“Mergers and acquisitions in India and its impact on shareholders wealth”

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Abstract: In this paper I had done shareholders wealth analysis for short term investment. For the same, I had analyzed top 10 (Value wise) mergers and acquisition by Indian companies, in which I had Find the market return and script return of the companies and Index pre merger and post merger with the help of the regression line. For the same, the changes in the closing prices of the script and compare it with Indices value, here I take BSE 500. I had taken X as an independent variable i.e. BSE 500 and Y as a dependent variable i.e. script prices of the particular company and try to fit regression line Y on X to see that after merger and before merger how this mergers affected shareholders wealth and also used the statistical tools such as ANNOVA and paired t test.

Keywords: Mergers & Acquisition, Pre and post merger analysis, Share holder’s Wealth, Top Ten Mergers & Acquisition.

I. Introduction

The decision to invest in a new asset would mean internal expansion for the firm. The new asset would generate returns raising the value of the corporation. Mergers offer an additional means of expansion, which is external, i.e. the productive operation is not within the corporation itself. For firms with limited investment opportunities, mergers can provide new areas for expansion. In addition to this benefit, the combination of two or more firms can offer several other advantages to each of the corporations such as operating economies, risk reduction and tax advantage.

Today mergers, acquisitions and other types of strategic alliances are on the agenda of most industrial groups intending to have an edge over competitors. Stress is now being made on the larger and bigger conglomerates to avail the economies of scale and diversification. Different companies in India are expanding by merger etc. In fact, there has emerged a phenomenon called merger wave.

The terms merger, amalgamations, take-over and acquisitions are often used interchangeably to refer to a situation where two or more firms come together and combine into one to avail the benefits of such combinations and re-structuring in the form of merger etc., have been attempted to face the challenge of increasing competition and to achieve synergy in business operations.

1.1 Literature Reviews

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Topic Name</th>
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<tr>
<td>1</td>
<td>Cross Border Mergers &amp; Acquisitions and Its Effect on Shareholders Wealth in India</td>
<td>Jayant Kalghagi &amp; Dr. Ravindranath V. Bad</td>
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<td>2</td>
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<td>Smita Kashiramka &amp; N.V.Muralidhar Rao</td>
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<td>3</td>
<td>Mergers and Acquisitions in Banking Sector</td>
<td>Prof. Anil K. Saini, Dr. Sambhavna, Dr. Mohender Kumar Gupta, Dr. Shivakumar Deene</td>
<td>Through this paper we will try to find out reasons of merger and acquisition from the experience of Indian banking sector but they shows some futuristic prediction of India Banking Industry and its outcome</td>
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<td>4</td>
<td>Impact of Merger &amp; Acquisition Announcement on Share Price – A Case of Selected Indian Listed Companies</td>
<td>Dr.S.Poornima and V.Chitra</td>
<td>Selected the scripts from Jan. 2012 to Dec. 2012 and see the impact in Impact has been analyzed between +7 days from the date of merger and acquisition announcement.</td>
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<td>Effectiveness of Banks after M &amp; A</td>
<td>Brajesh Kumar Tiwari</td>
<td>Author had compare the defend banks India and gives his opinion statement regarding effectiveness of Banks after M&amp;A shows in merger of Bank of Karad Ltd. (BOK) with Bank of India (BOI) was more effective in it.</td>
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<td>6</td>
<td>Impact of Mergers &amp; Acquisitions on Firms’ Long Term Performance: A Pre &amp; Post Analysis of the Indian Telecom Industry</td>
<td>Neha Verma &amp; Dr. Rahul Sharma</td>
<td>The Paper gives health idea about the financial tools to be choosen at the time of pre and pst merger analysis apart from telecom industry as a whole.</td>
</tr>
</tbody>
</table>
### 1.2 Need/Importance of the Study:
- To aware the investors regarding the effect, before and after the mergers & acquisitions for short term investments
- To make their strategies for investments, for the investors’ short term view by keeping in mind mergers & acquisitions.

### 1.3 Objective:
1.3.1 Primary Objective:
- Measuring Wealth of Shareholders for short term view with statistical methods.
1.3.2 Secondary Objectives:
- To know the short term effect pre and post merger compare to market
- To compare the market return and script return
- To understand the short term effect of the deal

### 1.4 Hypothesis:
1.4.1 Hypothesis 1
- \( H_0: \) The script return is not affected due to the market return in both i.e. Pre and Post Merger
- \( H_1: \) The script return is affected due to the market return in both i.e. Pre and Post Merger

1.4.2 Hypothesis 2
- \( H_0: \) There is no significance between Markets Return and Script Return and no abnormality between them
- \( H_1: \) There is significance between Market Return and Script Return and there is abnormality between them

### 1.5 Research Methodology:
1.5.1 Research Design:
Causal Research
1.5.2 Population:
The population of my research is taken of ten years of Indian Listed Companies Mergers and Acquisitions from financial year 2004 to 2014

1.5.3 Sampling Frame:
Indian companies who are registered in the Stock exchanges. So, the list of registered Indian companies in the stock exchanges becomes the part of my sampling frame.

1.5.4 Sampling Unit:
Sampling unit will be primarily consisting of the recent wealthiest Mergers and Acquisitions.

1.5.5 Sample Size:
Sample size will be analyzing top ten mergers and acquisition in India

1.5.6 Sampling Methods:
Convenience sampling method

II. Analysis and Interpretation:

2.1 Analysis:
Top 10 deals as per value vise: Measuring Wealth of Share holders for Short Term. Also find the market return and script return to find the shareholder’s wealth pre merger and post merger with the help of the regression line. For the same, the changes in the closing prices of the script and compare it with Indices value, here we take BSE 500.

We had taken X as an independent variable i.e. BSE 500 and Y as a dependent variable i.e. script prices of the particular company and try to fit regression line Y on X to see that after merger and before merger how this mergers affected shareholders wealth.

2.2 Value wise Top 10 M&A Deals in India:
In these top 10 deals Indian Company is the one which is Acquirer of the other company.
1. Tata Steel-Corus: $12.2 billion
2. Hindalco-Novelis: $6 billion
3. ONGC-Imperial Energy: $2.8 billion
4. HDFC Bank-Centurion Bank of Punjab: $2.4 billion
5. Tata Motors-Jaguar Land Rover: $2.3 billion
6. Sterlite-Asarco: $1.8 billion
7. Suzlon-RePower: $1.7 billion
8. RIL-RPL: 1.69 billion
9. Videocon-Daewoo: $731 million
10. Ranbaxy-Betapharm : $630 million

Source: http://asiancorrespondent.com/573/top-10-ma-deals-in-india-so-far/

2.3 Interpretation:
2.3.1. Tata Steel-Corus: $12.2 billion
Analysis of Regression Line and ANOVA Table:
R square:
➢ Pre Merger Analysis
   o Value at R square = 0.2769
   o It shows that value of the script return affected due to the market return only 0.2769 and remaining 0.7231 due to its own.
➢ Post Merger Analysis
   o Value at R square = 0.33865
   o It shows that value of the script return affected due to the market return only 0.33865 and remaining 0.66135 due to its own.

Paired T Test:
➢ Pre Merger Analysis
   o T test = 0.0017
➢ Post Merger Analysis
   o T test = 0.0071
➢ Both the value is less than 0.05 which means there is a significance between Markets Return and Script Return and abnormality between them

2.3.2. Hindalco-Novelis: $6 billion:
Analysis of Regression Line and ANOVA Table:
R square:
“Mergers and acquisitions in India and its impact on shareholders wealth”

- Pre Merger Analysis
  - Value at R square = 0.21889
  - It shows that value of the script return affected due to the market return only 0.22 and remaining 0.78 due to its own.
- Post Merger Analysis
  - Value at R square = 0.33034
  - It shows that value of the script return affected due to the market return only 0.33 and remaining 0.67 due to its own.

Paired T Test:
- Pre Merger Analysis
  - T test = 0.037499511
- Post Merger Analysis
  - T test = 0.00803037
- Both the value is less than 0.05 which means there is significance between Markets Return and Script Return and abnormality between them.

2.3.3. ONGC-Imperial Energy: $2.8 billion:
Analysis of Regression Line and ANOVA Table:
R square:
- Pre Merger Analysis
  - Value at R square = 0.51
  - It shows that value of the script return affected due to the market return only 0.51 and remaining 0.49 due to its own.
- Post Merger Analysis
  - Value at R square = 0.47
  - It shows that value of the script return affected due to the market return only 0.47 and remaining 0.53 due to its own.

Paired T Test:
- Pre Merger Analysis
  - T test = 0.000394352
- Post Merger Analysis
  - T test = 0.000771212
- Both the value is less than 0.05 which means there is a significance between Markets Return and Script Return and abnormality between them.

2.3.4. HDFC Bank-Centurion Bank of Punjab: $2.4 billion
Analysis of Regression Line and ANOVA Table:
R square:
- Pre Merger Analysis
  - Value at R square = 0.51
  - It shows that value of the script return affected due to the market return only 0.51 and remaining 0.49 due to its own.
- Post Merger Analysis
  - Value at R square = 0.61
  - It shows that value of the script return affected due to the market return only 0.61 and remaining 0.39 due to its own.

Paired T Test:
- Pre Merger Analysis
  - T test = 0.00676546
- Post Merger Analysis
  - T test = 4.71447E-05
- Both the value is less than 0.05 which means there is significance between Markets Return and Script Return and abnormality between them.

2.3.5. Tata Motors-Jaguar Land Rover: $2.3 billion
Analysis of Regression Line and ANOVA Table:
R square:
- Pre Merger Analysis
  - Value at R square = 0.39
It shows that value of the script return affected due to the market return only 0.39 and remaining 0.61 due to its own.

Post Merger Analysis
- Value at $R^2$ = 0.34
- It shows that value of the script return affected due to the market return only 0.34 and remaining 0.66 due to its own.

Paired T Test:
- Pre Merger Analysis
  - $T$ test = 0.00339788
- Post Merger Analysis
  - $T$ test = 0.00683
- Both the value is less than 0.05 which means there is significance between Markets Return and Script Return and abnormality between them.

2.3.6. Sterlite-Asarco: $1.8 billion

Analysis of Regression Line and ANOVA Table:

$R^2$:
- Pre Merger Analysis
  - Value at $R^2$ = 0.58
  - It shows that value of the script return affected due to the market return only 0.58 and remaining 0.42 due to its own.
- Post Merger Analysis
  - Value at $R^2$ = 0.55
  - It shows that value of the script return affected due to the market return only 0.55 and remaining 0.45 due to its own.

Paired T Test:
- Pre Merger Analysis
  - $T$ test = 8.7042E-05
- Post Merger Analysis
  - $T$ test = 0.00017
- Both the value is less than 0.05 which means there is significance between Markets Return and Script Return and abnormality between them.

2.3.7. Suzlon-RePower: $1.7 billion

Analysis of Regression Line and ANOVA Table:

$R^2$:
- Pre Merger Analysis
  - Value at $R^2$ = 0.21
  - It shows that value of the script return affected due to the market return only 0.21 and remaining 0.79 due to its own.
- Post Merger Analysis
  - Value at $R^2$ = 0.45
  - It shows that value of the script return affected due to the market return only 0.45 and remaining 0.55 due to its own.

Paired T Test:
- Pre Merger Analysis
  - $T$ test = 0.04386
- Post Merger Analysis
  - $T$ test = 0.000118
- Both the value is less than 0.05 which means there is significance between Markets Return and Script Return and abnormality between them.

2.3.8. RIL-RPL: $1.69 billion

Analysis of Regression Line and ANOVA Table:

$R^2$:
- Pre Merger Analysis
  - Value at $R^2$ = 0.87
  - It shows that value of the script return affected due to the market return by 0.87 and remaining 0.13 due to its own.
Post Merger Analysis
  o Value at R square = 0.76
  o It shows that value of the script return affected due to the market return by 0.76 and remaining 0.24 due to its own.

Paired T Test:
  ➢ Pre Merger Analysis
    o T test = 2.1E-09
  ➢ Post Merger Analysis
    o T test = 5.3E-07
  ➢ Both the value is less than 0.05 which means there is significance between Markets Return and Script Return and abnormality between them.

2.3.9. Videocon-Daewoo: $731 million:
Analysis of Regression Line and ANOVA Table:
R square:
  ➢ Pre Merger Analysis
    o Value at R square = 0.074
    o It shows that value of the script return affected due to the market return only 0.93 and remaining 0.26 due to its own.
  ➢ Post Merger Analysis
    o Value at R square = 0.033
    o It shows that value of the script return affected due to the market return only 0.03 and remaining 0.97 due to its own.

Paired T Test:
  ➢ Pre Merger Analysis
    o T test = 0.24741
  ➢ Post Merger Analysis
    o T test = 0.44011
  ➢ Both the value is more than 0.05 which means there is no significance between Markets Return and Script Return and no abnormality between them.

2.3.10. Ranbaxy-Betapharm: $630 million
Analysis of Regression Line and ANOVA Table:
R square:
  ➢ Pre Merger Analysis
    o Value at R square = 0.085
    o It shows that value of the script return affected due to the market return only 0.915 and remaining 0.915 due to its own.
  ➢ Post Merger Analysis
    o Value at R square = 0.087
    o It shows that value of the script return affected due to the market return only 0.087 and remaining 0.913 due to its own.

Paired T Test:
  ➢ Pre Merger Analysis
    o T test = 0.21229
  ➢ Post Merger Analysis
    o T test = 0.20668144
  ➢ Both the value is more than 0.05 which means there is no significance between Markets Return and Script Return and no abnormality between them.

<table>
<thead>
<tr>
<th>No.</th>
<th>Company Name</th>
<th>Pre Merger R Square</th>
<th>Pre Merger Paired T Test</th>
<th>Post Merger R Square</th>
<th>Post Merger Paired T Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tata Steel</td>
<td>0.2769</td>
<td>0.0017</td>
<td>0.33865</td>
<td>0.0071</td>
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<tr>
<td>2</td>
<td>Hindalco</td>
<td>0.21889</td>
<td>0.037499511</td>
<td>0.33034</td>
<td>0.00803037</td>
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<tr>
<td>3</td>
<td>ONGC</td>
<td>0.51</td>
<td>0.000394352</td>
<td>0.47</td>
<td>0.000771212</td>
</tr>
<tr>
<td>4</td>
<td>HDFC</td>
<td>0.51</td>
<td>0.00676546</td>
<td>0.61</td>
<td>0.000047144</td>
</tr>
<tr>
<td>5</td>
<td>Tata Motor</td>
<td>0.39</td>
<td>0.00339788</td>
<td>0.34</td>
<td>0.00683</td>
</tr>
<tr>
<td>6</td>
<td>Sterlite</td>
<td>0.58</td>
<td>0.0000870</td>
<td>0.55</td>
<td>0.00017</td>
</tr>
<tr>
<td>7</td>
<td>Suzlon</td>
<td>0.21</td>
<td>0.04386</td>
<td>0.45</td>
<td>0.00118</td>
</tr>
<tr>
<td>8</td>
<td>RIL</td>
<td>0.87</td>
<td>0.0000000021</td>
<td>0.76</td>
<td>0.00000053</td>
</tr>
</tbody>
</table>

TABLE 2: Overall Finding of Top Ten Mergers and Acquisitions by Indian Companies:
2.4 Hypothesis Analysis:

2.4.1 Hypothesis 1: (R square)

H0: The script return is not affected due to the market return in both i.e. Pre and Post Merger
H1: The script return is affected due to the market return in both i.e. Pre and Post Merger

At least .51 means there is an influence of market return on script in both pre and post merger. From the above table we can say that, pre merger script return compare to market return out of 10 there are 7 times shows that the value of the script return affected due to its own rather than market return. So, H0 is accepted in majority of the cases.

2.4.2 Hypothesis 2: (Paired T test)

H0: There is no significance between Markets Return and Script Return and no abnormality between them.
H1: There is significance between Market Return and Script Return and there is abnormality between them.

Here, 0.05 value of t test consider as parameter for the test. If a value of t test is less than 0.05 than there is no significance between Markets Return and Script Return and no abnormality between them and if a value of t test is more than 0.05 than there is significance between Market Return and Script Return and there is abnormality between them in both the cases pre and post merger. From the above table we can say that out of 10 there are 08 companies show the value less that 0.05 which means H0 is rejected and hence there is a significance between market return and script return and there is abnormality between them.

III. Conclusion

To conclude, I can say that there the trend shows upward movement in the deals of M&A in India and the investors have to keep in mind this corporate structure decision while they are investing in the companies. To the short term investors I would like to suggest from the first hypothesis analysis 70% companies’ shows that the value of the script return affected due to its own rather than market return. So, H0 is accepted in majority of the cases. And from the second hypothesis analysis 80% companies’ shows significance between market return and script return and there is abnormality between them. In both the hypothesis there is no significance difference between pre and post merger analysis of the company but it differ from the market return. So, as an investor for short term they have to look in this strategic alliance and then develop their short term investment strategies.

IV. Scope for further Research

From the research it clearly shows that the short term we get the clarity regarding the effect of market return with the script return but we have to now check for the long term to see the financial stability of the companies. With that we can come to more precise conclusion.

Acknowledgement

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