10	0.26536547	1.148143044	LOW
	AVG = 2.71629	AVG = 3.903611	5 – LOW,
			5 - HIGH

INTERPRETATION:

The above table shows that the average security return to the acquiring entity shareholders is higher than the average return to the target entity shareholders. But simple observation by comparing the returns does not show any major difference as five companies security return to the target entity shareholders when compared to that of the acquiring entity shareholders is high and that of the other five is low.

4.5 TEST OF NORMALITY AND HOMOGENEITY FOR SECURITY RETURN TO THE SHAREHOLDERS

Formulation of Hypothesis:

Null Hypothesis(Ho) : There is normality and homogeneity of variances in the distribution of security return to the shareholders

Alternative Hypothesis(H1) : There is no normality and homogeneity of variances in the distribution of security return to the shareholders

Level of significance:

Here for this study the Confidence level is taken as 95%. Thus the Level of significance = 0.05.

Test statistics:

Table No. 4.6

Tests of Normality

	ENTITY	Kolmogorov-Smirnov[a] Statistic	df	Sig.	Shapiro-Wilk Statistic	df	Sig.
VALUES	TARGET ENTITY	.231	10	.141	.904	10	.244
	ACQUIRING ENTITY	.334	10	.002	.783	10	.009

a. Lilliefors Significance Correction

Table No. 4.7

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
VALUES	Based on Mean	.965	1	18	.339

INTERPRETATION:

As the conditions of normality and homogeneity exist T-test can be conducted for security return to the shareholders.

4.6 T-TEST FOR SECURITY RETURN TO THE SHAREHOLDERS

Formulation of Hypothesis:

Null Hypothesis(Ho) : There is no major difference in the security return to the target and acquiring entity shareholders during the premerger period.
Alternative Hypothesis(H1) : There is a major difference in the security return to the target and acquiring entity shareholders during the premerger period.

Level of significance:

Here for this study the Confidence level is taken as 95%. Thus the Level of significance = 0.05.

Test statistics:

Table No. 4.8

Paired Samples Test

		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	TARGETENTITY SHAREHOLDERS RETURN - ACQUIRINGENTITY SHAREHOLDERS RETURN	-1.18731	13.179520	4.1677303	-10.6154	8.240747	-.28	9	.782

INTERPRETATION:

As the test statistic 0.782 is greater than the level of significance 0.05 we have to accept the null hypothesis (i.e.) there is no major difference in the security return to the target and acquiring entity shareholders during the premerger period.

V.FINDINGS & CONCLUSION

From the above study the average rate of volatility during the post merger period (1.186856599) is slightly higher than the pre merger period (0.8979697) there is no major difference between them.

When the return on shares were analysed for the target entity and the acquiring entity shareholders it is found that acquiring entity shareholders gain more than to the target entity shareholders during the premerger period.

This study reveals that M&A in India is not much effectual either in terms of overall performance of the company or in terms of the returns to the shareholders. The rationale behind this issue is, M&A is considered by the Indian corporates merely as an optional one but not as a business strategy. But our country desperately needs some giant corporates that would be its flag-bearers in the global market. The only approach to rapidly make giant corporates is intelligent consolidation So the best solution for the Indian Corporates is to merge into three or four large entities to achieve a reasonable size in terms of balance sheet and market value. Thus lots of great opportunities are missed out almost across all the sectors by the Indian companies only because of being small. Thus merging two firms will be the best shot at creating giant corporates to compete globally provided it is implemented in a deliberate style.

VI. REFRENCES

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