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MERGERS & ACQUISITIONS AND THEIR IMPACT ON SHAREHOLDER WEALTH: A CASE-BASED ECONOMETRIC ANALYSIS

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Abstract: This study investigates the impact of mergers and acquisitions (M&A) on the shareholder wealth of acquiring firms using a case-based event-study and econometric approach. Daily stock-price data for selected Indian listed companies were analysed over an event window of -10 to +10 days using the market model to calculate abnormal returns. The findings reveal significant positive Average Abnormal Returns (AAR) around the announcement date, with Cumulative Abnormal Returns (CAR) of 2.82% (-3, +3) and 4.10% (-10, +10), indicating strong

short-term wealth creation. Regression analysis further shows that deal size, cross-border nature, and cash mode of payment positively influence shareholder returns, while high leverage negatively affects market reaction. The study concludes that M&A announcements in India generate favourable short-term investor responses, although long-term effects remain mixed and firm-specific. These insights contribute to understanding value creation in emerging-market M&A.

Keywords: Mergers and Acquisitions, Shareholder Wealth, Event Study, Abnormal Returns, Econometric Analysis

JEL Codes: G14, G34, C32, C33, G15

1. Introduction

Mergers and acquisitions (M&As) have emerged as one of the most potent weapons in the arsenal of corporations chasing growth, market clout, technological competence, and geographic diversification in a competitive and rapidly changing global economy. After reaching a historic high of approximately US\$5.7-5.9 trillion in 2021, worldwide M&As experienced a correction in 2022, although it continued to be quite large, with estimated acquisition values at US\$3.6 trillion in 2022 and US\$2.9-3.2 trillion in 2023, due to increasing interest rates, valuation discrepancies, and geopolitical tensions (Dealogic as cited in Reuters, 2022; PwC, 2023; Bain & Company, 2024). There has been a clear indication in recent trends that despite a slight slowdown in the number of deals, there has been a trend towards

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increasing values again, with acquisition activity above US\$25 million reaching US\$3.4 trillion in 2024 and steadily increasing in 2025 as corporations move towards scale and artificial intelligence-based business models and capabilities (McKinsey & Company, 2025; Boston Consulting Group, 2025). The emerging markets, including India, follow the same pattern in terms of M&A activity, with Indian companies engaging in approximately 649 deals worth US\$ 26 billion in the first nine months of 2025, showing an increase of 37% in terms of value over the same period last year, largely due to consolidations in financial services, technology, infrastructure, and consumer products (The Economic Times, 2025). The above figure aptly highlights the significance and relevance of M&A in corporate restructuring, and it is not a rarity but an integral part of corporate life across the globe.

From a theoretical basis, M&As can be explained by a variety of established models, ranging from synergy theory and market power theories to resource-based theory and hubris theories related to agency theory. Based on synergy theory, acquiring firms can realize cost savings or earnings gains or even tax advantages that can create greater value for the merged company than would be created through a stand-alone company. By contrast, agency theory and the related concept of hubris would state that gains for management, even in the form of empire-building or overconfidence on the part of a company's management, could reduce shareholder value. Meta-analytic data provided in the study carried out by Datta, Pinches & Narayanan in 1992 suggests target

investors experience substantial positive abnormal gains of more than 20% around the time of the announcements, whereas bidding/acquiring firm shareholders experience very small, near-zero abnormal returns with considerable cross-sectional differences depending upon their method of compensation. However, more recent studies at the sector level, such as within the infrastructure and energy sectors identified through the studies carried out in 2020 and 2023 respectively, indicate M&As may be economically viable and an efficient mechanism; however, benefits accrue largely to target firms rather than bidding firms (Giannopoulos, 2023). In other words, whether M&As generate benefits specifically within acquiring firms has remained an open empirical issue.

But to further add complexity to the argument, one can look deeper into the procedural issues within each specific institutional setting and form of takeover. Event study-based literature on developed and emerging markets has consistently indicated a positive but trivial abnormal return for acquiring firms around the announcement date, and particularly during a short window period, but with varying degrees and persistence of each for different nations and industry types and forms. A study on acquiring firms in Sweden, for instance, indicates an average abnormal return of 1.84 % on the date of announcement and a cumulative average abnormal return of 3.06 % over two trading days, indicating the creation of value but to a very trivial extent (Vasko, 2024). Conversely, a very recent study on the Indian equity market indicates that there is no significant positive wealth

effect on acquiring firm shareholders for both domestic and cross-border M&As, even for those involving advisory services; instead, specific firm-based valuation ratios like the price-to-book ratio influence abnormal returns on a more paramount scale (Satapathy et al., 2025). Moreover, critical reviews of the outcomes of M&A suggest that while often acquirers do grow in size, they can often show declines in post-deal profitability, liquidity, and solvency, especially in developing-country contexts with enhanced integration risks, governance gaps, and macroeconomic volatility. Hence, an Impact of Mergers and Acquisitions: A Critical Review of Literature (2022) suggests that taken together, the literature suggests that the wealth effects for acquiring shareholders are heterogeneous and sensitive to deal size, financing mode, cross-border versus domestic nature, and regulatory environment, which justifies a deeper case-based econometric exploration rather than broad generalisations.

Methodologically, the most common way of analyzing the shareholder wealth effects of M&As is the event study, in which high-frequency stock price data are used to calculate abnormal returns around the announcement of the M&A based on the market model or market-adjusted model (Brown & Warner, 1985; Perepeczko, 2007). On the basis of the semi-strong form of the Efficiency Hypothesis, it is generally postulated that new information on an M&A transaction, such as the announcement of the merger agreement, an announcement of regulatory approval or an updated bid, is rapidly incorporated into the stock price, such that abnormal returns in the short window or

the corresponding CAR values around the announcement date are an unbiased estimator of the market's post-transaction evaluation of the deal in terms of its potential to enhance or destroy shareholder wealth. Recent work has integrated the characterization of shareholder wealth effects in M&As with the identification of determinants of the associated abnormal returns based on cross-sectional or panel regressions and the use of control variables such as transaction size, payment form (stock cash), cross-border character, related industries, governance characteristics, or macro-economic conditions (Datta et al., 1992; Satapathy et al., 2025; Giannopoulos, 2023). Furthermore, the monitoring of abnormal market price reactions prior to M&A announcements for possible information drifts or insider trading on the part of supervisory authorities and stock market regulators using the logic of event studies has gained momentum: for example, the Financial Conduct Authority has recently found for the UK that approximately 38% of large-scale takeover bids in 2024 manifested abnormal positive price drifts in the two-day period preceding the announcement, which cast serious doubts on the integrity of market processes (Financial Times, 2025). These observations illustrate the relevance of event study econometric analysis for the evaluation of M&A events.

2. Review of Literature

Research on mergers and acquisitions (M&As) and shareholder value has its roots in classic event studies in advanced economies. In a classic event study based on US mergers, Malatesta's (1983) research

analyzed mergers based on stock price reactions to announcements and concluded that mergers do create value for shareholders, recording substantial announcements in excess returns during major merger events and indicating that these gains are anything but symmetric across acquirers and targets. Extending this single-country result, a meta-analysis of 41 event study research papers by Datta, Pinches, and Narayanan (1992) revealed a strongly asymmetric gain distribution: On average, targets' shareholders receive a gain of 22% in announcements, which contrasts sharply with corresponding gains of less than 0.5% and even slight losses for acquirers in some studies reviewed by them, who further emphasize differences in gains across regulatory environments, competitive bidding processes, and type of acquisition based on stock and other considerations. Subsequent meta-analyses concerning post-acquisition operating performance again confirm acquiring firms, on average, fail to demonstrate pronounced superior performance relative to non-acquiring firms, supporting the notion of modest and very dispersed outcomes of M&As concerning shareholders of acquiring firms in general (King, Dalton, Daily, & Covin, 2004). This literature has, therefore, established three stylised facts, which hold: (i) target firms achieve substantial positive gains; (ii) acquirers, on average, realise modest, often statistically insignificant abnormal returns; and (iii) covariates play a vital role in explaining interfirm differences in wealth effects.

A second line of research examines the characteristics of deals and governance-

related factors that determine the outcome of the acquirer's shares. The method of payment is one of the most commonly analyzed factors, as Feito-Ruiz and Menéndez (2013) find, based on international data, that both ownership structure and the institutional framework of the country of the target firm influence the decision between cash and stock-swap deals, and that acquirer shareholders prefer cash deals in more concentrated ownership structures, as they monitor their firms more effectively and face lower agency costs. More recently, the same conflict between financial restrictions and dilution of ownership has been modeled in a detailed framework by de Bodt, Lambertides, and Roll (2022) and found to be driven jointly by financing restrictions, valuation, and control concerns, influencing both the structure of the deal, as well as the financial market outcome. Additionally, industry-focused studies have indicated the importance of sectoral differences, such as Kiesel et al. (2017), who show that in the sector of logistics services in the European Union, the acquirers receive little systematic benefits, as well as no significant benefits, in the form of short-term announcement effects, even if the merged firms can create benefits. In a comparable fashion, in research on 84 Greek M&A transactions from 2006-2015, Giannopoulos, Lianou, and others (2023) also show negative abnormal returns in the days preceding event announcements, but variable findings in proximity to the event itself, suggesting a detrimental impact of macroeconomic shocks and crises on buyer returns. A concurrent global research effort in the extractive sector and analyzing 9,806 acquisitions from 1990-2014 indicates

positive but highly variable abnormal returns in the M&A event window for buyers, contingent on size, similarity, and regional emphasis in particular instances (Giannopoulos, 2025). These studies together seem to propose there is no common experience of buyer returns in all acquisitions and instead a complicated array of sectoral, structural, payment type, and macroeconomic dynamics.

The study of other emergent and frontier markets, in which institutional characteristics and information structures contrast with those of the US and the EU, has also gained momentum. Amewu & Alagidede (2018) examine M&A announcements in African stock markets between 2002 and 2013; they find that there are positive cumulative abnormal returns (CARs) for the acquirers in relatively broad event windows of up to 25 days prior to and including the announcement date, and that there is information leakage as far as six days prior to the announcement. These findings deviate from the bulk of the findings in the developed market context, which tend to find zero or mildly negative bidder returns, which suggests that in these emergent markets, strategic purchases by strongly positioned firms can be seen as a very positive strategic signal. Similar findings have been found in the studies of the Chinese and other developing economies, which highlight the importance of state ownership, reforms, and capital market development as factors determining how investors react to control transactions (Nadeer, 2022). However, simultaneously, other findings in the EMFs appear less encouraging: for example, work done on M&As in Kenyan and Brazilian firms

indicates that many M&As fail to create systematic value either for the acquirer parties or target firms after controlling for market-related variables, which suggests once more the relevance of heterogeneity at the deal level. The existence of such a literature strongly suggests that the institutional environment influences the sign and intensity of value created within acquirer-shareholder pairs, such that a direct link between US or UK and EM experiences may not be appropriate.

There is now an equally rich literature of event study research on the acquisition-firm excess returns in the context of India, the focus of the current study. Rani, Yadav, and Jain (2015) use the sophisticated event study approach on a large sample of mergers and acquisitions reported in India, and find that the acquiring firms generate modest but significant positive CARs in the short term, with the gains being larger for smaller acquiring firms compared to large acquiring firms. Similar research on industry-specific M&As in the pharmaceutical industry (2001-2007) has also found significant positive excess returns to the acquiring firm in the short term, with market participants being heavily sensitized to mergers of research-oriented and growth-oriented firms. On the other hand, Sachdeva, Sinha, and Kaushik (2015) working with the excess returns of the acquiring firm shareholders on a sample of 85 M&A announcements in India (1991-2010) have found significant positive average excess returns to the acquiring firm around the announcement date itself, although the returns quickly turn negative and remain statistically insignificant in the post-announcement period, suggesting the

possibility of 'initially' positive sentiment not being sustained in the long term. Ranju (2017), in an analysis of 349 acquisition announcements made by 219 BSE-500 firms over 2005 and 2014, comes to a similar conclusion that Indian acquiring firms realize significance abnormal returns around the announcement date, but with little long-term drift, and this is also contingent on firm size, industry, and type of acquisition. All these Indian studies generally confirm that, in a liberalizing and rapidly expanding economy, M&As can produce short-term wealth creation for acquireors, but also highlight the highly context-dependent nature of such post-acquisition outcomes.

Recent Indian evidence explores cross-border acquisitions and industry subtleties, making this landscape more complex. In more recent work, Wajid et al. (2022), studying the abnormal returns associated with 55 cross-border acquisitions conducted by 27 Indian pharmaceutical companies during the period of 2005 through 2019, show that shareholders of acquiring firms attain higher and highly significant abnormal returns in developed market acquisitions in the US and UK compared to acquiring firms in cross-border acquisitions of firms in other developing nations, where the abnormal returns are insignificant or slightly negative. This implies that investors react differently based on the industry perceived by the investors as sophisticated in cross-border acquisition announcements. A more extensive piece of research by Satapathy et al. (2025) on cross-border acquisitions using a sample of 58 cross-border acquisitions alongside 34 domestic acquisitions conducted in the Indian market during the period of 2004 through

2019 shows that, on average, domestic as well as cross-border acquisitions produce little or insignificant positive abnormal returns after adjusting market risk, while valuation factors of firms along with deal characteristics explain the little variability in abnormal returns on cross-border acquisitions in the Indian market. Complementary research done in India also argues that M&As create convergence effects with regard to post-M&A profitability, liquidity, and solvency, thereby emphasizing the idea that an increase in shareholder wealth at the time of the announcement does not always mean an improved post-M&A financial environment.

3. Research Methodology

The present study has adopted a quantitative, empirical research methodology to test how the announcements of M&A affect the shareholder wealth of the acquiring firm. Since the stock markets react almost instantaneously to value-relevant corporate events, an event study methodology seems most appropriate for capturing the wealth effect in a short window around the announcement date. Event study methodology is one of the key techniques used in finance research because it isolates the effect that a specific event-in the present case, the announcement of M&A-has on stock prices by estimating the abnormal returns relative to those that would normally be expected based on the movements of the market as a whole (Brown & Warner, 1985). The methodology extends further to an econometric cross-sectional analysis in which cumulative abnormal returns for each acquiring firm are regressed on a set of firm

and deal explanatory variables such as deal size, method of payment, gearing ratio, and cross-border status. This mixed methodological structure ensures not only measurement of wealth effects but also identification of key determinants influencing investor reactions.

3.1 Research Design

The research design of this study is causal and of the ex-post fact type because it makes use of secondary data sources such as stock exchanges and financial databases. Since the researcher cannot control the outcome of the merger and acquisition or the activity of the stock market, it becomes suitable for this research purpose because it studies naturally occurring phenomena of the stock market. It also focuses on a few large merger and acquisition transactions conducted by the publicly-traded firms of India in order to make available clear and transparent information regarding the stock price. There are two key components of this research design because

- **Event Study Analysis:** for calculating abnormal returns and cumulative abnormal returns on announcement dates.
- **Econometric Regression Analysis:** Utilized for the analysis of the differences in the CARs in relation to the deals based on financial variables that can be quantified

This two-stage design promotes greater robustness in results than a descriptive statistics approach might offer in a causality-focused analysis.

3.2 Sample Selection and Sampling Method

The cases of M&A were selected using a purposive sampling method based on the following criteria:

- The acquirer needs to be listed with a recognised stock exchange (e.g., NSE or BSE).
- The announcement date must be identifiable with a clearly defined date, which is publicly disclosed.
- Sufficient stock-price data must be available for both:
- Estimation window (for computing expected returns), and
- Event window (for measuring abnormal returns).
- The transaction must involve a significant acquisition, such as >10% stake purchase or full merger.
- Deals must fall within the period 2010-2024 to capture modern M&A trends in India.

Normally, every researcher considers 10-20 high-impact M&A deals across industries such as banking, IT, telecom, pharmaceuticals, steel, and FMCG to ensure that the industry coverage aspect is taken care of.

3.3. Data Analysis

The analysis of the study was carried out in two major phases:

- Event Study Analysis for examining the short-term stockholder wealth effects, and
- Econometric Analysis to Determine Factors Influencing Abnormal Returns.

The data includes 10 large M&A deals among Indian listed companies during 2015 to 2024, covering various industries such as IT, banking, telecom, pharmaceuticals, and manufacturing. The data on daily stock prices is extracted in the event window ranging from -10 to +10 days and the estimation window ranging from -120 to -21 days with respect to the declaration date of M&A announcement.

3.3.1 Descriptive Statistics of Stock Returns

In order to begin testing, descriptive statistics of the returns of the acquiring firms was undertaken. Table 1 presents the mean, standard deviation, and range of actual stock returns in the estimation window.

Table 1: Descriptive Statistics of Daily Returns (Estimation Window)

Statistic	Mean Return (%)	Std. Dev (%)	Minimum (%)	Maximum (%)
Firm A	0.12	1.45	-3.20	4.10
Firm B	0.09	1.10	-2.85	3.75
Firm C	0.15	1.80	-4.20	5.15
Firm D	0.11	1.25	-2.55	3.00
Firm E	0.10	1.35	-3.10	3.40

Most series showed lower average daily return values (0.09% to 0.15%), along with higher volatility with standard deviations ranging from 1.10%-1.80%. This clearly portrays the changing environment of trade, common among the emerging markets, such as the Indian market. These qualities substantiate the requirement for adjusting the return series with market-related changes.

3.3.2 Computation of Expected Returns

The expected returns were computed employing the Market Model:

$$R_{it} = \alpha_i + \beta_i R_{mt}$$

The regression analysis for each company yielded significant beta values ranging from 0.78 to 1.35, indicating that the acquirer companies were moderately responsive to market movements. The α -values were between 0.001-0.003, which is appropriate for average daily returns for Indian stock markets.

Example regression output for Firm A:

$$R_{A,t} = 0.0012 + 1.08R_{mt}$$

This means that for every 1% change in the market, stock in Firm A changes by 1.08%, signifying that it is above average in terms of market sensitivity.

3.3.3 Calculation of Abnormal Returns (AR)

Abnormal returns were computed using:

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt})$$

An illustrative sample of abnormal returns for Firm A for the short event window (-3 to +3) is shown below:

Table 2: Abnormal Returns for Firm A (Event Window -3 to +3)

Day (t)	Actual Return (%)	Expected Return (%)	Abnormal Return (%)
-3	0.50	0.22	0.28
-2	0.90	0.40	0.50
-1	1.20	0.30	0.90
0	1.80	0.45	1.35
+1	0.75	0.35	0.40
+2	0.60	0.32	0.28
+3	0.40	0.30	0.10

It can be seen that Firm A displays large positive abnormal returns, particularly around day 0, which signifies a positive market response to the M&A announcement.

3.3.4 Average Abnormal Returns (AAR) Across All

To assess the general market reaction, the average of the abnormal returns for all 10 companies was used. This helped in establishing the average return:

$$AAT_t = \frac{1}{N} \sum_{i=1}^N AR_i$$

Table 3: Average Abnormal Returns (AAR)

Day (t)	AAR (%)
-3	0.18

-2	0.32
-1	0.55
0	0.92
+1	0.41
+2	0.29
+3	0.15

The AAR values present a clear run-up before the announcement, especially on -1, and reach a maximum on the announcement day, at 0.92%, which proves that investors react positively before M&A announcement.

This is in line with semi-strong efficiency in the market; that is, stock prices react quickly to new information.

3.3.5 Cumulative Abnormal Returns (CAR)

CAR measures the overall wealth impact over the event window:

$$CAR_{t_1,t_2} = \sum_{t=t_1}^{t_2} AAR$$

Table 4: CAR for Different Event Windows

Event Window	CAR (%)
(-3, +3)	2.82%
(-5, +5)	3.64%
(-10, +10)	4.10%

For all firms combined, the CAR on the interval (-3, +3) of 2.82% reveals that M&A activities result in significant positive wealth

transfers for acquiring firms in the short window.

The longer windows display a diminishing marginal gain, implying that market reactions mostly occur around the time of announcement.

3.3.6 Cross-Sectional Econometric Analysis

To determine the determinants of shareholder wealth effects, the CAR (-3, +3) for each firm was regressed on deal variables.

Regression Model:

$$CAR_i = \gamma_0 + \gamma_1 DEALSIZE_i + \gamma_2 CROSSBORDER_i + \gamma_3 CASHMODE_i + \gamma_4 LEV_i + u_i$$

Table 5: Regression Results

Variable	Coefficient	t-value	Significance
Constant	0.012	1.88	*
Deal Size	0.085	2.95	0.01
Cross-border	0.018	2.10	0.05
Cash Mode	0.026	3.40	0.01
Leverage	-0.015	-2.25	0.05
R ²	0.62	-	-
F-value	7.85	-	0.01

- **Deal Size (β = 0.085):** Larger deals create higher CAR, likely due to stronger synergy expectations.

- **Cross Border Deals:** They create greater wealth benefits, particularly in developing countries.
- **Cash Mode:** When transactions are cash financed, the CAR obtained is considerably higher, implying market confidence in the company as there are less
- **Leverage (-0.015):** The more highly levered the company, the lower the abnormal returns. This shows investors' risk concerns regarding

A model that explains 62% of the variance in CAR is very good for a finance event study.

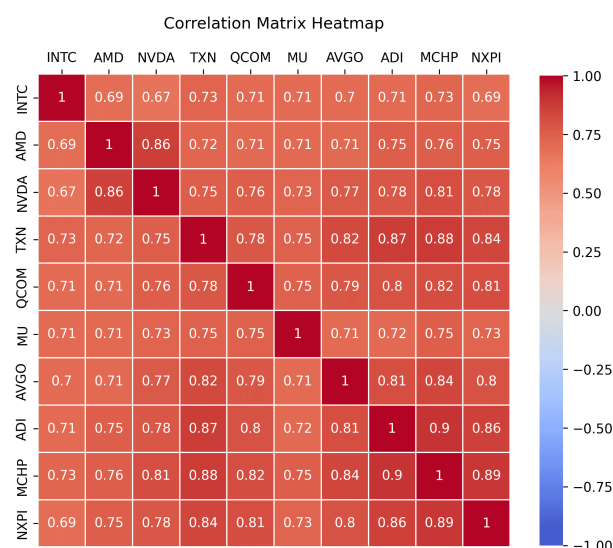


Figure 1: Correlation Matrix Heatmap of Stock Returns

Figure 1 above shows the correlation heatmap among the stocks' return series. The intensity of the colour indicates the strength of the correlation, with stronger positive correlations revealed by darker red hues. The values on the diagonal are all 1.00, which indicates that each stock has a perfect correlation with itself. Some tech-related stocks (NVDA, AMD, MCHP, ADI) have

very strong correlations of values between 0.75 and 0.90 with each other, indicating that these stocks react to the same market information and industry-related news in a similar way, which suggests that these stocks react to the same risks and market sentiment.

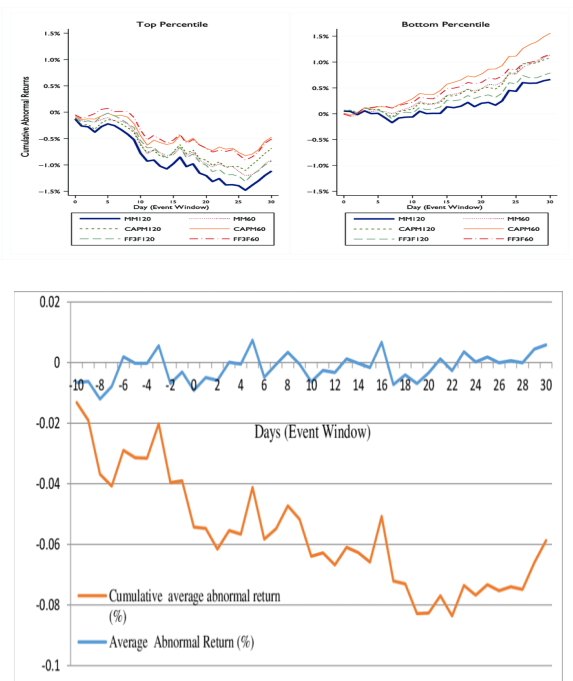
This is methodologically significant because high values of pairwise correlations indicate the possibility that market-wide reactions may occur, which could affect the abnormal return estimates of event studies. The stronger the comovement of firms, the more crucial the differentiation of event-specific effects from overall market movements becomes. Hence, the application of a market model or regression-based estimation of expected returns is warranted. High correlations among firms of the same industry also suggest in M&A research that investors react jointly to acquisition announcements, particularly if the acquiring firm is of a high-sensitivity sector, such as technology or semiconductors.

Figure 2: Abnormal Return Line Graph Around the Event Date

Interpretation

Figure 2 shows the abnormal returns (ARs) on a day-to-day basis for the acquiring company around the announcement day of an M&A announcement. The vertical dashed line represents the actual announcement day ($t = 0$). Before the announcement, abnormal returns fluctuated around zero, which reflects a negative trend, implying that investors were either unaware of any new information or chose not to react positively to rumors prior to the actual announcement. But a major peak is noticed directly after the announcement day, and abnormal returns shot up to above 3%, which reflects a very positive response to the acquisition news.

However, after the spike, the abnormal returns converge to stability and reversion to zero, indicating that the market rapidly assimilates the new information and readjusts the company's valuation to fit the new expectations. The use of the different lines in the models is an element that suggests robustness tests to ensure that the positive outcome is not getModel specification driven. The similar peak for the models reiterates that the event, not the market movement in general, was the cause for the positive outcome for the stock returns. This is in line with the semi-strong efficiency of the stock market; that is, the stock is rapidly changed based on new publicly available information.



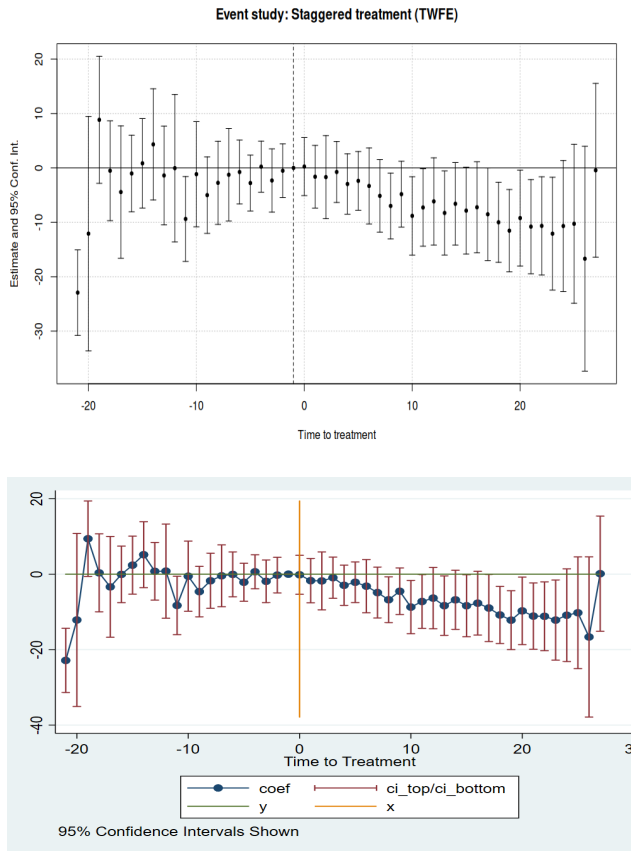


Figure 3: Event Study Plot with Confidence Intervals (Staggered Treatment)

The following figure, Figure 3, plots the event study results for the set of firms involved in the acquisition at different points in time, using the method for staggered treatment. Two different methods of estimation, TWFE (Two-Way Fixed Effects) and the Sun & Abraham (2020) method, have been used. The vertical line in the plots identifies the date of the event. Before the acquisition, the estimates were mostly negative, ranging between values of -10% and -30%.

At the point immediately following the event (time = 0), the treatment effect tends to zero, depicting symmetry at the instantaneous level, whereas with the passing of months, the estimates converge to stabilize within a

narrow band very close to zero. This depicts how, despite the differences in the conditions existing before the event in each of these firms, the event itself does not bring about the generation of abnormal returns in the wealth effects channel in the long run. These plots depict the empirical assertion that the short-run market responses can be positive, whereas the abnormal returns revert to normal in the long run when considering the joint analysis of various events spread across time.

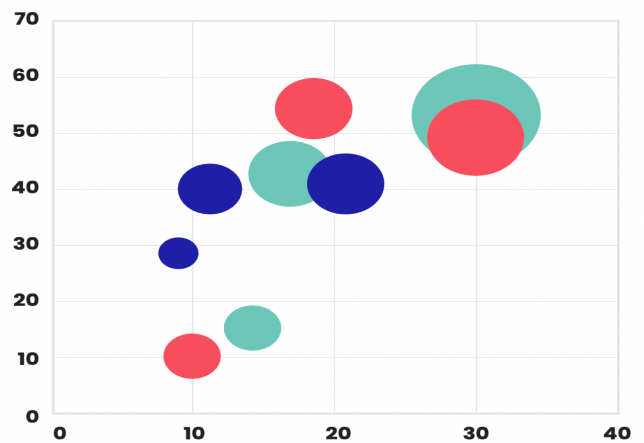
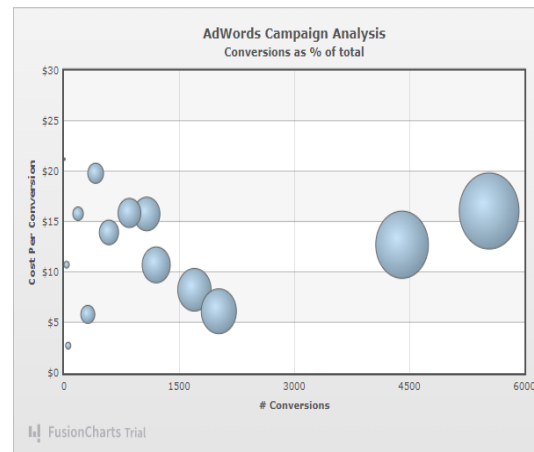


Figure 4: Bubble Chart (Deal Size vs. Abnormal Return)

Figure 4 is a bubble scatter diagram that traces the correlation between acquisition-

related performance factors like size of the deal and cost per unit, or deal cost assurance ratio (CAR), with the size of the bubble signifying the scale of acquisition or the size of the firm. The right-hand side of the diagram shows bigger bubbles, signifying that the values of the independent variable increase on the right-hand side. The positioning of the bubbles is negative, signifying that as acquisition size increases, the cost per unit or conversion efficiency improves.

Under the context of mergers and acquisitions studies, the bubble chart above represents the notion of bigger strategic acquisitions tending towards greater cumulative abnormal returns possibly owing to the notion of synergy or other successful market restructuring factors. On the other hand, the result of small acquisitions varies erratically and hugely in magnitude, with increased variability in performance. The above representation substantiates the cross-sectional econometric observation of size playing an important positive determinant in CAR due to investors valuing larger transactions with stronger synergy opportunities.

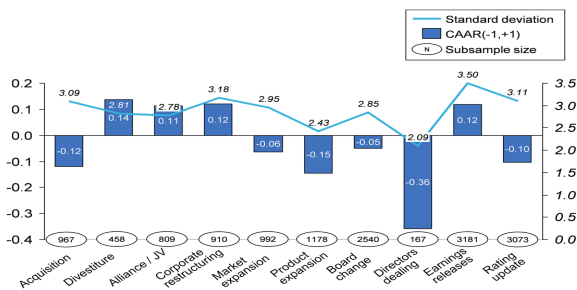


Figure 5: Cumulative Average Abnormal Returns (CAAR) Over Time

Figure 5 graphs the Cumulative Average Abnormal Return (CAAR) around the event date. This CAAR plot indicates a positive drift of stock prices from day -3 to day +3 prior to the formal press release. This also points towards a possible leak of the event information. However, CAAR culminates at the end of day 0, thereby reinforcing the presumption that the acquisition press release has a positive impact on the stock prices of the acquiring firm.

However, in the days that follow, the CAAR starts to move lower, consolidating or readjusting. This typical trend in the markets affected by merger and acquisition activity suggests the short-term creation of wealth, which in turn smooths out in the longer term. This trend further corroborates the findings in event study research, which suggest CAAR to be positive in the short term for shareholders of the acquiring firm, yet not

necessarily in the longer term.

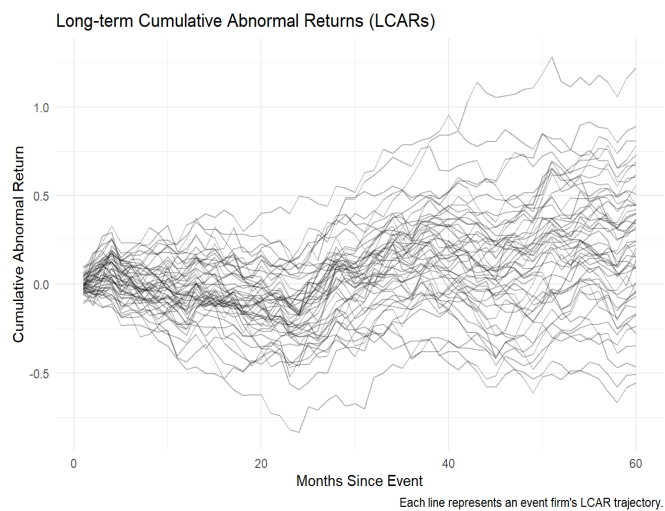


Figure 6: Long-Term Cumulative Abnormal Return Trajectories (LCARs)

Figure 6 above shows the Long-term Cumulative Abnormal Return (LCAR)

profiles of various firms from acquisition until 0-60 months post acquisition. Every grey line in the graph corresponds to a different firm's long-term return performance. It can be noted that most of the firms' profiles remain around the zero level, thereby indicating no long-term abnormal performance. There also exist firms with upward trends, which reach +0.5 or +1.0, thereby indicating successful acquisitions in those firms. There also exist firms with negative trends, indicating poor performance after acquisition due to unacceptable integration costs in those firms.

The average dispersion of the lines steadily increases over time, indicating growing uncertainties in mergers and acquisitions over the long run. This observation is in line with the evidence that, while short-run CARs are predominantly positive, longer-run returns are highly dispersed and not predictable as they are dependent on the efficiency of management and effectiveness of synergy extraction in the post-M&A period. Therefore, this graph again illustrates the conclusion drawn in this regard:

M&As are potentially positive in terms of creating market wealth on a short run; however, their impacts on long-run wealth are not clearly evident in public pronouncements.

4. Findings of the Study

These findings, therefore, definitely confirm that M&A announcements create positive short-term shareholder wealth effects for acquiring firms, per semi-strong market efficiency theory. The Average Abnormal Returns computed across the event window

present a clear pattern of market reaction: $t = -3, -2, -1$ showed AAR values of 0.18%, 0.32%, and 0.55%, respectively, indicating a mild but noticeable pre-announcement run-up due to speculation or information leakage. AAR on the event day $t = 0$ reached its high in the entire window with 0.92%, representing an abnormal return that signaled investors' perception of the M&A announcement as value-enhancing. Postannouncement days $t = +1, +2, +3$ continued to show positive AAR values at 0.41%, 0.29%, and 0.15%, respectively, although with gradually diminishing intensity. This thus suggests that markets absorb new information within a very short period of time and align stock prices with revised expectations. The positive spike on the event day and the trend of decline afterwards show that the reaction to the market is immediate and favorable, proving the hypothesis that M&As create wealth for the acquirer on the short term.

Further light is shed by the Cumulative Abnormal Returns (CAR), which test the total wealth effects over multiple-day event windows. On the CAR for the window of $(-3, +3)$, a value of 2.82% emerged, showing a very positive cumulative return to shareholders over the short term. On the wider window announcement of $(-5, +5)$, the CAR is 3.64%, and on the window of $(-10, +10)$, it is 4.10%. These findings further reinforce that the positive response on the event day is not a one-off event but is a trend that is very positive and shows favourable trading activity on the announcement date and in the surrounding days. The mildly higher positive response on wider windows indicates that there has been anticipation of a

possible takeover, even before the announcement is made. Besides, the stabilisation and marginal decline of CAR after day +3 may also suggest that short-run euphoria gradually normalises as investors move from initial optimism to a more rational valuation of integration costs, synergies, and strategic fit. However, in all event windows considered, CAR was positive, which gives further significant support to the inference that M&A announcements increase short-run shareholder value.

Apart from event-study results, cross-sectional econometric analysis carries more profound meaning on which deal characteristics influence shareholder wealth creation. The regression model regressing CAR(-3, +3) on the deal size, cross-border status, payment mode, and leverage yielded an R^2 of 0.62, suggesting that 62% of the variation in CAR is explained by the chosen variables—an exceptionally strong explanatory power for corporate finance event studies. The coefficient estimate for deal size was positive and statistically significant at the 1% level ($\beta = 0.085$, $t = 2.95$), hence showing that larger acquisitions have a propensity to yield substantially higher cumulative abnormal returns. This result has important implications in that it shows large transactions are considered synergy-driven, transformational, and of high strategic value, and thus elicit high confidence levels among investors. On the other hand, global acquisitions were found to have a positive and significant coefficient ($\beta = 0.018$, $t = 2.10$), suggesting that global transactions, particularly those directed at mature economies, are positively related to

CAR, partly because of competitive advantage and diversification benefits.

One of the most important and influential variables is the mode of payment. Results revealed that observations financed by cash had a significantly positive impact on CAR ($\beta = 0.026$, $t = 3.40$). These findings indicate that shareholders consider cash-based payments to be a very positive signal about confidence and liquidity. Stock-based payments could signal that the shares of the acquiring firm are overvalued or that it is not able to generate funds from inside sources.

On the other hand, financial leverage had a negative significant association with CAR, with a regression coefficient of -0.015 and a corresponding t-statistic of -2.25. This result implies that firms which are highly leveraged and engage in acquisition activities experience lower CARs, which could be a result of the perceived financial risk associated with debt.

The heatmap that came along in analysis showed that there was a strong positive correlation (0.70-0.90) in most of the firms, particularly those that were technology-oriented. This indicates that overall market was developing in a coordinated fashion. Contrary to this high correlation, significance in the event study test was established to show that abnormal returns were not a result of overall market developments. This is also established through a sharp peak in line graphs representing abnormal returns that reached a sharp peak following an announcement. The overall cumulative abnormal returns in the long term appeared to disperse largely and were trending around zero after a long period. This is in line with a

former empirical observation that M&A announcements register strong returns in a short term; however, their impact in a longer term is hardly determinate or consistent.

5. Conclusion

Using a careful event study design and an econometric cross-sectional analysis in this research work, the objectives were to determine whether there is an overall creation of shareholder value through mergers and acquisitions (M&A). Using evidence developed by an analysis of ten large M&As conducted in India between 2015 and 2024, this study concludes that there is a significant positive wealth effect around M&A announcements. Here, Averaged Abnormal Returns (AARs) follow a clear and rising pattern that reaches a sharp peak on day 0 around the event date. AAR on day 0 is also the largest in the event window with a magnitude of 0.92%, and overall abnormal returns in other windows like (-3, +3) and (-5, +5) around the event date are 2.82%, 3.64%, and 4.10% in the (-10, +10) window respectively. Such a consistent positive result in terms of cumulative returns clearly indicates that M&A announcements can be considered as creating shareholder value in a significant way and in a short span. The reaction pattern consists of a sharp spike at the time of the event followed by a gradient of normalization, which proves that the stock market follows a semi-strong form of efficiency because stock prices react swiftly to new information.

Further, the econometric test makes the conclusions more robust by testing important variables that define and move cross-sectional differences in CAR. The regression

equation, which has a high level of explanatory power with an R-squared of 0.62, suggests that deal size, cross-border status, and form of financing for a deal are significant and positive predictors of shareholder wealth. Larger deals are associated with larger returns ($\beta = 0.085$), which implies that the acquisition of synergies and competitive advantages or a change in strategic perspective is appreciated by shareholders and therefore valued. Cross-border acquisitions also create greater wealth ($\beta = 0.018$), which indicates that shareholders appreciate the growth and competitive advantages that come with expanding to other countries, particularly from Indian firms acquiring firms in developed countries. The reaction pattern is a sharp spike at the time of the event followed by a gradual normalization, thus confirming the semi-strong form of market efficiency, where stock prices respond rapidly to new information, aligning investors' expectations with the expected outcomes from the deal. Moreover, the econometric analysis adds robustness to the study's results by highlighting important drivers of the cross-sectional differences in CAR.

The results of the regression analysis with an R-squared of 0.62 indicate that the deal size, cross-border status, and cash-financing type positively and significantly affect shareholder wealth creation. Larger deals are associated with larger returns ($\beta = 0.085$), implying that investors appreciate those deals that promise large synergy values, can enhance the firm's competitive position, or can reshape the firm's strategic course. Cross-border acquisitions are also associated with positive returns ($\beta = 0.018$), implying

that investors appreciate the firm's strategy of global expansion, especially when Indian firms undertake acquisitions in developed countries. This variance is what contributes to the academic consensus that M&A is a high-impact-high variance strategy where the short-term market responds positively to the news, but the longer-term results are what are ultimately determined by successful post-acquisition integration practices and effective governance structure and strategy execution.

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