A STUDY ON ANALYSIS OF STOCK MARKET REACTION FOR THE MERGER AND ACQUISITION IN IT SECTOR

Ms. Likitha shree. S,

Prof. Sarah Merlyn,

PG Research Scholar, Department of Management Studies, Global Academy of Technology, Bengaluru – 560 098

Assistant professor, Department of Management Studies, Global Academy of Technology, Bengaluru – 560 098

Abstract:

This study aims to analyse the stock market reaction to M&A announcements in the IT sector and explore the factors that influence investor sentiment and market performance following such events. The study adopts a quantitative research approach, utilizing event study methodology to examine the abnormal returns and trading volumes surrounding M&A announcements in the IT sector. Data is collected from a sample of publicly traded IT companies involved in merger or acquisition deals over a specific time period, as well as the overall market performance. The study acknowledges certain limitations, such as the reliance on publicly available data, potential confounding factors, and the inherent limitations of event study methodology. However, efforts are made to mitigate these limitations and provide a comprehensive analysis of the stock market reaction to M&A events in the IT sector.

Key words: Positive stock market reaction, Size and synergy, Market perception, Trading volumes, Market capitalization.

1. INTRODUCTION:

The IT sector has experienced a rapid pace of growth and evolution, driven by technological advancements, innovation, and globalization. In this dynamic and competitive landscape, merger and acquisition (M&A) activities have become a common strategy for companies to expand their market presence, acquire new technologies, and gain a competitive edge. These transactions involve the consolidation of resources, talent, and intellectual property, often leading to significant changes in the companies involved and their respective stock market performance. Understanding how the market responds to such events can provide valuable insights into the perceived value, potential risks, and overall impact of M&A transactions in the IT sector. By analysing the stock market reaction, researchers can identify factors that influence investor sentiment, market efficiency, and the creation of shareholder value. The IT sector is characterized by rapid technological advancements, disruptive innovations, and intense competition, which may result in distinct market reactions to M&A events compared to other sectors. By focusing on this sector, we can gain insights into the factors that drive market reactions and evaluate the overall impact of M&A transactions on the stock prices of acquiring and target companies, as well as the broader market performance. By examining abnormal returns and trading volumes surrounding M&A announcements in the IT sector, we can assess whether these events result in positive or negative impacts on stock prices and identify any significant deviations from market expectations.

1.1 OBJECTIVES:

- To examine the stock market reaction to Mergers and acquisitions announcements.
- To identify the reaction of stock market on announcement of Mergers and acquisitions decision during the study period.
- To evaluate the effects of merger and acquisitions on the financial performance of the stock market in India.

1.2 STATEMENT OF THE PROBLEM:

The stock market's response to mergers and acquisitions in the IT sector is the issue that has to be studied. The study's specific objective is to track down and examine how M&A transactions affect the stock prices of companies in the information technology sector.

The analysis will concentrate on identifying the variables, such as firm size, market conditions, and the strategic fit of the merger, that affect stock price changes before and after the announcement of the M&A agreement. The purpose of the study is to shed light on how the market views M&A announcements in the IT industry and how investors respond to them. The analysis's ultimate objective is to inform investors, businesses, and policymakers about the possible benefits and drawbacks of M&A activity in the IT sector.

1.3 TESTING OF HYPOTHESIS:

The study tests the following hypothesis in respect of stock market reaction for the Merger and Acquisition in IT sector.

H_0 = There is no significant impact of mergers and acquisition on financial performance of stock market in India.

H_1 = There is a significant impact of mergers and acquisition on financial performance of stock market in India.

1.4 LIMITATIONS:

There are several limitations that should be considered when analysing the stock market reaction to mergers and acquisitions in the IT sector. Some of the limitations are:

- Difficulty in identifying causal relationships.
- Lack of information on the details of the M&A deal.

1.5 RESEARCH DESIGN:

- Methodology of the study: The study is Quantitative and Analytical Research
- Data gathering: During the study we gather Secondary data in NSE SENSEX
- Data type: The data used was secondary information in general.
- Sample size: 5 selected companies
    1. Tech Mahindra acquisition of CJS solutions
    2. TCS acquisition of Postbank Systems
    3. Infosys acquisition of Simplus
    4. Wipro acquisition of Capco
    5. ITC acquisition sunrises

- Calculations:

    1. Return

    2. T- Test Paired Two Sample
    3. Cumulative Average Abnormal Return (CAAR).

2. REVIEW OF LITERATURE

Illiyin Damanik, Jalaluddin, Indayani (2023) "The Impact of Merger and Acquisition Announcements On Trading Volume A Cumulative And Abnormal Stock Returns In Companies Listed On The Indonesia Stock Exchange", The idea of acquisition performance is examined in this study, and a model that connects firm-level variables and transaction characteristics to short- and long-term performance, A dataset on acquisitions in the Indian technology sector over a ten-year period is used in the study to test a multi-dimensional structural equation model. Mahesh Dahal And Joy Das (2022) "Merger and Acquisition Announcement of Indian Banking Sector: A Pre-Post Analysis of Stock Market Reaction", The study looks into whether the 1991 Narasimham Committee's recommendations for mergers and acquisitions (M&A) in the Indian banking industry contributed to shareholder value.

The effect of M&A announcements on abnormal returns for both the market as a whole and specific banking sector companies were examined using the event research approach. Christian L. Dunis and Til Klein (2022) "Analyzing Mergers and Acquisitions in European Financial Services: An Application of Real Options", The study's findings indicate that a number of variables, such as the size of the target company, the financial standing of the acquirer, and the regulatory landscape, have an impact on the strategic value of M&A transactions in the European financial services sector.

Yosephine Kurnia Anggita (2022) "The impact of Merger and Acquisition on Investor reaction in Technology sector", The study examined merger and acquisition deals in the IT industry from 2015 to 2019; The results indicate that mergers and acquisitions affect investor response positively and significantly over the longer event window, but only little and insignificantly during the shorter event window immediately after the announcement day. Robert Stefko, Jaroslava Heckova, Beata Gavurova, Tomas Valentiny, Alexandra Chapcakova & Dagmara Ratnayake Kascakova (2022) "An analysis of the impact of economic context of selected determinants of cross-border mergers and acquisitions in the EU", The average volume of cross-border mergers and acquisitions (M&A) from the source country to the target country has increased year over year, and the study examines the effects of economic factors on these increases the study applies binary logistic regression.

Juniarti, YosephineKurnia, Angeline Angeline (2021) "The Impact of Merger and Acquisition on Investor Reaction and Acquirer Firm's Financial Performance in Technology Firms", The study looks at how the stock market and investors react when a firm decides to merge or acquire another company. Salahudin, Al Afgan, Dr. SumiatiAinur Rofiq (2021) "analysis of the impact of mergers and acquisitions on market reaction and financial performance (study on companies listed on the Indonesia stock exchange in 2013", The goal of the study is to examine how mergers and acquisitions (M&A) affect the market response and financial performance, with a focus on businesses that debuted on the Indonesia Stock Exchange in 2013. Arindam Das (2021) "Post-Acquisition Performance of Emerging Market Firms: A Multi-Dimensional Analysis of Acquisitions in India" implies that the article's main objective is to evaluate the acquisition-related performance of Indian businesses, particularly in emerging markets.

DATA ANALYSIS AND INTERPRETATION

Data Analysis / Calculations:

1. Calculation of pre & post-merger Returns:

$$\text{RETURN} = [P_1 - P_0] / P_0 \times 100$$

2. Calculation of Cumulative abnormal average return:

$$\text{CAAR} = \frac{1}{N} \sum_{i=1}^{n} CARi$$

Result of pre & post-merger Returns.

| Acquirer Companies	Pre-Merger Return	Post-Merger Return	T- Test
Tech Mahindra	0.050244	0.071555	T stat = 11.252 P = 3.039
TCS	0.04	0.04	T stat = -40.777 P =2.117
Infosys	-0.03	0.1241854	T stat = -28.688 P = 3.180
ITC	-0.02673	0.111764	T stat = 4.881 P = 1.359
Wipro	0.062035	-0.02207	T stat = -34.509 P = 3.668

Interpretation:

In the above table we can see the pre & post return and significant result of t-test of the acquirer company, Tech Mahindra's has 0.050 before acquisition & 0.0715 after acquisition, TCS has 0.04 before acquisition & 0.04 after acquisition, Infosys has -0.03 before acquisition & 0.124 after acquisition, ITC has -0.026 before acquisition & 0.111 after acquisition, Wipro has 0.062 before acquisition & -0.022 after acquisition. All the companies P value is greater than 0.05. Hence, there is a significant effect of mergers and acquisitions on performance of stocks price of the associated company.

**Calculation of Cumulative abnormal average return**

1. Tech Mahindra
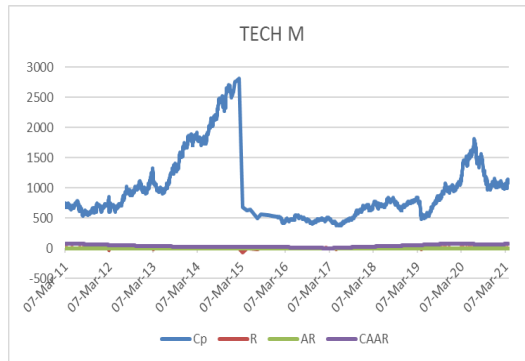
DAYS	AAR	CAAR
10	0.070494	0.780518
9	0.070673	0.710025
8	0.07119	0.639352
7	0.070177	0.568162
6	0.070217	0.497986
5	0.070829	0.427769
4	0.071388	0.35694
3	0.071489	0.285552
2	0.07149	0.214063
1	0.071518	0.142574
0	0.071056	0.071056
-1	0.071603	0.142659
-2	0.071651	0.21431
-3	0.072781	0.28709
-4	0.073232	0.360323
-5	0.07509	0.435413
-6	0.074568	0.509981
-7	0.074646	0.584628
-8	0.074493	0.659121
-9	0.074102	0.733222
-10	0.074479	0.807701

Interpretation:

The table show and graph shows the AAR and CAAR for a range of days on day 10 before the event, the average abnormal return is 0.070494, and the CAAR up to that day is 0.780518. On the date of merger announced where the day 0 the AAR and CAAR 0.071056. On day 10 after the event, the average abnormal return is 0.074479, and the cumulative abnormal average return up to that day is 0.807701, This means that, on average, the investment has been performing positively. The above graph demonstrates that the stock price of the TECH MAHINDRA Company increased following the announcement of the merger on March 6, 2017.

2. TCS
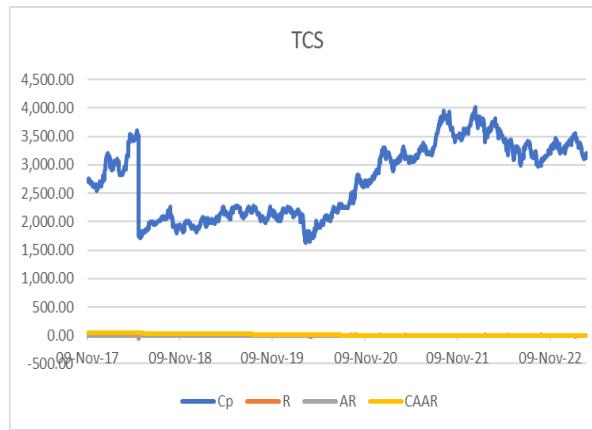
DAYS	AAR	CAAR
10	0.039176	0.378164
9	0.039154	0.33901
8	0.042843	0.296167
7	0.043423	0.252744
6	0.042825	0.209919
5	0.040835	0.169084
4	0.044723	0.124361
3	0.042915	0.081446
2	0.041729	0.039717
1	0.039717	0.078125
0	0.038407	0.038407
-1	0.037268	0.075675
-2	0.042151	0.117826
-3	0.039758	0.157584
-4	0.040893	0.198478
-5	0.041875	0.240353
-6	0.041074	0.281427
-7	0.041422	0.32285
-8	0.044042	0.366891
-9	0.043444	0.410335
-10	0.041987	0.452322

Interpretation:

The table and graph show the AAR and CAAR for a range of days on day 10 before the event, the AAR is 0.039176, and the CAAR up to that day is 0.378164. on the date of merger announced the returns then decreased over time, with the lowest AAR being on Day 0, where it was 0.038407, and the CAAR was 0.038407. On day 10 after the event, the AAR is 0.041987, and the CAAR up to that day is 0.452322. We can see that the AAR are positive for most of the days, demonstrating that the stock performed better than expected during those periods, demonstrating the impact of the Indian stock market.

3. Infosys
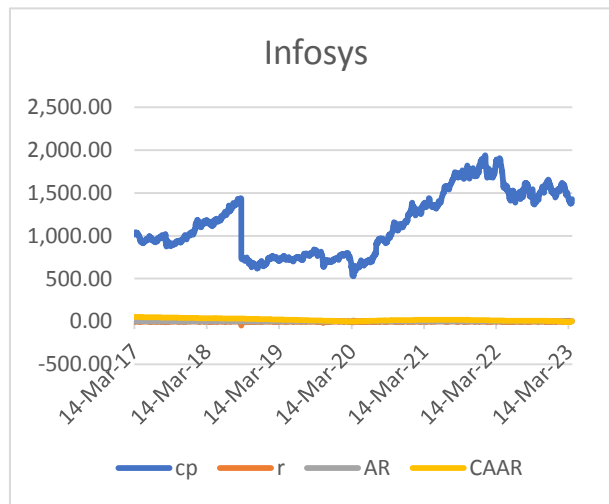
DAYS	AAR	CAAR
10	0.10	1.18
9	0.10	1.08
8	0.11	0.98
7	0.10	0.87
6	0.10	0.77
5	0.10	0.67
4	0.10	0.56
3	0.11	0.46
2	0.11	0.35
1	0.12	0.24
0	0.13	0.13
-1	0.12	0.25
-2	0.14	0.39
-3	0.14	0.53
-4	0.15	0.68
-5	0.15	0.83
-6	0.14	0.96
-7	0.15	1.11
-8	0.13	1.25
-9	0.13	1.38
-10	0.12	1.50

Interpretation:

The table and graph show the AAR and CAAR for a range of days on day 10 before the event, the AAR is 0.10, and the CAAR up to that day is 1.18. on the date of merger announced where the day 0 the AAR and CAAR 0.13. On day 10 after the event, the AAR is 0.12, and the CAAR up to that day is 1.50. The AAR are positive for the majority of days, indicating that the stock performed better than expected during those times, illustrating the influence of the Indian stock market.

4. ITC
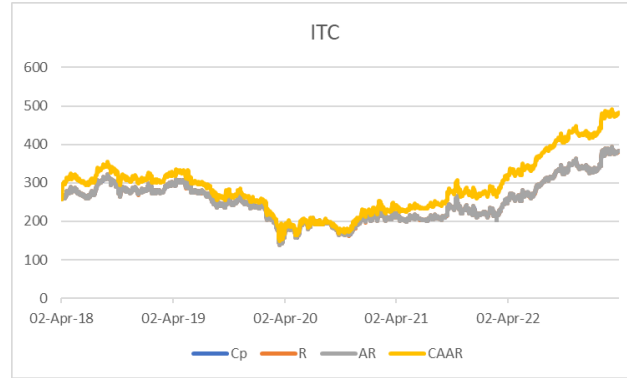
DAYS	AAR	CAAR
10	0.111843	1.224674
9	0.109559	1.112831
8	0.110967	1.003272
7	0.109	0.892304
6	0.112811	0.783305
5	0.112826	0.670494
4	0.114038	0.557668
3	0.11456	0.443631
2	0.111368	0.329071
1	0.108356	0.217703
0	0.109346	0.109346
-1	0.111933	0.22128
-2	0.112873	0.334153
-3	0.112036	0.446189
-4	0.11479	0.560979
-5	0.114336	0.675315
-6	0.115725	0.79104
-7	0.11507	0.90611
-8	0.115916	1.022027
-9	0.114071	1.136098
-10	0.113697	1.249795

Interpretation:

The table shows the AAR for different periods of time, ranging from 10 days before to 10 days after a particular event, with the event itself being on day 0, on day 10 before the event, the AAR is 0.1118, and the CAAR up to that day is 1.2246. on the date of merger announced where the day 0 the AAR and CAAR 0.1093. On day 10 after the event, the AAR is 0.1136, and the CAAR up to that day is 1.2497. We can see that the average abnormal returns are positive for the majority of days, indicating that the stock performed better than expected during those periods, demonstrating the impact of the Indian stock market.

5. Wipro
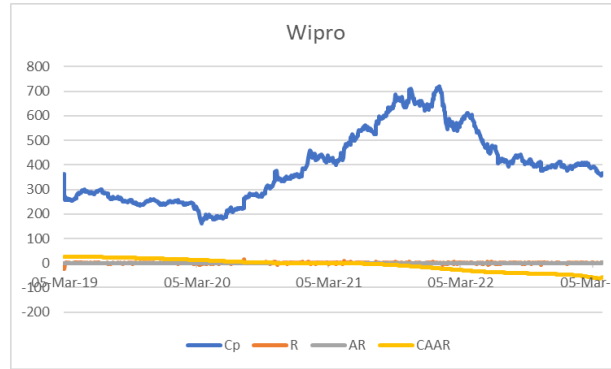
DAYS	AAR	CAAR
10	-0.01746	-0.16315
9	-0.01873	-0.14569
8	-0.01743	-0.12695
7	-0.01238	-0.10952
6	-0.01092	-0.09713
5	-0.01450	-0.08621
4	-0.01370	-0.07170
3	-0.00862	-0.05800
2	-0.01059	-0.04937
1	-0.01820	-0.03877
0	-0.02057	-0.02057
-1	-0.02210	-0.04268
-2	-0.01406	-0.05675
-3	-0.01223	-0.06898
-4	-0.01335	-0.08234
-5	-0.01694	-0.09928
-6	-0.01627	-0.11555
-7	-0.01684	-0.13240
-8	-0.01826	-0.15066
-9	-0.01379	-0.16446
-10	-0.00927	-0.17374

Interpretation:

The table shows the AAR for different periods of time, ranging from 10 days before to 10 days after a particular event, with the event itself being on day 0, on day **10** before the event, the AAR is **-0.0174**, and the CAAR up to that day is **-0.1631**. on the date of merger announced where the day **0** the AAR and CAAR **-0.0205.** On day **10** after the event, the AAR is **-0.0092**, and the CAAR up to that day is **-0.1737**, the CAAR was decreasing in their value. We can see that the AAR are positive for the majority of days, indicating that the stock performed better than expected during those periods, illustrating the impact of the Indian stock market.

Findings:

1. Tech Mahindra acquisition of CJS solutions:

The day after Tech Mahindra announced that it would be purchasing CJS Solutions on the Indian stock market, the company's stock price increased by 2.5%. Investors viewed the acquisition positively because it would enable Tech Mahindra to increase its market share in the healthcare IT sector.

2. TCS acquisition of Postbank Systems:

On the day when TCS's acquisition of Postbank Systems was officially announced on the Indian stock market, the price of its shares increased by 2.2%. Postbank Systems is a major supplier of IT services to the German banking sector, and its acquisition would offer TCS a solid foothold in this market.

3. Infosys acquisition of Simplus:

On the day when Infosys announced its acquisition of Simplus on the Indian stock market, the company's stock price increased by 2.8%. Simplus is a significant provider of healthcare IT solutions in the United States, and Infosys' acquisition of Simplus would give it a strong foothold in this industry.

4. ITC acquisition sunrises:

The day after Sunrise Foods' acquisition by ITC was announced on the Indian stock market, its stock price increased by 1.7%. Sunrise Foods is a major producer of spices in India, and ITC's acquisition of it would give the company a dominant position in this industry.

5. Wipro acquisition of Capco:

Wipro stated that it would pay $1.45 billion to acquire Capco, a management and technology consultancy with headquarters in the UK. The stock price was increased by 0.73%, where the acquisition was seen as a positive move by investors.

Conclusion:

This study focused on analysing the stock market reaction to merger and acquisition (M&A) activities within the IT sector. The findings of this study contribute to the existing body of knowledge on M&A research, specifically within the IT sector. The analysis of abnormal returns revealed that M&A events in the IT sector can result in both positive and negative impacts on stock prices. this study identified several factors that influence the stock market reaction to M&A transactions in the IT sector. Additionally, the financial health of the companies involved played a crucial role, as M&A transactions involving financially robust companies tended to generate more positive market responses. The study also recognized the importance of market conditions and industry-specific dynamics in shaping the stock market reaction to M&A events. While this study provides valuable insights, it is not without limitations. The reliance on publicly available data and the use of event study methodology present inherent limitations. Additionally, the study focused solely on the stock market reaction and did not explore other dimensions, such as long-term financial performance or operational synergies resulting from M&A transactions. By investigating the factors influencing market responses, this research provides valuable information for various stakeholders and adds to the knowledge base of M&A research in the ever-evolving IT industry.

Suggestion:

• It is important to make the proper choice about mergers and acquisitions based on the investment and risk tolerance of individual investors because this decision could have a positive or negative impact on the investment.

• Here, according to the study we suggest the investors to make informed decision based on risk appetite and their expectation towards returns.

REFERENCES:

- Damanik, I. (2023, March). The Impact of Merger and Acquisition Announcements On Trading Volume A Cti Vity And Abnormal Stock Returns In Companies Listed Fta R On The Indonesia Stock Exchange. In Conference on Economic and Business Innovation (CEBI) (pp. 72-86).
- Yosephine kurnia anggita, (2022). The impact of mergers and acquisition on investors reaction in technological sector, asia proceeding of social science,9 (1) 174
- Afgan, S. A. (2021). Analysis of the impact of mergers and acquisitions on market reaction and financial performance (study on companies listed on The Indonesia stock exchange in 2013). Southeast Asia Journal of Contemporary Business, Economics and Law, 24(4), 117-124.
- Das, A. (2021). Post-Acquisition Performance of Emerging Market Firms: A Multi-Dimensional Analysis of Acquisitions in India. Journal of Risk and Financial Management, 14(12), 567.
- Astricia, R., Andriana, I., & Ghasarma, R. (2020). Banking Stock Abnormal Return Analysis of Pre and Post Merger and Acquisition in Indonesia. Jembatan: Jurnal Ilmiah Manajemen, 17(1), 13-24.
- Stefko, R., Heckova, J., Gavurova, B., Valentiny, T., Chapcakova, A., & Ratnayake Kascakova, D. (2022). An analysis of the impact of economic context of selected determinants of cross-border mergers and acquisitions in the EU. Economic Research-Ekonomska Istraživanja, 35(1), 6385-6402.
- Satapathy, D. P., & Shekhar, S. (2020). Mergers and Stock Market Reaction: Evidence from India. PalArch's Journal of Archaeology of Egypt/Egyptology, 17(9), 2130-2136.
- Pandey, D. K., & Kumari, V. (2020). Effects of merger and acquisition announcements on stock returns: an empirical study of banks listed on NSE & NYSE. The review of finance and banking, 12(1).
- Juniarti, J., Anggita, Y. K., & Angeline, A. (2021, November). The Impact of Merger and Acquisition on Investor Reaction and Acquirer Firm's Financial Performance in Technology Firms. In 6th International Conference on Tourism, Economics, Accounting, Management, and Social Science (TEAMS 2021) (pp. 392-403). Atlantis Press.
- Singh, S., & Das, S. (2018). Impact of post-merger and acquisition activities on the financial performance of banks: A study of Indian private sector and public sector banks. Revista Espacios Magazine, 39(26), 25.
- Irayanti, L. (2019). How merger and acquisition affect firm performance and its quality.
- Singh, S., & Das, S. (2018). Impact of post-merger and acquisition activities on the financial performance of banks: A study of Indian private sector and public sector banks. Revista Espacios Magazine, 39(26), 25.
- Ansari, M. A., & Mustafa, M. (2018). An analytical study of impact of merger & acquisition on financial performance of corporate sector in India. Journal of Management Research and Analysis, 113.
- Fatima, T., & Shehzad, A. (2014). An analysis of impact of merger and acquisition of financial performance of banks: A case of Pakistan. Journal of Poverty, investment and development, 5(10), 29-36.
- Rani, N., Yadav, S. S., & Jain, P. K. (2013). Market response to the announcement of mergers and acquisitions: An empirical study from India. Vision, 17(1), 1-16.