

# “Open repurchase announcements and abnormal returns of Indian firms: An industry-wise analysis”

## AUTHORS

Vandana Bhama 

## ARTICLE INFO

Vandana Bhama (2023). Open repurchase announcements and abnormal returns of Indian firms: An industry-wise analysis. *Investment Management and Financial Innovations*, 20(1), 238-249. doi:[10.21511/imfi.20\(1\).2023.21](https://doi.org/10.21511/imfi.20(1).2023.21)

## DOI

[http://dx.doi.org/10.21511/imfi.20\(1\).2023.21](http://dx.doi.org/10.21511/imfi.20(1).2023.21)

## RELEASED ON

Monday, 20 March 2023

## RECEIVED ON

Wednesday, 14 December 2022

## ACCEPTED ON

Tuesday, 14 March 2023

## LICENSE



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

## JOURNAL

"Investment Management and Financial Innovations"

## ISSN PRINT

1810-4967

## ISSN ONLINE

1812-9358

## PUBLISHER

LLC “Consulting Publishing Company “Business Perspectives”

## FOUNDER

LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

**37**



NUMBER OF FIGURES

**7**



NUMBER OF TABLES

**5**

© The author(s) 2023. This publication is an open access article.



## BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"  
Hryhorii Skovoroda lane, 10,  
Sumy, 40022, Ukraine  
[www.businessperspectives.org](http://www.businessperspectives.org)

**Received on:** 14<sup>th</sup> of December, 2022

**Accepted on:** 14<sup>th</sup> of March, 2023

**Published on:** 20<sup>th</sup> of March, 2023

© Vandana Bhama, 2023

Vandana Bhama, Assistant Professor,  
Finance & Accounting, FORE School of  
Management, New Delhi, India.

Vandana Bhama (India)

# OPEN REPURCHASE ANNOUNCEMENTS AND ABNORMAL RETURNS OF INDIAN FIRMS: AN INDUSTRY-WISE ANALYSIS

## Abstract

Although the tender offer buyback method has gained significance over time, many companies still prefer open market repurchases. The existing literature focuses mainly on the impact of buyback announcements, specifically on stock returns; however, buyback announcements and abnormal returns in the case of open market repurchases have not yet been studied in detail, especially across industries in the Indian context. This study, therefore, attempts to analyze the impact of open market repurchase announcements on the stock returns of Indian firms. To that end, the event study methodology has been used for a period of 31 days, i.e. 15 days prior to and 15 days after the buyback announcement on a filtered sample of 100 firms during the period 2010–2020. The results of the study indicate that the returns were more favorable in the short run. The findings do not support the undervaluation rationale of firms behind the open buyback statement. The low-profit opportunities in the prior event window convey investors' predictions about the repurchase announcement. In the context of industries, the manufacturing sector seemed to be far better than IT & telecom, chemical, and pharma firms as the returns were statistically significant for five (5) out of 31 days. The industry-specific results also suggest that the profit opportunities are majorly in the pre-announcement phase. The overall findings corroborate that share repurchases might be irrelevant to shareholders' wealth. Therefore, open market buybacks may support decisions related to capital structure changes.

## Keywords

share buyback, average abnormal returns, event study, event window, share undervaluation

## JEL Classification

G14, G12, G35

## INTRODUCTION

Share buybacks are a flexible way of paying out excess cash. A company repurchases its existing shares by distributing a portion of the excess cash to the shareholders. There have been significant repurchase offers by cash-rich Indian companies in the last few years. Moreover, these offers have been significantly higher than the initial public offers (IPOs) post-2015 (see Table 5). This evidence represents the preference of Indian firms for buybacks over issues since 2016. In India, buybacks are generally conducted through either the open market or through a fixed-price tender offer, i.e. buying directly from the investors. Though the tender offer method has gained significance in the past 5-6 years, companies appear to prefer open market repurchases (Grullon & Ikenberry, 2000), especially when the markets are choppy or a business firm encounters a weak position (Li & McNally, 1999). Extant research has developed various hypotheses on the buyback announcements by focusing on both the open market and the tender offer buybacks. Previous lit-



This is an Open Access article, distributed under the terms of the [Creative Commons Attribution 4.0 International license](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.

### Conflict of interest statement:

Author(s) reported no conflict of interest

erature evidence suggests that open market buybacks have been criticized on account of exhibiting weak signals (Lee et al., 2020; Andriosopoulos & Lasfer, 2015; Ikenberry et al., 1995; Ikenberry et al., 2000) and hence lack of commitment (Chan et al., 2010).

Here the question arises: “If the buybacks have increased significantly in the past years then do they really exhibit strong signals in the Indian market?” As the previous evidence indicated weak signals of open market buybacks (Lee et al., 2020; Andriosopoulos & Lasfer, 2015), this raises an important question on the relevance of open market buybacks along with their signaling effect in terms of generating returns. This rationale stimulates to examine the impact of repurchase announcements on stock returns, particularly across different industries having open market buybacks in India. A modest attempt has also been made to check price reactions across different time frames. This is to understand the abnormal returns strategy for long and short-term periods. The research would provide insights into which sector has more potential concerning abnormal returns gain.

---

## 1. LITERATURE REVIEW AND HYPOTHESES

Tender offer buybacks are more frequently used for capital structure changes, whereas open market buybacks support decisions related to dividend substitution and capital structure changes (Grullon & Michaely, 2002; Varma et al., 2018). Generally, stock undervaluation is considered the primary reason for a firm initiating a share buyback offer (Ikenberry et al., 1995; Jagannathan et al., 2000; Arora, 2019). On average, the returns are nearly 60 per cent post-repurchase announcements. Shares are undervalued when the managers of a firm believe that the intrinsic worth of a stock is greater than its actual price. McNally and William (2002) noted that firms announced share buybacks due to the undervaluation of their shares. Yarram (2014) analyzed that undervaluation is one of the important factors for share buyback that signals future growth opportunities for the companies. Due to these reasons, companies purchase their own shares at higher prices to signal to the market that their stock is currently undervalued, particularly if a company’s management possesses favorable information on its future that is privy only to the company (Dixon et al., 2008).

Besides stock undervaluation, there are other rationales behind share repurchases, including the substitution hypothesis, free cash flow hypothesis, leverage hypothesis, and liquidity hypothesis. Jena et al. (2018) studied various hypotheses related to share buyback and noted pieces of evidence favoring the signaling hypothesis and free cash flow hypothesis. The signaling hypothesis states that

the effect of the buyback announcement is positive (Gupta et al., 2005). Yarram (2014) observed favorable results with respect to signaling theory. In contrast, other researchers found that the signaling hypothesis was incorrect and the returns were not statistically significant (Jagannathan & Stephens, 2003; Gupta, 2016). Kim (2007) noted that the active buying back of shares by firms in an open market was particularly conducted during lower share prices. This helped in decreasing the volatility of returns. Gupta (2018) observed an average annual return (AAR) of  $-0.23\%$  on the day of the announcement, which indicated that open market repurchases did not support the signaling effect hypothesis. Repurchase reactions are better explained by the free cash flow theory.

In the context of the liquidity hypothesis, the results of the study by Jena et al. (2018), Masry and Menshawy (2015) and Ginglinger and Hamon (2007) supported it, whereas Anwar et al. (2017) observed a decline in liquidity due to a reduction in shares. Yook and Gagnopadhyay (2010) analyzed positive results related to the free cash flow hypothesis. In contrast, Yarram (2014) noted no significant relation between free cash flow and repurchase decisions. Evans et al. (2003) focused on the buyback strategy of firms and observed the existence of cash flow effect till the time of announcement of the buyback strategy post when there were non-significant net cash flows.

Examining the other aspects of repurchases, Mishra (2005) noted that repurchases typically provide short-term benefits to the employees and improved the promoters’ holding in the

firm. Ota et al. (2022) inspected whether managers altered the terms of the open market repurchase announcements in the situations of bad news announcement which could impact the credibility of the signal from the existing repurchase program. They found that managers adjusted the buyback size with the degree of bad news in a particular announcement. Chen and Wang (2012) examined the post-buyback performances of financially constrained firms. Their results confirmed the presence of distress risk post the buyback announcement among firms with insignificant abnormal returns and poor performance.

Kuntluru (2019) examined the effect of repurchases on the market performance of companies using earnings per share and abnormal returns. The findings indicated that returns were more favorable in the short-run vis-à-vis the long term. Gupta et al. (2005) observed a positive announcement effect as the majority of the company's shares yielded significant returns. Likewise, Gupta (2017) found that most favorable returns were in the post-announcement period. In contrast, Liano et.al. (2003) noted that pre-announcement returns from day -20 to -3 were negative, while the returns from day -2 to +2 were positive and significant. The returns in the post-event window between +3 to +20 days were non-significant.

Kumar et al. (2019) noticed that 93% of the firms were not affected by share buyback announcements. These companies did not show significant abnormal returns and contradicted the work of Gupta et al. (2005). Similarly, Gupta (2016) observed that abnormal returns of companies announcing buybacks were not very significant. Furthermore, Gupta (2017) noted that abnormal returns (AR) were significant but only for a shorter period. Pradhan and Kasilingam (2019) also noted that share repurchase was irrelevant to shareholders' wealth. Wang et al. (2021) noticed substantial abnormal returns in the pre-trading window. These returns were determined by market reactions, enhanced liquidity and lesser volatility during the actual transaction window. Similarly, Gunn (2017) noted that small and medium-sized companies gained abnormal returns whereas large-cap companies did not.

Mukherjee and Chatterjee (2019) examined open market announcements by focusing on the factors behind excess returns. Their findings confirm that there was no price improvement post-buyback and only 10 percent of their sample firms benefited. The important factors that played a crucial role in post-repurchase announcements were the promoter's share and share premium. Pandey et al. (2020) observed returns in the prior event window, which indicated that profit opportunities were available if investors could make predictions about the repurchase announcement.

Upon examining the available literature on different hypotheses concerning buybacks, it has been observed that most studies captured the impact of buybacks either for a whole set of firms or 1-2 industries. Moreover, the results of these studies were limited in the Indian context with respect to open buybacks. Hence, there are gaps in: 1) the impact of open market buyback announcements on returns using the latest data, and 2) the announcement's impact in the context of the industry. In line with these gaps, the following null hypotheses were formulated:

$H_1$ : *There are no significant average abnormal returns post-open buyback announcements.*

$H_2$ : *There are no significant average abnormal returns across all industries post-open buyback announcements.*

## 2. METHODOLOGY

### 2.1. Data

The final sample comprised 100 firms that announced open buybacks from 2010 to 2020, a sample period of 11 consecutive years. Initially, the data were collected for 111 firms that issued open market buyback announcements for the sample period. Using the filtering criteria (given below) and data adequacy issues, 11 companies were eliminated. The final sample covered 100 buyback announcements. Data from the Centre for Monitoring Indian Economy (CMIE) Prowess have been used to access adjusted daily closing prices in order to convert this data into daily returns.

## 2.2. Filtering criteria

The sample companies were selected using the following filtering criteria:

- The company must be listed on the Bombay Stock Exchange (BSE) 500 index.
- The buyback was done through the open market method.
- There should not have been any other announcements related to dividends, quarterly, half-yearly or annual performance results, stock splits, bonus issues, right issues, mergers and acquisitions, takeover news, etc.

The above criteria of sample selection were critical to understanding the impact of repurchase announcements on stocks' returns. Other researchers have also used similar criteria to filter firms (Anwar et al., 2017). The selected sample firms were further divided into different groups based on industries. The industries taken into consideration were IT and Telecom, Pharma and Chemicals, Manufacturing, Service and Miscellaneous (Table 1).

**Table 1.** Selected industries and number of firms

Industry	No. of Firms
IT & Telecom	16
Chemical & Pharma	18
Manufacturing	24
Others	23
Service	19
TOTAL	100

## 2.3. Conceptual framework

This study has used an event study methodology to examine the impact of announcements on buybacks. In this methodology, it is necessary to calculate the abnormal returns (AR) to gain insights into the abnormal performance of a company's stock around the time of the announcement of the share buyback. A market-adjusted abnormal return model has been used to get the abnormal returns. The formula for the same is as follows:

$$AR_{ct} = R_{ct} - (\alpha_i + \beta_i R_{mt}), \quad (1)$$

where  $AR_{ct}$  = abnormal returns of company  $c$  at time  $t$ ;  $R_{ct}$  = daily share price return of company  $c$  at time  $t$ ;  $R_{mt}$  = market adjusted returns at time  $t$ .

To measure shareholders' reaction to the buyback announcement, it is necessary to estimate the AR over a long period as it indicates shareholders' reactions to the repurchase announcement made by the company. To analyze AR, an event window of 31 days was considered, which includes the announcement day (regarded as Day 0), along with 15 days prior to and 15 days after the announcement. The days prior to the announcement are represented as -1, -2, -3... -15, while the days after the announcement as 1, 2, 3... 15. The average abnormal returns (AAR) and the cumulative average abnormal returns (CAAR) have also been calculated for the entire period.

The AAR is estimated by totaling the abnormal returns of all the sample firms on each day and averaging them out as given in equation (2):

$$AAR = \frac{1}{N} \sum_{i=1}^N AR_{i,t}, \quad (2)$$

where  $N$  is the number of companies.

The CAAR has been estimated to determine the combined effect of an event during the given time frame. It is the aggregate total of daily AAR for the pre-identified period that starts at time 1, i.e.  $t_1$  and continues till time 2, i.e.  $t_2$ . The equation for calculating CAAR for  $N$  number of companies is:

$$CAAR_i(t_1, t_2) = \frac{1}{N} \sum_{t=t_1}^{t_2} Air_{ift}. \quad (3)$$

The study uses the Kolmogorov-Smirnov test to check the normality of data.

## 3. RESULTS

The results in Table 2 indicate that the data points of abnormal returns range between -1 and +1 per cent during the event window. While the AAR is highest on the announcement day, it appears to be negative one day prior to, and a day after the announcement, thus indicating a neutral reaction of the investors to the share buyback announcements. The maximum AAR has been at 1.1% on the day of the announcement.

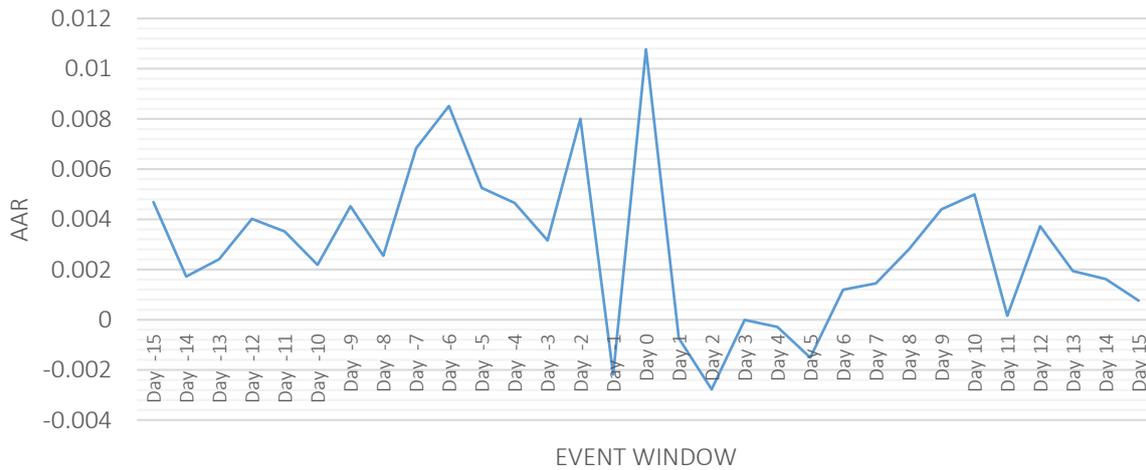
Upon analyzing the daily values of AAR, it was observed that AAR was positive prior to the announcement, and negative for the consecutive five days after the announcement. This result accepts the first null hypothesis of the study that there are no significant abnormal returns post-buyback announcement. This might be attributed to information leakage of share buyback announcements that tend to give consistent positive abnormal returns before the announcement dates. In other words,

markets discounted the information in advance and thus repurchase announcements do not support the undervaluation hypothesis (Ishwar, 2010; Ikenberry et al., 1995). The negligible AAR returns were determined by mixed market reactions during the actual transaction window. It was found that the AAR had negligible but statistically significant returns on days -7, -6, -2 and 0 (announcement day). Post announcement, the AAR values were found to be non-significant.

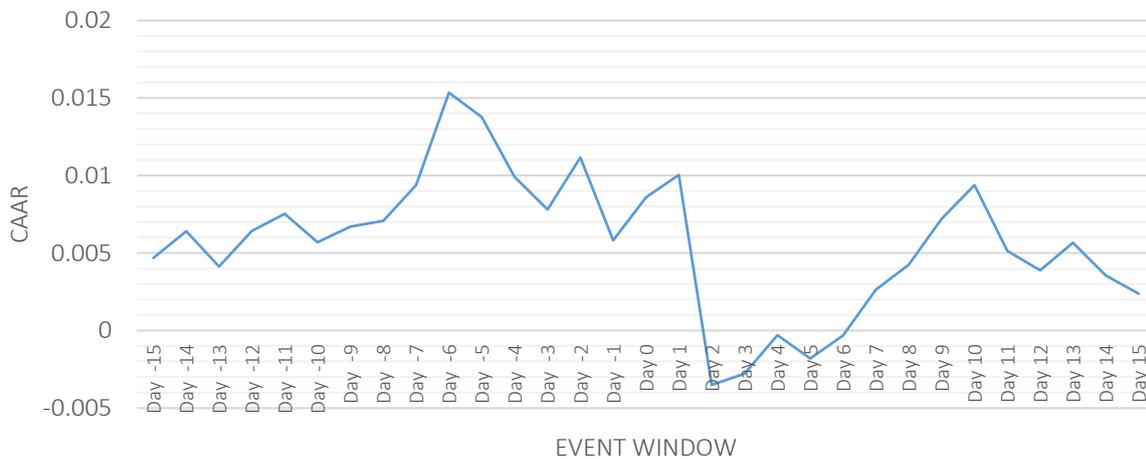
**Table 2.** AAR and CAAR values of all firms

Days	AAR	t-stat	CAAR	t-stat	St.Dev.	Min	Max	Skewness	Kurtosis
-15	0.005	1.508	0.005	1.508	0.034	-0.06	0.20	2.96	13.52
-14	0.002	0.554	0.006	1.458	0.021	-0.05	0.05	0.24	0.24
-13	0.002	0.775	0.009	1.638	0.026	-0.08	0.11	0.73	3.39
-12	0.004	1.294	0.013	2.065**	0.031	-0.11	0.13	0.15	4.75
-11	0.004	1.130	0.016	2.353**	0.029	-0.05	0.15	2.43	10.12
-10	0.002	0.703	0.019	2.435**	0.031	-0.05	0.13	1.63	4.15
-9	0.005	1.456	0.023	2.804***	0.028	-0.11	0.12	0.91	7.18
-8	0.003	0.820	0.026	2.913***	0.024	-0.05	0.90	0.87	2.06
-7	0.007	2.198**	0.032	3.479***	0.027	-0.05	0.13	1.96	7.21
-6	0.009	2.739***	0.041	4.167***	0.037	-0.05	0.17	2.12	6.12
-5	0.005	1.690	0.046	4.483***	0.037	-0.10	0.20	1.80	8.42
-4	0.005	1.497	0.051	4.724***	0.038	-0.80	0.18	1.49	5.62
-3	0.003	1.017	0.054	4.820***	0.024	-0.40	0.08	0.64	0.52
-2	0.008	2.576**	0.062	5.334***	0.034	-0.13	0.14	0.37	4.63
-1	-0.002	-0.704	0.060	4.971***	0.027	-0.11	0.09	-0.38	4.68
0	0.011	3.467***	0.071	5.680***	0.039	-0.60	0.19	2.15	8.15
1	-0.001	-0.237	0.070	5.453***	0.027	-0.70	0.08	0.26	0.90
2	-0.003	-0.892	0.067	5.089***	0.025	-0.10	0.90	0.10	3.51
3	0.000	-0.002	0.067	4.953***	0.022	-0.70	0.08	0.60	1.68
4	0.000	-0.092	0.067	4.807***	0.021	-0.40	0.09	1.12	3.24
5	-0.002	-0.486	0.065	4.585***	0.018	-0.80	0.50	-0.61	4.38
6	0.001	0.383	0.066	4.561***	0.020	-0.10	0.05	-0.17	0.80
7	0.001	0.467	0.068	4.558***	0.029	-0.11	0.17	1.39	12.60
8	0.003	0.900	0.071	4.646***	0.020	-0.50	0.10	1.06	4.95
9	0.004	1.415	0.075	4.835***	0.021	-0.50	0.11	1.79	7.50
10	0.005	1.605	0.080	5.056***	0.020	-0.50	0.10	1.26	4.20
11	0.000	0.050	0.080	4.971***	0.023	-0.12	0.05	-1.25	5.62
12	0.004	1.199	0.084	5.108***	0.025	-0.50	0.15	2.26	11.15
13	0.002	0.623	0.086	5.135***	0.029	-0.60	0.19	3.10	17.04
14	0.002	0.520	0.088	5.144***	0.021	-0.70	0.06	0.02	1.77
15	0.001	0.245	0.088	5.104***	0.020	-0.60	0.07	0.38	1.26

Note: \*\*\* and \*\* denote 1% and 5% significance levels. Overall CAAR values are positive in the event window, whether pre-announcement or post-announcement days. This indicates that investors are likely to benefit during the event window. Figures 1 and 2 graphically depict the value of AAR and CAAR corresponding to each day of the event window during the period of the study. They represent the trends in the AAR and support the findings obtained.



**Figure 1.** Average Abnormal Returns (AAR) for the event window of -15 to +15



**Figure 2.** Cumulative Average Abnormal Returns (CAAR) for the event window of -15 to +15

### 3.1. Price reaction results for smaller windows:

For a better estimation and understanding of these abnormal returns, smaller event windows have been created as indicated in Table 3. The event windows are denoted by  $(x, y)$ , where  $x$  denotes the day

of starting of the event, and  $y$  denotes the day the event window ends. The values represent CAAR and their corresponding t-statistic values for these different short event windows. The announcement effect of buyback on abnormal returns has been measured for  $(-1,0)$ ,  $(0, +1)$ ,  $(-1, +1)$ ,  $(-5, +5)$ ,  $(-3, +3)$ ,  $(-2, +2)$   $(-5, -1)$  and  $(+1, +5)$  event windows.

**Table 3.** CAAR for different event windows for shorter duration

Event Window	CAAR	t-stat
$(-1, 0)$	0.009	0.937
$(0, +1)$	0.010	0.872
$(-1, +1)$	0.008	0.638
$(-5, +5)$	0.024	1.717*
$(-3, +3)$	0.016	3.22E-05
$(-2, +2)$	0.013	9.28E-01
$(-5, -1)$	0.019	2.241**
$(+1, +5)$	-0.005	-2.136**

Note: \*\* and \* denote 5% and 1% significance levels.

Upon analyzing the event window (0, +1), it has been observed that the CAAR for this window is 1%, which means that investors can gain an abnormal return of 1% in these 2 days. When analyzing the event window (-5, +5), it was revealed that this window is where an investor can gain maximum returns of 2.43%. Event window (-3, +3) proves to be profitable for the investors as they will gain 1.62%. The event window (-2 to +2) indicates nearly 2% but non-significant returns, unlike Liano et.al. (2003) who noted positive and significant returns from day -2 to +2. The event window (+1, +5) shows negative abnormal returns just after the announcement day. This means that abnormal returns are very short-lived.

### 3.2. Industry specific results

As indicated in Table 4, the results are statistically significant on the day of the announcement for IT & telecom, manufacturing and other sectors. The average abnormal returns are 2.3% for IT & telecom firms, 0.8% for manufacturing, and 1.1% for others. However, the t-values do not reject the null hypothesis that there are no significant average abnormal returns post-repurchase announcement across all industries. Equally interesting is that the returns are statistically significant prior to the announcement for chemicals & pharma, manufacturing and other sectoral firms. The statistically significant abnormal profits are highest for manufacturing firms at 4.7%, chemicals & pharma at 3.2%, and others at 2%. These

**Table 4.** AAR and T-STAT values for different industries

Days	IT & Telecom		Chemical & Pharma		Manufacturing		Others		Service	
	AAR	T-STAT	AAR	T-STAT	AAR	T-STAT	AAR	T-STAT	AAR	T-STAT
-15	-0.004	-0.530	0.008	1.149	0.007	1.451	0.006	1.635	-0.001	-0.094
-14	0.005	0.592	-0.004	-0.622	0.002	0.343	0.001	0.192	0.000	0.010
-13	0.013	1.671*	0.005	0.706	0.001	0.058	0.001	0.228	0.001	0.155
-12	0.011	1.394	0.003	0.453	0.007	1.627	-0.001	-0.329	0.010	1.936*
-11	0.022	2.788***	-0.005	-0.714	-0.004	-0.863	0.005	1.288	0.011	2.143**
-10	0.006	0.812	-0.006	-0.865	-0.001	-0.299	0.005	1.268	0.007	1.296
-9	-0.003	-0.353	0.010	1.464	0.006	1.231	0.007	1.948	0.006	1.208
-8	0.011	1.356	0.005	0.670	0.004	0.791	-0.001	-0.158	-0.006	-1.201
-7	0.002	0.247	0.005	0.763	0.004	0.929	0.012	3.318***	0.007	1.370
-6	0.003	0.363	0.015	2.220**	0.012	2.607***	0.008	2.348**	-0.001	-0.115
-5	-0.005	-0.683	0.010	1.432	0.010	2.160**	0.006	1.775	0.006	1.141
-4	0.006	0.811	0.010	1.550	0.009	1.876*	0.003	0.735	0.008	1.497
-3	0.008	1.035	0.007	1.085	0.007	1.512	0.001	0.168	0.009	1.704*
-2	0.006	0.815	0.017	2.597***	0.016	3.456***	0.004	1.144	0.004	0.704
-1	0.004	0.497	-0.002	-0.264	0.001	0.135	-0.004	-1.144	-0.007	-1.438
0	0.023	2.989***	0.007	1.117	0.008	1.855*	0.011	3.102***	0.006	1.188
1	-0.004	-0.512	0.008	1.223	0.002	0.510	0.001	0.351	0.004	0.705
2	-0.005	-0.653	0.001	0.084	-0.001	-0.096	-0.001	-0.152	-0.002	-0.298
3	0.002	0.297	-0.005	-0.791	0.002	0.481	0.000	0.006	-0.006	-1.148
4	0.006	0.771	-0.008	-1.197	-0.001	-0.186	0.001	0.238	-0.001	-0.100
5	-0.004	-0.486	-0.007	-1.065	-0.003	-0.697	0.003	0.972	-0.004	-0.767
6	0.001	0.159	-0.002	-0.334	-0.001	-0.139	0.006	1.594	0.006	1.253
7	-0.006	-0.776	0.003	0.371	0.004	0.960	0.004	1.183	0.003	0.553
8	0.008	1.003	0.000	0.021	0.005	1.044	0.002	0.533	0.001	0.083
9	0.011	1.465	0.005	0.737	0.006	1.403	0.003	0.810	0.001	0.271
10	0.007	0.933	0.003	0.376	0.007	1.493	0.005	1.494	0.003	0.502
11	-0.005	-0.652	-0.001	-0.110	0.001	0.092	0.005	1.464	0.008	1.548
12	-0.002	-0.307	-0.001	-0.127	0.004	0.947	0.008	2.280**	-0.003	-0.618
13	-0.008	-1.073	0.009	1.360	0.006	1.343	0.006	1.573	0.012	2.429**
14	-0.003	-0.331	0.003	0.408	0.007	1.453	0.002	0.618	0.003	0.591
15	0.007	0.854	-0.009	-1.333	-0.002	-0.415	0.005	1.304	0.001	0.249

Note: \*\*\* denotes significance at 1%, \*\* denotes significance at 5%, and \* denotes significance at 10%.

**Table 5.** Number of open market offers, tender offers and IPOs

Year	Open Market announcements	Tender Offer	Public Issues (Offer documents filed with SEBI)
2010	31	17	128
2011	56	16	90
2012	53	4	27
2013	53	29	20
2014	41	22	20
2015	8	38	46
2016	20	117	34
2017	11	200	60
2018	26	213	90
2019	25	226	46
2020	39	139	32

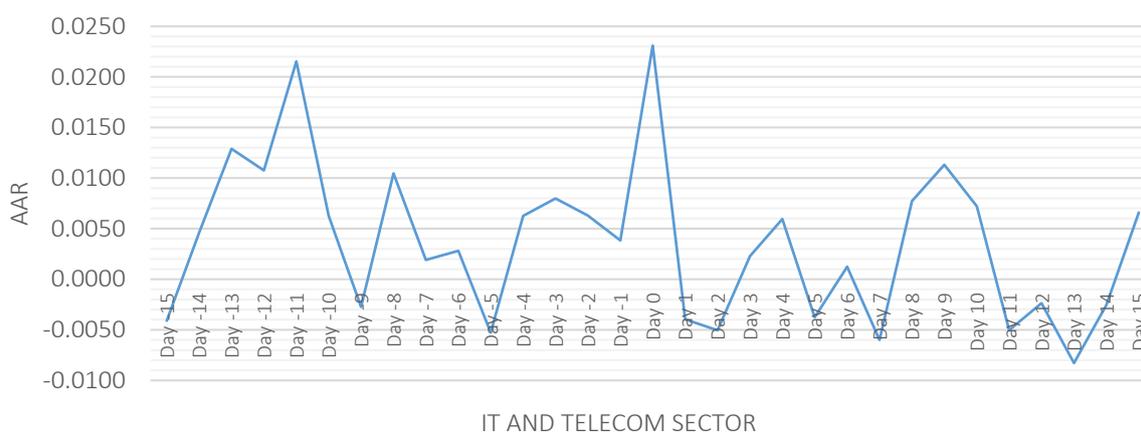
Note: The data has been extracted from Securities and Exchange Board of India (SEBI).

pieces of evidence suggest that profit opportunities are at the preannouncement stage in all industries. While the cumulative AAR values are positive for all the days, it has not grown fast enough to give investors a high motivation to purchase these shares.

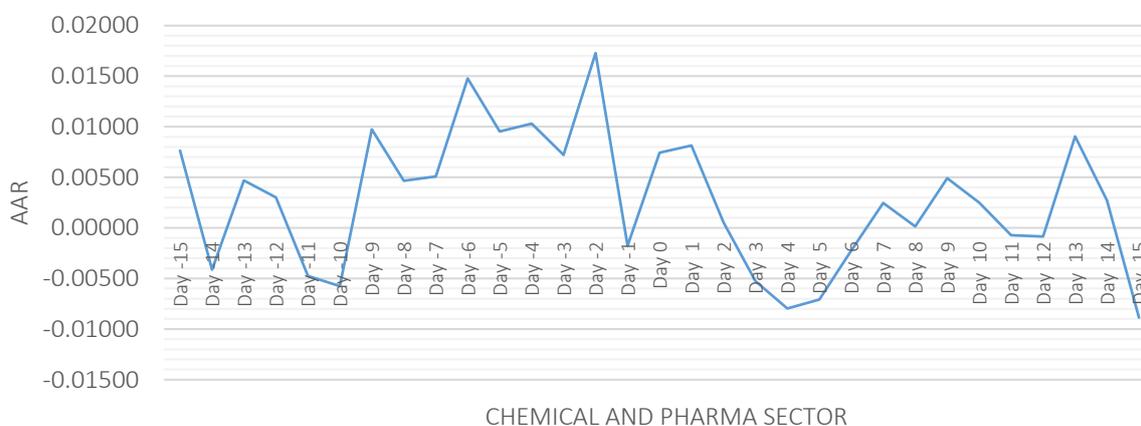
tistically significant. Here, the average abnormal returns were significant for 3 out of 31 days event window.

AAR and CAAR values for various industries are shown graphically in Figures 3 to 7.

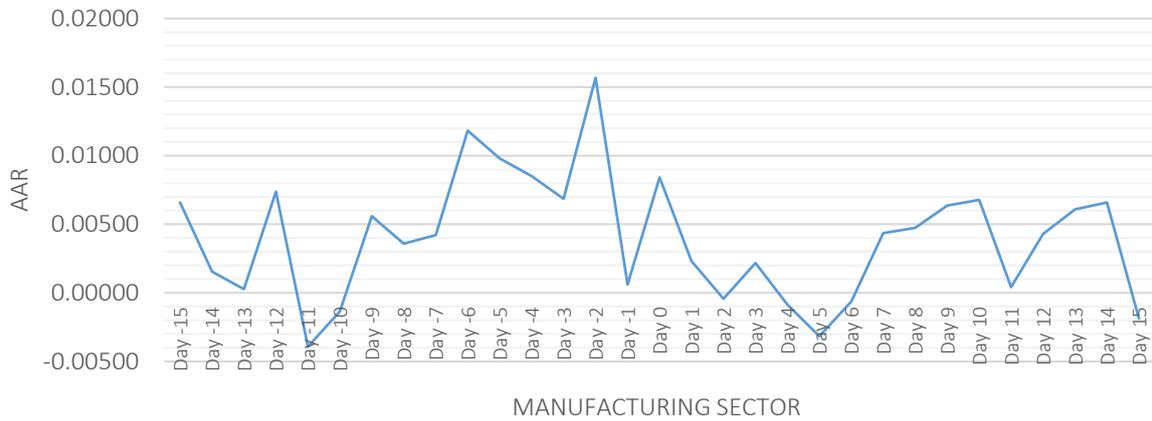
The service sector has largely been like the IT& telecom sector, showing abnormal returns but not sta-



**Figure 3.** Average Abnormal Returns (AAR) for IT and Telecom Sector



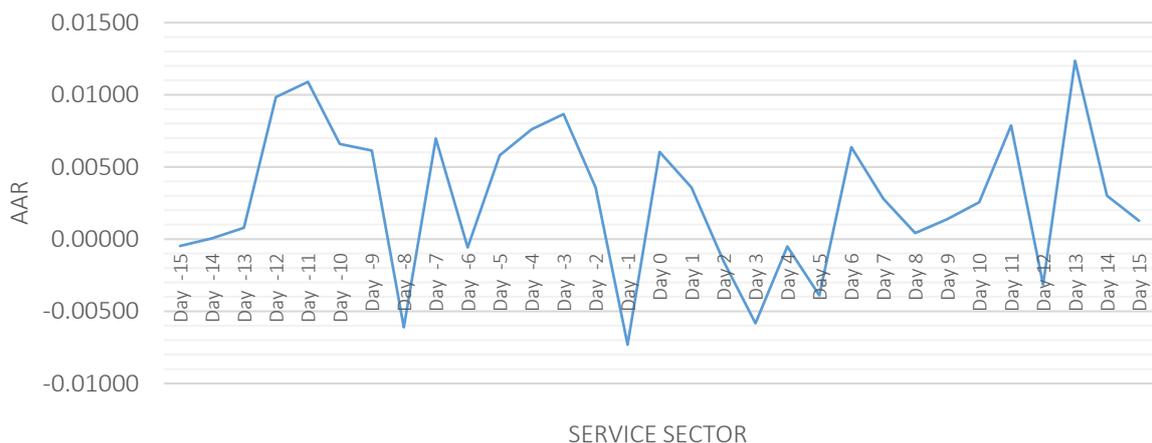
**Figure 4.** Average Abnormal Returns (AAR) of the Chemical and Pharma Sector



**Figure 5. Average Abnormal Returns (AAR) of the Manufacturing Sector**



**Figure 6. Average Abnormal Returns (AAR) of other firms**



**Figure 7. Average Abnormal Returns (AAR) of the Service Sector**

## 4. DISCUSSION

Generally, undervaluation is considered one of the important factors for share buyback, which also signals future growth opportunities for

companies (Jagannathan et al., 2000; Yarram, 2014; Arora, 2019), and thus boosts the confidence of investors. In this study, the findings strongly indicate that returns were more favorable in the short run. Therefore, the findings

did not support the undervaluation rationale of firms behind the open buyback announcements. The t-test values accepted the null hypothesis of no significant abnormal returns following the buyback announcement. The evidence confirms the findings of Kuntluru (2019) and Mukherjee and Chatterjee (2019). The sample firms did not show significant abnormal returns (Lee et al., 2020; Andriosopoulos & Lasfer, 2015), thus contradicting the work of Gupta et al. (2005) and Gupta (2017) that most returns were in the post-announcement period. The low-profit opportunity in the prior announcement event window indicates investors' predictions about the repurchase announcement (Pandey et al., 2020).

With reference to industries, IT and telecom firms indicate negligible abnormal returns for a shorter tenure. Chemical and pharma firms are largely similar to IT firms, since their abnormal returns (AAR) were found to be significant only

for two days (prior to the announcement) in the 31-day event window. The manufacturing sector seems to be superior to IT & telecom, chemical and pharma firms as the returns are statistically significant for five out of 31 days and these returns are on the day of the announcement, as well as prior to the announcement date. Similarly, the performance of miscellaneous firms in the other sectors' category has been considerable; the AAR is statistically significant for seven out of 31 days' event window. To sum it up, industry-specific results also indicate that the profit opportunities are in the pre-announcement phase.

The above observations suggest that open market buybacks might support the decisions related to dividend substitution and capital structure changes (Varma et al., 2018; Grullon & Michaely, 2002), and share repurchases might be irrelevant to shareholders' wealth (Pradhan & Kasilingam, 2019).

---

## CONCLUSION

The present study examines the impact of firms' repurchase announcements on stock returns, particularly across different industries having open market buybacks. The study intends to understand how investors react to these announcements in the context of Indian firms across different sectors. It also tries to explore price reactions in different time frames.

The results indicate that the announcement of open market share buybacks does not significantly influence abnormal returns. On most of the days in the event study period, the stocks exhibit negligible abnormal returns. The findings, therefore, do not support the undervaluation rationale of firms behind their open buyback announcements. The returns appear to be significant for a few days in the pre-announcement period, corroborating the fact that there are profit opportunities if investors can make predictions about the repurchase announcements. By and large, firms did not show significant abnormal returns after the announcement of buybacks. Furthermore, industry analysis shows that manufacturing and miscellaneous firms have better returns in the pre-announcement phase as compared to other sectors, and are way above in terms of cumulative returns in the event window. Hence, industry-specific findings also convey profit opportunities in the pre-announcement period.

The study contributes significantly to the existing literature on open market buybacks by focusing on the Indian industry. The research is helpful to investors as it makes them understand which sector(s) has/have more potential concerning abnormal returns. The study recommends not overreacting to buyback announcements as there are no significant returns. However, investors may have an incentive to sell their shares as they can get premium prices for them, especially as companies buy back shares at higher prices than the market rate.

## AUTHOR CONTRIBUTIONS

Conceptualization: Vandana Bhama.  
Data curation: Vandana Bhama.  
Formal analysis: Vandana Bhama.  
Methodology: Vandana Bhama.  
Software: Vandana Bhama.  
Validation: Vandana Bhama.  
Visualization: Vandana Bhama.  
Writing – original draft: Vandana Bhama.

## ACKNOWLEDGMENT

The infrastructural support provided by the FORE School of Management, New Delhi in completing this paper is gratefully acknowledged.

## REFERENCES

1. Andriosopoulos, D., & Lasfer, M. (2015). The market valuation of share repurchases in Europe. A cross country analysis. *Journal of Banking and Finance*, 55, 327-339. <https://doi.org/10.1016/j.jbankfin.2014.04.017>
2. Anwar, S., Singh, S., & Jain, P. K. (2017). Shares repurchase and liquidity: An examination of Indian firms. *Prajnan*, 46(3), 213-229.
3. Arora, R. K. (2019). Why do Indian companies repurchase their shares? *Global Business Review*, 23(1), 205-217. Retrieved from <https://journals.sagepub.com/doi/pdf/10.1177/0972150919854935>
4. Chan, K., Ikenberry, D. L., Lee, I., & Wang, Y. (2010). Share repurchases as a potential tool to mislead investors. *Journal of Corporate Finance*, 16(2), 137-158. <https://doi.org/10.1016/j.jcorpfin.2009.10.003>
5. Chan, S. S., & Wang, Y. (2012). Financial constraints and share repurchases. *Journal of Financial Economics*, 105(2), 311-331. <https://doi.org/10.1016/j.jfineco.2012.03.003>
6. Dixon, R., Palmer, G., Stradling, B., & Woodhead, A. (2008). An empirical survey of the motivation for share repurchases in the UK. *Managerial Finance*, 34(12), 886-906.
7. Ginglinger, E., & Hamon, J. (2007). Actual share repurchases, timing and liquidity. *Journal of Banking and Finance*, 31(3), 915-938. <https://doi.org/10.1016/j.jbankfin.2006.07.006>
8. Grullon, G., & Ikenberry, D. L. (2000). What do we know about stock repurchases? *Journal of Applied Corporate Finance*, 13(1), 31-51. <https://doi.org/10.1111/j.1745-6622.2000.tb00040.x>
9. Grullon, G., & Michaely, R. (2002). Dividends, share repurchases, and the substitution hypothesis. *Journal of Finance*, 57(4), 1649-1684.
10. Gunn, M. (2017). *Share repurchases: market timing and abnormal returns*. Retrieved from <http://dx.doi.org/10.2139/ssrn.3105712>
11. Gupta, M. (2017). Share buyback and announcement effects: An industry wise analysis. *FIIIB Business Review*, 6(2), 43-50. <https://journals.sagepub.com/doi/pdf/10.1177/2455265820170207>
12. Gupta, V. (2016). Impact of buyback of shares on stock prices and financial performance of companies in India. *Prajnan: Journal of Social and Management Sciences*, 45(1), 61-82.
13. Gupta, L. C., Jain, N., & Kumar, A. (2005). Corporate practices regarding buyback of shares and its regulation in India. *Study Sponsored by Indian Council of Social Science Research, New Delhi*, 1-76.
14. Gupta, V. (2018). Open market repurchases and signaling hypothesis. *Theoretical Economics Letters*, 8(3), 592-608.
15. Ikenberry, D., Lakonishok, J., & Vermaelen, T. (1995). Market underreaction to open market share repurchases. *Journal of Financial Economics*, 39(2-3), 181-208. [https://doi.org/10.1016/0304-405X\(95\)00826-Z](https://doi.org/10.1016/0304-405X(95)00826-Z)
16. Ikenberry, D., Lakonishok, J., & Vermaelen, T. (2000). Stock repurchases in Canada: performance and strategic trading. *Journal of Finance*, 55(5), 2373-97.
17. Ishwar, P. (2010). Stock price responses to the announcement of buyback of shares in India. *Indian Journal of Commerce and Management Studies*, 1(1), 14-29.
18. Jagannathan, M., & Stephens, C. (2003). Motives for multiple open-market repurchase programs. *Financial Management*, 32(2), 71-91. <https://doi.org/10.2307/3666337>
19. Jagannathan, M., Stephens, C. P., & Weisbach, M. S. (2000). Financial flexibility and the choice between dividends and stock

- repurchases. *Journal of Financial Economics*, 57(3), 355-384. [https://doi.org/10.1016/S0304-405X\(00\)00061-1](https://doi.org/10.1016/S0304-405X(00)00061-1)
20. Jena, S. K., Mishra, C. S., & Rajib, P. (2018). Factors influencing share buyback decisions of Indian companies. *South Asian Journal of Management*, 25(2), 31-65.
  21. Kim, J. (2007). Buyback trading of open market share repurchase firms and the return volatility decline. *International Journal of Managerial Finance*, 3(4), 316-337.
  22. Kumar, R., Kumar, P., & Firoz, M. (2019). How do Indian stock market react to repurchase of shares announcement? An event study methodology. *Wealth*, 8(1), 20-29.
  23. Kuntluru, S. (2019). *Share buybacks in India: An empirical analysis* (Working papers 318). Indian Institute of Management Kozhikode. Retrieved from <https://ideas.repec.org/p/iik/wpaper/318.html>
  24. Lee, I., Park, Y. J., & Pearson, N. D. (2020). Repurchases after being well known as good news. *Journal of Corporate Finance*, 62, 101552. <https://doi.org/10.1016/j.jcorpfin.2019.101552>
  25. Li, K., & McNally, W. J. (1999). Open market vs tender offer share repurchases: A conditional event study. *University of British Columbia Finance Working paper*, 2-33. Retrieved from [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=149513](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=149513)
  26. Liano, K., Huang, G. C., & Manakyan, H. (2003). Market reaction to open market stock repurchases and industry affiliation. *Quarterly Journal of Business and Economics*, 42(1-2), 97-120.
  27. Masry, M. A. F., & El Menshawy, H. M. (2015). The impact of share repurchases on liquidity and return volatility in Egyptian stock exchange. *The Business & Management Review*, 6(4), 52-58.
  28. McNally, W. J. (2002). Open market share repurchases in Canada. *Canadian Investment Review*, 15(4), 24-31.
  29. Mishra, A. (2005). An empirical analysis of share buybacks in India. *ICFAI Journal of Applied Finance*, 11(5), 5-24. Retrieved from [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=733144](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=733144)
  30. Mukherjee, P., & Chatterjee, C. (2019). Does share repurchase announcement lead to rise in share price? Evidence from India. *Global Business Review*, 20(2), 420-433. Retrieved from <https://journals.sagepub.com/doi/pdf/10.1177/0972150918825327>
  31. Ota, K., Lau, D., & Kawase, H. (2022). Signal strength adjustment behavior: Evidence from share repurchases. *Journal of Banking and Finance*, 143, 106545. <https://doi.org/10.1016/j.jbankfin.2022.106545>
  32. Pandey, A., Bhama V., & Mohapatra, A. K. (2020). Trading strategy using share buybacks: Evidence from India. *Investment Management and Financial Innovations*, 17(2), 169-182. [http://dx.doi.org/10.21511/imfi.17\(2\).2020.14](http://dx.doi.org/10.21511/imfi.17(2).2020.14)
  33. Pradhan, S. K., & Kasilingam, R. (2019). Buyback announcement and its impact on shareholders' wealth: A study on Bombay stock exchange. *Asia-Pacific Journal of Management Research and Innovation*, 14(3-4), 111-119. Retrieved from <https://journals.sagepub.com/doi/full/10.1177/2319510X18819652>
  34. Varma, U., Singh, H., & Munjal, A. (2018). Corporate restructuring through share buybacks: An Indian experience. *Australian Accounting, Business and Finance Journal*, 12(2), 117-133. <http://dx.doi.org/10.14453/aabf.v12i2.8>
  35. Wang, H.B., Nguyen, C., & Rafi, N.A. (2021). The effectiveness of price-stabilizing share buybacks: Evidence from listed firms in Vietnam. *The North American Journal of Economics and Finance*, 57, 101436. <https://doi.org/10.1016/j.najef.2021.101436>
  36. Yarram, S. R. (2014). Factors influencing on-market share repurchase decisions in Australia. *Studies in Economics and Finance*, 31(3), 255-271. <http://dx.doi.org/10.1108/SEF-02-2013-0021>
  37. Yook, K. C., & Gangopadhyay, P. (2010). Free cash flow and the wealth effects of stock repurchase announcements. *Quarterly Journal of Finance and Accounting*, 49(3-4), 23-42.