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# Corporate result announcements' and stock returns: An event study of NIFTY 50 companies 

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#### Abstract

Corporate results announcements provide information about the company's financial performance to the general public, investors, analysts, and shareholders. The announcements provide details on the company's revenue, expenses, profitability, and overall financial situation. When a company discloses financial data, including sales, profitability, and other crucial performance indicators, investors and market observers examine that data to evaluate the firm's financial situation and future prospects. Corporate results announcements supposed to have a big impact on stock returns. In the current study, event study methodology is being used to analyse the effect of corporate result releases on stock returns. The results indicate that, except from the fifth day in the post-event window, average abnormal returns are not significant for the pre- and post-event days. However, CAAR values tend to increase during the post-event window, indicating that corporate result announcements have a substantial impact on CAAR values during this time.


Keywords: Average Abnormal Returns (ARR), Corporate Result Announcements, Cumulative Average Abnormal Returns (CAAR), event study, event window

## Introduction

A firm is an artificial entity run and resourced by its management that draws from its surrounding environment. As a result, the business has a responsibility to perform up to the aspirations of the environmental stakeholders. The business must also be worried about maintaining itself and expansion at the same time. Therefore, the management must make sure that any business decisions benefit both the company and its stakeholders before making them. The shareholders of a firm, who get a dividend as compensation for their investment, are one of its key stakeholders. An official disclosure of the financial performance of a business and operational results is referred to as a corporate results announcement. These announcements, which are normally made quarterly or annually, contain thorough details regarding the company's revenue reports, statement of financial position. Corporate results announcements serve to inform the public, investors, analysts, and shareholders of the company's financial performance. The announcements give information about the company's earnings, costs, profitability, and general financial health.
Announcements of business results can significantly affect stock returns. Investors and market watchers analyse such information when a company releases financial information, such as revenue, profits, and other important indicators of performance, to assess the firm's financial condition and future prospects. The variance between announced earnings and market expectations is one of the major variables affecting stock returns. Stock prices frequently rise when a company's earnings beat analyst forecasts (a positive earnings surprise). In contrast, stock prices may drop if the earnings come in below expectations (a "negative earnings surprise"). Companies also provide guidance or projections for future performance along with their financial results. Stock prices can be positively impacted by good guidance, which indicates expectations of rapid growth or increased profitability. On the other hand, poor guidance may cause stock prices to fall.
In order to make wise investment decisions, traders and market watchers often pay close attention to business results announcements. However, before making investment decisions based purely on these announcements, it's important to take into account the larger market backdrop, apply extensive research, and evaluate the company's long-term fundamentals.

Corporate results releases are crucial for stakeholders and investors as they offer significant data for evaluating the company's financial health, potential for growth, and investment prospects. As investors respond to the released information and modify their investment decisions in response, these announcements can have a major impact on stock prices and market sentiments. In the present study an attempt is made to analysis the impact of corporate result announcements on stock returns by applying event study methodology.

## Literature Review

Corporate result announcements are the official release of the financial results of the company. These results include financial performance and there are various indicators which can be used to access the financial performance such as revenue and profits earned by the firm. The corporate performance affects the various decisions or announcements of issue of bonus or right shares, dividend, stock splits and mergers and acquisitions. The impact of these announcements based on corporate results are reviewed in this section. Kumar (2017) ${ }^{[9]}$ investigated at how dividend announcements affected stock returns for companies listed on the NSE between 2012 and 2014, he discovered that the announcements cause positive anomalous returns. While a rise in dividends causes abnormal returns to be larger, a fall in dividends causes abnormal returns to be lower. By using data of daily stock returns of American listed firms from 2012 to 2016, researchers examined the effects of dividend announcements during an adverse economic environment and discovered favourable, abnormal returns on and around the announcement day (Khanal and Mishra, 2017) ${ }^{[8]}$. Using a sample of 60 Thai companies from Suwanna (2012) tracked the effect of announcements related to dividends on stock returns and proved the dividend signalling hypothesis with significant positive anomalous returns around the announcement date. A number of researchers have been eager to discover whether dividend announcements have any effect on stock prices.
The impact of the dividend choice on the firm's stock prices has been the subject of conflicting opinions, both in favour of and against. A study conducted in India on the BSE 30 businesses found that stock prices respond favourably to dividend announcements (Savita, 2014) ${ }^{\text {[12] }}$. With the exception of the aforementioned findings, it was discovered that the market reacted in the opposite direction to dividend announcements, with an increase in dividends leading to a decrease in the company's share price and opposite effect (Berdnikova \& Rogova (2014) ${ }^{[4]}$. Various Studies Compared the impact of company announcements on stock prices and determined that prices responded to dividend announcements more quickly and produced extremely high anomalous returns on and near the announcement date (Masse, Hanrahan, \& Kushner, 1997, Gelb, 2000 and Grinblatt, Masulis \& Titman, 1984) ${ }^{[10, ~ 6, ~ 7] . ~ P e t t i t ~(1972) ~}{ }^{[11]}$ concluded that Dividends have a positive signalling impact. It was discovered that dividends are used as a strategy to inform about the firm's potential earning power in the future by the management and so positively impact the stock prices, which led to higher anomalous growth in the stock prices. Additionally, it was proposed that market participants utilise both dividend and earnings
announcements together to assess the firm's future prospects because both provide important details about the company.
Studies mostly examined how business announcements, mergers, and dividend announcements affected stock prices. The current study specifically focused on corporate result announcements and employed event study analysis to examine the effects of these announcements.

## Objective and Contribution of the study

The purpose of the current study is to examine, using the event study approach, how corporate announcements affect stock prices. The gap may be seen in the existing literature's significant focus on analysing the effects of dividend announcements, stock splits, merger announcements, bonus share announcements, etc. This study contributes to literature by demonstrating how business announcements affect stock prices.

## Research Methodology

A sample of the top 30 firms that make up the NIFTY 50 index of NSE is utilised in the current study, which is based on secondary data. The necessary information regarding the daily prices of the selected stocks and the dates on which corporate result announcements were made was gathered from the National Stock Exchange (NSE) and finance.yahoo.com to determine the effects of corporate results releases or announcements on stock prices. For the purpose of studying the effect of corporate result releases on stock prices, the dates of yearly result announcements are considered event days, and -10 days and +10 days are called event windows. In the study, the effect of business result releases on stock prices is investigated using the t-test. A normality analysis is also performed for this reason, and following analysis, the same 06 companies that were identified as outliers are removed from the sample and a final sample of 24 companies is chosen for examination. The event day was chosen to coincide with the final corporate announcement. The day preceding the announcement is considered as the day of announcement (event day) if the announcement was made on a day which is not a trading day. For the purpose of calculating the regression coefficients alpha and beta, a window of 180 days before to the occurrence has been used as an estimation period. The 21-day event window, which includes 10 days prior to and 10 days following the event day, has been selected.
Stock returns are calculated by using the adjusted closing prices and following formula is used to calculate the stock returns:

Stock Return = Present Day Price - (Previous Day Price) / Previous Day Price
Expected returns are calculated as per following formula:
$\mathrm{E}(\mathrm{R})=\alpha+\beta(\mathrm{Rm})$
Where:
$\mathrm{E}(\mathrm{R})=$ Expected Return
$\alpha=$ alpha coefficient
$\beta=$ beta coefficient
After calculating the expected returns abnormal returns are calculated by taking the difference of actual return and expected return of the stock. It can be expressed as under:
Abnormal Return = Actual Return - Expected Return
T-Test is used, in order to analyse impact of corporate announcements on stock returns during event window.
T-Value for Average Abnormal Return (AAR) or Cumulative Average Abnormal Return (CAAR)
= AAR or CAAR / SE
Where SE is Standard Error and calculated by dividing the Standard Deviation (SD) with square root of number of observations. It can written as under:
$S E=\frac{\sigma}{\sqrt{N}}$

## Results and Discussions

To conduct the analysis firstly stock returns are calculated by using the data of adjusted closing prices of daily stocks. After calculating the stock returns, abnormal returns are calculated for each stock for event window. Before applying the t -test or calculating the value of alpha and beta coefficients the normality test has been conducted which is required to apply the parametric tests (t-test). It was observed that there were outliers in the data, which has been removed and finally a sample of 24 companies was utilised for the purpose of analysis. The results of Shapiro - wilk test of normality (Table No. 1) shows that all the data of Abnormal Average Return (ARR) is found to be normally distributed except for $+4^{\text {th }}$ and $+7^{\text {th }}$ day. It is been observed that the almost all data follows normal distribution.

Table 1: Results of Shapiro Wilks Test

| Shapiro-Wilk |  |  |  |
| :---: | :---: | :---: | :---: |
| Period | Statistic | DF | Sig. |
| -10 | . 938 | 24 | .149* |
| -9 | . 973 | 24 | .738* |
| -8 | . 962 | 24 | .478* |
| -7 | . 937 | 24 | .142* |
| -6 | . 920 | 24 | .057* |
| -5 | . 985 | 24 | .963* |
| -4 | . 923 | 24 | .070* |
| -3 | . 943 | 24 | .189* |
| -2 | . 968 | 24 | .629* |
| -1 | . 952 | 24 | .306* |
| 0 | . 954 | 24 | .333* |
| 1 | . 943 | 24 | .195* |
| 2 | . 972 | 24 | .719* |
| 3 | . 967 | 24 | .582* |
| 4 | . 895 | 24 | . 017 |
| 5 | . 928 | 24 | .086* |
| 6 | . 940 | 24 | .161* |
| 7 | . 916 | 24 | . 048 |
| 8 | . 979 | 24 | .871* |
| 9 | . 972 | 24 | .725* |
| 10 | . 964 | 24 | .524* |
| *Significant @ 5\% |  |  |  |

Source: Author's Calculations

Further the normality of data is also checked by normal probability plots. The data is found to be normally distributed if the points roughly follow the diagonal line and points are arranged in an "S-curve" pattern. Table - 2 indicates that all the normal probability plots also validates
that all the data points are normally distributed as all the data points follows the diagonal line. This indicates that there are no outliers in the data. After checking the normality t-test is performed to check the significance of Average Abnormal Returns (ARR).

Table 2: Normal Probability Plots

| Abnormal Returns (-10 Day) | Abnormal Returns (-09 Day) | Abnormal Returns (-08 Day) |
| :---: | :---: | :---: |
| Abnormal Returns (-07 Day) | Abnormal Returns (-06 Day) | Abnormal Returns (-05 Day) |
| Abnormal Returns (-04 Day) | Abnormal Returns (-03 Day) | Abnormal Returns (-02 Day) |
| Abnormal Returns (-01 Day) | Abnormal Returns (0 Day) | Abnormal Returns (+01 Day) |
| Abnormal Returns (+02 Day) | Abnormal Returns (+03 Day) | Abnormal Returns (+04 Day) |



Source: Author’s calculations

The results of t-test indicate that Average Abnormal Returns (ARR) found to be insignificant in all pre-event days and also on event day. In post event day all the days found to be insignificant except $5^{\text {th }}$ day ( +05 day). The daily Average Abnormal Returns (ARR) found to be significant and having positive impact on +05 day. Though on event day

Average Abnormal Returns (ARR) were negative and it becomes positive and significant on +05 day. This indicates that the market adjust the impacts of corporate result announcements and it validates the hypothesis of a semi strong form of markets.

Table 3: T-statistics values of AAR and CAAR for 21 days window

| PERIOD | AAR | SE | t statistics | CAAR | SE | T statistics |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| -10 | -0.0005276 | 0.001647 | -0.32027 | -0.013710915 | 0.002083736 | $-6.579966526^{*}$ |
| -9 | 0.003033653 | 0.00156 | 1.944315 | 0.04067354 | 0.004798377 | $8.47651989^{*}$ |
| -8 | -0.00218423 | 0.002374 | -0.91991 | -0.029042695 | 0.004967462 | $-5.846586337^{*}$ |
| -7 | 0.001827341 | 0.002244 | 0.814164 | 0.015462097 | 0.005371067 | $2.878775739^{*}$ |
| -6 | -0.00047608 | 0.002937 | -0.16212 | -0.011723274 | 0.002816043 | $-4.163031567^{*}$ |
| -5 | -0.00361691 | 0.002576 | -1.40421 | -0.029024662 | 0.005356535 | $-5.41855208^{*}$ |
| -4 | 0.000796571 | 0.00236 | 0.337541 | 0.006597111 | 0.003939068 | 1.674789792 |
| -3 | -0.00036167 | 0.00199 | -0.18174 | -0.008242892 | 0.001767397 | $-4.663860499^{*}$ |
| -2 | 0.001347574 | 0.001927 | 0.699257 | 0.021704282 | 0.002977383 | $7.289717208^{*}$ |
| -1 | -0.00065059 | 0.001931 | -0.33685 | 0.006385949 | 0.002894508 | $2.206229281^{*}$ |
| $\mathbf{0}$ | -0.00195014 | 0.002662 | -0.73259 | -0.022475969 | 0.00382537 | $-5.875502533^{*}$ |
| 1 | -0.00597126 | 0.004018 | -1.48612 | -0.10822739 | 0.009829372 | $-11.01061083^{*}$ |
| 2 | -0.00030258 | 0.001313 | -0.2304 | -0.001023862 | 0.001278949 | -0.800549456 |
| 3 | -0.00047579 | 0.00197 | -0.24152 | 0.007682974 | 0.002637904 | $2.912529477^{*}$ |
| 4 | 0.000515184 | 0.001993 | 0.258467 | 0.006912479 | 0.003021472 | $2.28778517^{*}$ |
| 5 | 0.00485227 | 0.001669 | $2.908103^{*}$ | 0.076774048 | 0.008031389 | $9.559248946^{*}$ |
| 6 | -0.00124914 | 0.001845 | -0.67718 | 0.00771483 | 0.003241083 | $2.380324534^{*}$ |
| 7 | 0.002650526 | 0.001728 | 1.533581 | 0.03361859 | 0.005478551 | $6.136401422^{*}$ |
| 8 | -0.0019456 | 0.002255 | -0.86275 | 0.013417431 | 0.004236916 | $3.166791586^{*}$ |
| 9 | 0.002077801 | 0.00198 | 1.049377 | 0.033399921 | 0.00198711 | $16.80829032^{*}$ |
| 10 | 0.000563218 | 0.001674 | 0.336479 | 0.002188427 | 0.001314008 | 1.665459632 |

*Significant @ 5\% (table value = 2.069)
T table value @ 5\% = 2.069
Source: Author's calculations

The results of $t$ statistics for CAAR shows significant impact on event day and in all the pre-event days of the window except on $-04^{\text {th }}$ day. It is also found that CAAR is also found to be significant in all the post event days of the
window except $+02^{\text {nd }}$ and $10^{\text {th }}$ day. The visual of CAAR values is presented in figure - 1 which indicates that CAAR values shows sharp decline on event day and after one day of event. Afterwards, CAAR Values shows upward trend
and become positive. It indicates that the event positively affects the CAAR values in post event days. It can be
concluded that corporate result announcements positively impact the CAAR values.


Fig 1: CAAR line during event window

It is observed that Average Abnormal Returns (ARR) are not found to significant in pre and post event days expect on $5^{\text {th }}$ day in post event window. On the other hand, CAAR values tends to rise in post event window which signifies that corporate result announcements significantly affects the CAAR values in post event window.

## Conclusion

In the present study, an effort is made to apply the event study approach to analyse the effect of corporate result announcements on stock returns. The dates of yearly result announcements are taken into consideration as event days, and the intervals of -10 days and +10 days are known as event windows, for the aim of examining the impact of corporate result announcements on stock prices. The t -test is used in the study to examine the impact of result announcements on stock prices. For this reason, a normality analysis is also carried out, and after the analysis, the same six companies that were found to be outliers are eliminated from the sample and a final sample of 24 companies is selected for analysis. A large portion of the data were found to follow a normal distribution, according to the findings of the normality test. T-test is used to determine the significance of Average Abnormal Returns (ARR) after normality has been verified. The findings of the $t$-test show that Average Abnormal Returns (ARR) were insignificant on both the event day and on all of the days leading up to it. Except for the fifth day ( +05 day), all the days were discovered to be irrelevant on the post-event day. The daily Average Abnormal Returns (ARR) were discovered to be significant and to have a favourable effect on days +05 . Although Average Abnormal Returns (ARR) were negative on the event day, they turned positive and large on day +5 . Results of the CAAR t- test indicate a strong impact on event day and all pre-event days of the window, with the
exception of day -04 . Additionally, it is discovered that CAAR is relevant in all post-event days of the window with the exception of the +02 nd and 10th day. It was discovered that the occurrence had a beneficial impact on CAAR values in the days after it. It is evident that corporate result announcements have a favourable effect on the CAAR values.

## Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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