Impact of Mergers & Acquisitions on Firms’ Long Term Performance: A Pre & Post Analysis of the Indian Telecom Industry

Neha Verma
Jaypee Business School (JIIT), Noida, U.P. (India)

Dr. Rahul Sharma
Jaypee Business School (JIIT), Noida, U.P. (India)

Abstract - Mergers and Acquisitions are key forms of corporate restructuring. India in the recent years has showed incredible growth in the Mergers and Acquisitions (M&A) deals. It has been actively playing in all industrial sectors. Mergers and Acquisitions facilitate a firm to implement a strategy of diversification or vertical integration, where vertical integration and diversifications are corporate-level strategy options; M&A is a vehicle or mode of entry. The M&A activity is the means by which a firm can achieve its growth strategy. This research paper aims to study the impact of mergers and acquisitions on the performance of Indian Telecom industry, by examining some pre and post-merger financial and operating variables. For the purpose of the study, companies which have been merged or acquired during the period 2001-02 to 2007-08 have been selected. From the literature review, it is found that there is no decisive evidence about the impact of M&A on the firm’s performance. The present study is thus, an attempt to find out the impact of M&A on the post-merger performance compared with pre-merger performance.

Keywords: Financial and Operating variables, Mergers and Acquisitions (M&A), Pre and Post M&A performance.

I. INTRODUCTION

Favorable demographics and growth opportunities keep India an "attractive" destination for merger and acquisition activities across diverse sectors including consumer goods and pharmaceuticals, according to global consultancy Ernst & Young. The M&A's come into existence from the post independence period in India. But very few M&A took place in India prior to 1990’s due to Industrial Development and Regulation Act 1951, FERA Act, MRTP Act. After the liberalization in 1991, there were cut-throat domestic and global competitions which lead to the big wave of M&A. With the increasing number of Indian companies opting for M&A’s as their growth strategy, India is now one of the leading nations in the world in terms of M&A’s. Mitchell and Mulherin [1] tried to address the issue that mergers occur in waves. These features suggest that mergers might occur as a reaction to unexpected shocks to industry structure. However, identifying industry shocks and substantiating their effect is quite a challenge till now in the researches.

Today’s competitive marketplace makes it nearly impossible for an organization to achieve its growth objectives through organic growth only. Recent studies suggest, that companies which don’t complement internal growth with external activities, such as M&A, discover that it’s difficult to provide the top-line and bottom-line results the shareholders expect. Companies expecting to expand into new markets, pursuing new innovation opportunities and hit aggressive targets must therefore, build M&A as their growth strategies. The situation of M&A in India has undergone a transformation in the last couple of years. In Indian corporate sectors M&A’s of foreign companies by the Indian companies has been latest trend. According to Banal-Estanol and Seldeslachts [2], mergers and acquisitions are often created to expand a current organization or operation aiming for long term profitability and an increase in market power. There are different key factors like dynamic attitude of Indian entrepreneurs, buoyancy in economy, favorable government policies, additional liquidity etc. behind the changing helm of affairs of mergers and acquisition in India. The IT and ITES sector have already played a dominant role in global market. The increased involvement of the Indian companies in the global corporate sector has further facilitated the merger and acquisition activities in India.

II. MERGERS AND ACQUISITIONS IN INDIAN TELECOM INDUSTRY

The Indian Telecommunication Industry is the third largest in the world and the second largest among the
emerging economies of Asia. Today, it is the fastest growing market in the world. The telecommunication sector continued to record considerable success and has emerged as one of the key sectors responsible for India’s resurgent economic growth. The number of M&A’s in Telecom Sector has been increasing significantly. Currently, a slew of M&A in Telecom Sector are going throughout the world. The aim behind such M&A’s is to attain competitive benefits in telecommunications industry. The M&A’s in telecom industry are regarded as horizontal mergers as the entities going for M&A are operating in the same industry. The M&A’s in the telecommunication industry help the telecommunications service providers to cut down on their costs, achieve greater market share and accomplish market control [3].

India has become a source of telecom M&A’s in the last decade. M&A have also been driven by the development of new telecommunication technologies. The history of the Indian Telecom sector starts way back in 1851, when the first operational landlines were laid by The British Government in Calcutta. With independence, all foreign telecommunication companies were nationalized to form a Post, Telephone and Telegraph, a monopoly run by the Government of India. Telecommunications industry is mainly the most profitable and rapidly developing industries in the world and it is regarded as a crucial component of the worldwide utility and services sector. Telecom industry in India has undergone a revolution during the past few years with tremendous growth in the telecom subscriber base. India’s telecom sector is one of the fastest growing and one of the largest telecommunication networks in the world. With the ongoing investments into infrastructure deployment, the country is projected to witness high penetration of Internet, broadband and mobile subscribers in near future. Telecommunication industry deals with various forms of communication mediums, for example mobile phones, fixed line phones, Internet and broadband services. The aim behind such M&A’s is to attain competitive advantages over the other players in the telecommunications industry. M&A’s in the telecom industry have grown by significant proportions in India since the mid 1990’s. Economic reforms undertaken in the 1990’s in India pioneered the telecom sector which used to be a predominantly state controlled one. Private investment in the telecom sector in India not only facilitated the rapid growth of telecom services in the urban, as well as rural parts of India, it also provided the opportunity for M&A’s in this sector.

According to a new analytical study on the sector “Indian Telecom Analysis (2008-2012)”, mobile telephony continues to stimulate growth in the Indian telecom sector with mobile subscriber base projected to rise at a CAGR of around 6.6% during 2011-12 to 2014-15. Tele-density in India has significantly enhanced during the past few years and has covered large portion of the country’s population owing to the improving network infrastructure. Telecom Regulatory Authority of India (TRAI) was founded to act as an independent regulatory body supervising telecom development in India. It was founded by an Act of Parliament, the main function of the body was to finalize toll rates and settle disputes between players. TRAI is of the view that while on one hand mergers encourage efficiencies of scope and scale and hence are desirable, care has to be taken that monopolies do not emerge as a consequence of it. TRAI had issued its recommendation to Department of Telecommunications (DoT) in January 2004 regarding intra circle Mergers & Acquisitions which were accepted by DoT. The telecom industry in India is growing at an unbelievable speed and the growth rate is expected to double with every passing year. There are many new developments in the telecom sector, including the introduction of 3G technology into the Indian market.

In recent times M&A’s in the Indian telecom industry have been driven by some key factors like, the inclusion of internet (including broadband) and cable services in the telecom sector, new technologies like wireless fixed phone services and deregulation in the telecom sector. Mergers and acquisitions in Telecom Sector can also have some negative effects, which include monopolization of the telecommunication products and services, unemployment and many others. However, the governments of various countries take appropriate steps to control these problems.

This research paper aims to analyze the impact of mergers and acquisitions on the post financial and operating performance of Indian Telecom Industry during the period 2001-02 to 2007-08. This paper comprises of introduction, literature review, research objectives, theoretical framework and research design, results & analysis and the conclusion.

III. REVIEW OF LITERATURE

Healy, Palepu and Ruback [4] examined the post-merger operating performance for the 50 largest mergers between 1979 and 1984. They analyzed the operating performance for the combined firm relative to the industry median. The results suggested that
merged firms experienced improvements in asset productivity, leading to higher operating cash flows relative to their industry peers. Their results show that the operating cash flows of merged firms actually drop from their pre-merger level on an average but the non-merging firms in the same industry drop considerably more. Thus, the results concluded that the post-merger operating performance improves relative to the industry benchmark.

Ramaswamy and Waigelein [5] tested the long-term post-merger financial performance of merged companies in Hong Kong to determine relationships between post-merger performance and firm size, the compensation plan, method of payment, and industry type. The analysis covered the five years pre and post-mergers (using operating cash flow returns on market value of assets as the measure of performance). The results have concluded that there is a positive significant improvement in the post-merger performance. King, Dalton and Covin [6] reviewed the findings of published research on post-acquisition performance and employed a meta-analysis technique to assess the impact of the addressed variables in the literature on the performance of the merged firms. The study determined that M&A do not lead to better financial performance. It can be argued that M&A has a negative effect on long-term financial performance of acquiring firms. Malhotra and Zhu [7] carried out a study to investigate short-term announcement impact on the acquiring firm’s shareholders wealth, to analyze post-acquisition long-term impact on the acquiring firm’s shareholders wealth and also to test the impact of acquisition on the acquiring firms’ financial performance. The study revealed that Indian domestic market has significant positive response to the announcement of Indian firms acquiring of U.S. firms and also that Indian international acquisition underperformed their benchmarking.

Mantravadi and Reddy [8] tested whether the relative size of target and acquiring firms has an impact on the post-merger operating performance in India. The analysis of pre and post merger operating performance ratios for the acquiring small size firms has indicated that relative size does make difference to post-merger performance. Ramakrishnan [9] investigated that whether mergers in India have resulted in improved long-term post merger firm operating performance through enhanced efficiency or not with the help of hypotheses. This study indicated that in the long run, mergers emerge to have been financially beneficial for firms in the Indian industry. It also renews confidence in the Indian managerial fraternity to adopt M&A’s as fruitful instruments of corporate strategy for growth.

E Akben and Yilmaz [10] investigated the impact of Merger & Acquisition deals on the performance of acquirer Turkish companies. In order to evaluate the performance of the acquiring company, two approaches have been used by the author; Stock market approach in which an event study is conducted to measure whether any abnormal returns are earned by security holders around M&A announcements. The core assumption of the event-study methodology is that if information communicated to the market contains any useful and surprising content an abnormal return will occur. Accounting approach; three profitability ratios are used to assess changes in corporate performance: ROA (Return on assets defined as Net Income/Total Assets), ROE (Return on equity defined as Net Income/Total Equity) and ROS (Return on sales defined as Net Income/Net Sales). Kumar [11] examined the post-merger operating performance. The study attempts to identify synergies, if any, resulting from mergers. The study uses accounting data to examine merger related gains to the acquiring firms. It was found that the post-merger profitability, assets turnover and solvency of the acquiring companies, on an average, depicted no improvement when compared with pre-merger values.

IV. RESEARCH OBJECTIVES

The objective of the research paper is to analyze the post mergers and acquisitions performance of the companies in the Indian Telecom Sector which were merged or acquired during the period 2001-02 to 2007-08. The objectives of the paper are:

1) To analyze the impact of select financial and operating performance variables on Return on Shareholder’s Fund (ROSF) in the Indian Telecom Sector companies which were merged or acquired during the period 2001-02 to 2007-08.

2) To identify M&A induced changes in financial and operating performance of the companies and synergies, if any, resulting from M&A’s in the Indian Telecom Sector during the period 2001-02 to 2007-08.

V. THEORETICAL FRAMEWORK

The present research paper undertakes Accounting-based study to measure the post-M&A performance. Accounting studies deal with analyzing pre-merger performance of the target and the acquiring
companies and the post-merger performance of only the acquiring company. The accounting-based studies use financial accounting data and seek to determine whether, on an average, M&A’s are followed by changes in profitability. Moreover, since the target company’s annual account information is absorbed into that of the acquirer, it can be expected that the pre-M&A performance of a target company will influence the post-M&A performance of the acquirer company [12] and [13]. Tambi [14] evaluated the impact of such mergers on the performance of a corporation. Tambi uses his paper to evaluate the same in the scenario of Indian economy. The paper used three parameters- PBITDA, PAT & ROCE to measure any change in their before and after values by comparison of means using t-test. Ravichandran, Nor and Said [15] evaluated the efficiency and performance before and after the mergers. The paper used Profit Margin, Current Ratio, Ratio of Advances to Total Assets, Cost Efficiency and Interest Cover to identify the relationship between these factors and return on shareholder’s funds through regression analysis.

In this study, the effect of M&A is studied through a pre and post-M&A Regression Model. The effect of M&A on Return on Shareholder’s Fund (ROSF) is examined and is measured in terms of Return on Capital Employed (ROCE) and is taken as the dependent variable in both the models. Assessing a company’s operating performance, helps in measuring whether a company is applying its assets in an efficient and profitable manner. It is done by using operational efficiency ratios. Assessing a company's financial performance helps in measuring whether a company is able to meet its financial obligations. It is done by using ratios like liquidity, leverage and profitability ratios.

The study uses Financial performance variables: Profit after Tax (PAT), Current Ratio (CR), Earnings per Share (EPS), Interest Cover (times) and Operating performance variables: Stock Turnover Ratio (STR), Debtors Turnover Ratio (DTR), Creditors Turnover Ratio (CTR), Asset Turnover Ratio (ATR), to identify the relationship between independent variables and Return on Shareholder’s Fund (ROSF) proxied by Return on Capital Employed (ROCE). M&A’s in general are supposed to increase the post-M&A performance. Whether M&A’s create economic values is the central question in every M&A research. In answering this question finance theory usually considers shareholder’s wealth/funds as a variable to measure economic value creation because shareholders are the residual owners of the firm and thus assumes that shareholder value yields an efficient evaluation criterion for the same. The post-M&A three years averaged ROCE of the acquirer is compared with that of pre-M&A three years averaged ROCE of the acquirer and target firms combined into one measure with all the other variables in the same way to analyze the impact of M&A on the post-M&A performance of the firm.

VI. RESEARCH METHODOLOGY

A. Sample Selection

A total of 59 M&A deals have been selected from Indian Telecom Sector spreading a time period from 2001-02 to 2007-08 for the purpose of this study. The list of companies involved in M&A’s during the period was compiled from the database of CMIE-Business Beacon. The cases where at least two years of data was not available for pre and post-M&A period were removed from the final sample for the study.

B. Data Collection

To study the impact of M&A on financial and operating performance of the company’s in the Indian Telecom Sector, data for six years has been taken into consideration which includes three years data from Pre-M&A period and three years data from post-M&A period of the companies which were involved in the M&A. Data for all the 59 deals of M&A has been collected for all the six years for the following eight parameters in total-

1) Financial Performance Variables:
   - Profit after Tax (PAT)
   - Current Ratio (CR)
   - Earnings per Share (EPS)
   - Interest Cover (times)

2) Operating Performance Variables:
   - Stock Turnover Ratio (STR)
   - Debtors Turnover Ratio (DTR)
   - Creditors Turnover Ratio (CTR)
   - Asset Turnover Ratio (ATR)

The data on financial and operating performance ratios has been extracted from CMIE database PROWESS. The years 2001-02 to 2007-08 has been selected to identify M&A deals in the Telecom sector. Thus, three years pre and post financial and operating ratios are considered for each case; For deals in 2001-02 (pre deal years- 1998-99, 1999-00 & 2000-01 and post deal years- 2002-03, 2003-04 & 2004-05), for deals in 2002-03 (pre deal years- 1999-
The three year pre and post-merger data points were taken for all the financial and operating variables across all the 59 M&A deals. For pre-merger series, a simple average of the parameters value for all the three years of both the target and the acquirer company is taken. For post-merger series, the average of the parameters value for only the acquirer company is taken.

Pre-M&A Model: $\text{ROSF}_{\text{BM}} = \alpha + \beta_1 \text{PAT} + \beta_2 \text{CR} + \beta_3 \text{EPS} + \beta_4 \text{IER} + \beta_5 \text{STR} + \beta_6 \text{DTR} + \beta_7 \text{CTR} + \beta_8 \text{ATR} + \varepsilon$

Post-M&A Model: $\text{ROSF}_{\text{AM}} = \delta + \gamma_1 \text{PAT} + \gamma_2 \text{CR} + \gamma_3 \text{EPS} + \gamma_4 \text{IER} + \gamma_5 \text{STR} + \gamma_6 \text{DTR} + \gamma_7 \text{CTR} + \gamma_8 \text{ATR} + \varepsilon$

Where:
- $\text{ROSF}_{\text{BM}}$ = Return on Shareholder’s funds before merger and acquisition (proxied by ROCE)
- $\text{ROSF}_{\text{AM}}$ = Return on Shareholder’s funds after merger and acquisition (proxied by ROCE)
- $\text{ROCE}$ = Return on Capital Employed
- $\text{PAT}$ = Profit after Tax
- $\text{EPS}$ = Earnings per Share
- $\text{CR}$ = Current Ratio
- $\text{IER}$ = Interest Earning Ratio (Interest Coverage times)
- $\text{STR}$ = Stock Turnover Ratio
- $\text{DTR}$ = Debtors Turnover Ratio
- $\text{CTR}$ = Creditors Turnover Ratio
- $\text{ATR}$ = Asset Turnover Ratio

VII. RESULTS AND ANALYSIS

The following are the results of the Regression Analysis for the various cases of merger & acquisitions and their effects measured using financial and operating variables.

Pre-M&A Model: (Table I of Annexure)

The stationarity of the variable series (dependent & independent) have been checked using Augmented Dickey Fuller test. It was found that all the series are stationary at level. The results depicted that Profit after Tax (PAT), Current Ratio (CR), Interest Earning Ratio (IER), Stock Turnover Ratio (STR) and Creditors Turnover Ratio (CTR) had a positive significant impact on the Return on Shareholder’s Funds (ROSF) which is proxied by Return on Capital Employed (ROCE) before the M&A. The relationship is significant at 1 percent for PAT & STR and is significant at 5 percent for CR, IER and CTR respectively. A company's profit after tax (PAT) is important because it tells investors the percentage of money a company actually earns per rupee of sales. STR is a significant variable and is also positively associated to ROSF that shows that effectively converting stock into cash is an important factor before the M&A. CR also had a positive significant impact on the ROSF that depicts the efficiency of a company's operating cycle or its ability to turn its product into cash is a contributing factor before the M&A. Companies that have trouble getting paid on their receivables or have long inventory turnover can run into liquidity problems because they are unable to alleviate their obligations. IER is a significant variable affecting the ROSF before the M&A and is positively associated to the same indicating that an increase in IER will allow for an increase in ROSF. Creditor’s Turnover Ratio (CTR) is also significant, which means that the company is paying of its suppliers at a faster rate and depicts the efficiency of the company’s credit policies which are positively associated i.e. contributed significantly to Return on Shareholder’s Funds (ROSF) in the pre-M&A period.

On the other hand, DTR although proved to be a significant variable before the mergers & acquisitions, it was negatively associated with the ROSF and was significant at 5 percent. A significant Debtor’s Turnover Ratio (DTR) implies that the company’s extension of credit and collection of accounts receivable is efficient although the ratio did not significantly contributed to ROSF. However,
ATR was found to be insignificant and also negatively related with ROSF which implies that an increase in ATR leads to a decrease in ROSF in the pre-M&A period. EPS however, is insignificant but positively related with ROSF that implies that EPS had no impact on the ROSF in the pre M&A scenario.

Post-M&A Model: (Table II of Annexure)
\[
\text{ROSF}_{\text{AM}} = \delta + \gamma_1 \text{PAT} + \gamma_2 \text{CR} + \gamma_3 \text{EPS} + \gamma_4 \text{IER} + \gamma_5 \text{STR} + \gamma_6 \text{DTR} + \gamma_7 \text{CTR} + \gamma_8 \text{ATR} + \epsilon
\]

The stationarity of the variable series (dependent & independent) have been checked using Augmented Dickey Fuller test. It was found that the series are stationary at level. The results depicted that Profit after Tax (PAT), Current ratio (CR), Interest Earning Ratio (IER) and Asset Turnover Ratio (ATR) had a negative significant impact on the Return on Shareholder’s Funds (ROSF) which is proxied by Return on Capital Employed (ROCE) after the M&A. The relationship is significant at 5 percent for PAT and is significant at 1 percent for CR, IER and ATR respectively. It can be seen from the results that PAT, CR and IER which had a positive significant impact on the ROSF before the M&A, have a negative significant impact on the ROSF after the M&A. This implies that an increase in PAT, CR, IER and ATR will lead to a decrease in ROSF in the post M&A scenario.

STR which was a significant variable affecting the ROSF and was positively associated to the same became insignificant but positively related to ROSF. This implies STR though had a positive impact on the ROSF after the M&A’s but the impact was found to be insignificant. However, DTR and CTR were found to be insignificant and also negatively related with ROSF. This implies that DTR and CTR had a no significant impact on ROSF in post M&A performance of the companies. EPS however remained an insignificant variable, indicating that there was no change in the relationship between the ROSF and EPS in both pre and post M&A scenario.

It implies that neither the companies were able to leverage the synergies arising out of M&A nor they were able to maintain their capital structure and financial position to improve their liquidity position after the mergers and acquisitions has taken place. It is also important to note here that, in turn it becomes very essential for the companies to generate profits in order to rationalize the decision of entering into M&A embarked upon by the management to both its shareholders and stakeholders.

Comparison of Financial and Operating Variables in the Pre & Post M&A: (Table III of Annexure)
The results depicted that the financial performance of the companies decreased following the M&A. It can be seen that Profit after Tax (PAT), Current Ratio (CR) and Interest Earnings Ratio (IER) which was a positive significant variable before the mergers and acquisitions, became negatively significant variable after the M&A took place indicating that with an increase in PAT, CR and IER, the ROSF decreased in the post M&A. EPS remained insignificant before and after the M&A which indicated that M&A had no impact on the Earning per Share. The operating performance overall showed a decline in the post-M&A scenario. The statistical results proved that the operating performance variables did not showed any improvement after the M&A which indicates that the M&A did not lead to an enhanced performance. STR and CTR which had a positive significant effect on the ROSF before the M&A became insignificant following the M&A. it implies that these variables had no impact on the ROSF in the post M&A period. DTR which was a negative significant variable before the M&A also became insignificant after the M&A. ATR which was an insignificant variable before the mergers & acquisitions, the variable was found to be negatively associated with the ROSF in the post M&A period.

VIII. CONCLUSION

With the series of M&A taking place in India, this study has focused on the empirical evidence with respect to M&A induced changes in the performance of Indian Telecom Sector over a period of 2001-02 to 2007-08. Earlier researches evidenced that no significant improvement was seen in the corporate performance after the M&A. This study concludes that, on an average, M&A induced changes in return on shareholder’s funds (ROSF) of companies showed a significant underperformance in the financial performance and an insignificant improvement in the operating performance, in the post-M&A time period as compared to the pre-M&A period which is also in-lined with the results from the literature review. This result depicts that M&A’s do not cause improvement in the shareholder’s funds of the acquirers. The study demonstrates that the merger or acquisitions in the Indian Telecom Sector, do not, on average, improve shareholder funds of the acquiring firm; rather, it actually decreases it. A comparison of the pre and post-merger performance of these companies indicates that though an increase in PAT, CR and IER allows for an increase in Return on shareholder’s funds (ROSF) before the mergers and acquisitions but eventually lead to a decrease in Return on
shareholder’s funds (ROSF) after the mergers and acquisitions. Overall, the result of the study indicated that though companies may have been able to leverage the synergies arising out of the merger or acquisition, but they haven’t been able to improve their financial and operating performance.

Furthermore, from these empirical results it may be concluded that M&A decisions are not fully aimed at maximizing profits and henceforth, the wealth of shareholders. The decisions for M&A may have been inspired by the intention of empire building, market consolidation or acquiring bigger size. The study concludes that companies often focus too closely on cutting costs following M&A’s, whilst revenues and eventually, profits suffer. This loss of revenue momentum is one reason that so many M&A’s fail to create value for shareholders. Instead, managers must retain focus on firm’s business, particularly, post-M&A integration process to achieve the real objectives of the M&A. Therefore, it can be concluded that it becomes important to generate elevated profits after the mergers and acquisitions in order to rationalize the decision of M&A, undertaken by the management to the shareholders. An explanation for the findings may also arise from the post-M&A issues of organizational fit and the process of “managing the integration”.

REFERENCES


[16] Lawrence, P. R. and J. W. Lorsch, (1967) “Organization and Environment”, Graduate School of Business Administration, Harvard University, Boston, MA.


ANNEXURE

TABLE I: PRE-M&A SERIES

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
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<th>Sig.</th>
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<td></td>
<td>B</td>
<td>Std. Error</td>
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<tr>
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a. Dependent Variable: ROCE

TABLE II: POST-M&A SERIES

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<th>Standardized Coefficients</th>
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<th>Sig.</th>
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a. Dependent Variable: ROCE
### TABLE III: COMPARISON OF FINANCIAL & OPERATING VARIABLES

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<th>Post-M&amp;A</th>
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<tr>
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<td>I</td>
<td>I</td>
</tr>
<tr>
<td>CR</td>
<td>(+)</td>
<td>(-)</td>
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<tr>
<td>IER</td>
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<td>STR</td>
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</tr>
<tr>
<td>DTR</td>
<td>(-)</td>
<td>I</td>
</tr>
<tr>
<td>CTR</td>
<td>(+)</td>
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</tr>
<tr>
<td>ATR</td>
<td>I</td>
<td>(-)</td>
</tr>
</tbody>
</table>

Where:
- **Positively Significant**: (+)
- **Negatively Significant**: (-)
- **Insignificant**: I

### AUTHORS PROFILE

**Neha Verma** has received her MBA Degree from Gautam Buddha University, Greater Noida, India. Presently she is working as a Research Scholar at Jaypee Business School (A constituent of Jaypee Institute of Information Technology), Noida, India. She has 2.5 Years of research experience. Her area of interest includes Corporate Finance.

**Dr. Rahul Sharma** is presently working as Assistant Professor at Jaypee Business School (A constituent of Jaypee Institute of Information Technology), Noida, India. He has around 11 years of academic and research experience. His area of interest includes Financial Reporting and Personal Financial Planning.