"Announcement effect of tender offer share buyback around turmoil period – evidence from India"

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# ANNOUNCEMENT EFFECT OF TENDER OFFER SHARE BUYBACK AROUND TURMOIL PERIOD – EVIDENCE FROM INDIA

#### Abstract

The announcement of a buyback informs the market about the company's decision to repurchase its own shares. This announcement highlights the company's price valuation and the inefficiencies that exist in the market. This study examines the share buyback announcement effect during the COVID-19 period. The study considered the stocks listed in the National Stock Exchange (NSE) that offered share buyback under tender offer mode during the pre-pandemic period between April 2016 and February 2020 and the post-pandemic period between March 2020 and March 2022. 75 firms in the pre-pandemic period and 43 in the post-pandemic period that announced share buyback under the tender offer method were analyzed. The event study methodology using a market model was employed to determine the presence of abnormal returns during the event period, which consisted of -21 days and +21 days. The findings of the study revealed the existence of abnormal returns in and around the announcement date. Besides, statistically significant cumulative abnormal average returns (CAAR) were also found on the event day, i.e., on Day 0. The study found that the impact of buyback announcements on stock returns significantly differed before and after COVID-19 for 10 and 21-day periods, with no significant differences for shorter periods. These insights can help traders and fund managers make informed portfolio adjustments during turbulent market periods surrounding buyback announcements.

#### Keywords

share buyback, market efficiency, abnormal returns, event window, CAR model

JEL Classification G14, G12, G30

# INTRODUCTION

A share buyback is when a company repurchases its own shares from existing shareholders at a price typically higher than the market price. Buyback announcements are usually issued by companies as a strategic move to boost their stock price, enhance the company's earnings per share, lower the cost of equity, and strengthen the ownership position of the company's promoters. Most of the time companies resort to buybacks when they observe that their current market price is not fairly valued. This is often observed during economic crises, industry slowdowns, and unforeseen events like pandemics. When companies announce a share buyback, it signals to the market that the shares are undervalued. The announcement often leads to an increase in share prices, generating abnormal returns for shareholders. However, there is no certainty about the upward price trend, especially during turbulent periods like the pandemic. In India, there are two methods of share buyback, i.e., through an open market or tender offer route. The method of a buyback depends on the company. Under the open market route, shares are bought through brokers at the market price. The second method is called a tender offer, in which shares are repur-

chased directly from shareholders at a fixed price with a clear announcement of the record date and offer period. The tender offer is usually preferred, and many shareholders participate in it. In a tender offer, the buyback price is typically higher than the current market price. This encourages shareholders to sell their shares back to the company, thus leading to potential profits to them as it is transacted at higher than current market prices in the stock exchanges. In the past, researchers have empirically investigated market efficiency around various corporate announcements and documented varied results to different events, including share buyback announcements. However, there is limited research on how events such as share buybacks have been affected during the turbulent periods of the COVID-19 pandemic. The pandemic disrupted economies, forcing many companies to readjust their business models in order to survive. Frequently, companies with substantial cash reserves opt for share buybacks as a strategic move. This typically occurs when attractive investment opportunities are limited, and there is a decline in earnings per share (EPS). Recognizing these signals, the market may anticipate a buyback announcement, potentially leading to abnormal returns for shareholders. However, the market's response to such announcements remains uncertain, especially in varying market conditions. Amidst turbulent times like the COVID-19 pandemic, it is important to reassess the concepts of information efficiency and signalling hypothesis. It is crucial to thoroughly examine how stock prices indicate both public and private information, especially during unprecedented market conditions such as global pandemics. Furthermore, it is essential to understand how companies actively seek to impact their stock prices through share repurchases from the market. This study aims to address these key questions and facilitate informed investments, particularly in the Indian context.

## 1. LITERATURE REVIEW

A turmoil period is when a firm has no profitable projects that can give returns more than the expected returns of the investors. Firms face these issues when there are recession, geopolitical problems, and sudden shifts in consumer demand. This was experienced by most of the firms in the recent COVID-19 pandemic disrupting business models. During these times, many firms restructured their business models. A buyback of shares was initiated to sustain their business and enhance shareholders' value. Many major IT sector firms in India offer buyback during the pandemic period. The impact of the share repurchase announcement on market efficiency, shareholders' wealth, and stock returns are areas of great interest for researchers and academicians. Their aim is to verify possibilities of additional wealth creation and better risk management. The earlier papers documented market anomalies with and without significant price or wealth effects. Some prominent research findings from the previous studies are discussed in this section.

When a company is not performing well, executives may consider buying back shares to improve the situation (Pettit, 2001). However, if not used properly, buybacks can be risky and ineffective.

Shareholders often prefer companies to invest money in new opportunities instead of buying back shares. This is especially true in high-growth industries, where the company's growth is strong, and shareholders are unwilling to give up their shares. Mishra (2005) examined the long-run impact of share buyback strategies of Indian companies and confirmed that buyback has no long-term value effect for shareholders, unlike promoters. The study also confirmed the existence of shortrun gains for investors. Kim (2007) verified the daily return volatility of buyback and found that subsequent buying from a firm leads to return volatility and not the announcement effect under open market buyback offers. Steenkamp and Wesson (2020) examined the post-recession share repurchase behavior by JSE-listed companies and documented that post-recession, the share repurchase declined significantly and stabilized at a lower level. Also asserted that subsidiaries' share repurchase has fallen due to dividend taxes. The study states that the annual report has the least disclosure of share repurchases. Nguyen et al. (2015) verified the stock price drifts and found that firms that indulge in buyback portrayed a positive postannouncement drift compared to those firms not involved in the buyback. Segara and Yang (2022) examined the motives of share repurchasing and the behavior of institutions, firms, and short sell-

ers. Their study documented that the firm indulges in share buyback when there is intense shortselling and parallel trading institutional investors in parallel trading. The primary intent of a firm stock repurchase is to ensure fair valuations for its stock and any degree of undervaluation calls for repurchase strategies. It thus ensures wealth creation to its stakeholders over the period. Yook and Gangopadhyay (2014) assessed the accelerated stock repurchase effect on shareholders' wealth and their findings showed that the wealth effect exists in a higher percentage for three days event window and the frequency of stock repurchase announcement was a key determinant for the positive wealth effect. Kim and Park (2021) verified whether signalling costs and accounting transparency is the key criterion for deciding on the method of stock repurchasing in Korean firms and found that firms with poor earnings history choose the low-cost repurchase method mainly due to managerial speculative mindsets. Pandey et al. (2020) studied the trading opportunities to generate abnormal returns around buyback announcements in India using event study methodology. Their findings exhibited negligible trading opportunities to general excess returns post-announcement. However, significant evidence was found for excess returns in pre-announcement period providing opportunities for traders to predict the event for earning additional returns. Furthermore, Lin et al. (2011) investigated the effect of share repurchase announcement on stock prices in Taiwan and confirmed positive price movements in the short run. However, fully executed buyback firm had a considerable price decline in the post announcement period. Vermaelen (1984) stated the following reasons for buyback by a firm such as to change the capital structure, to reward the shareholders, and to control the ownership of the firm. Sometimes firms opt for buyback to signal to the investors that the firm will do better; the same has been mentioned by Gupta (2018) who examined the price effect for buyback announcements and found an insignificant price reaction for open market buyback as compared to tender offer buybacks which had significant price reaction, thus confirming signalling hypothesis for tender offer buybacks. Wrońska-Bukalska and Kaźmierska-Jóźwiak (2017) stated that firms also opt for buyback when they have excess cash flow and fewer investment opportunities.

Albaity and Said (2016) confirmed no long run impact of open market buyback announcement under standard event approach unlike buy and hold method of undervaluations. Chatterjee and Dutta (2015) confirm that open market buyback announcement does not result in abnormal results. Hung and Chen (2010) verified the legal restrictions in deciding the price range and its signalling effect on the undervaluations. The findings argue that announced price range has information content about the future valuations of the firms. Vermaelen (1984) attempted to verify signalling impact of share repurchase on perceived managerial incentives; his findings argue that signalling power of share repurchase has insider benefits. Yarram (2014) studied a sample of non-financial firms to understand the factors influencing stock repurchase decision in Australia; his findings confirmed the undervaluation and signalling hypotheses. Gupta (2017) analyzed the impact of buyback announcements on the movements of market price of the stocks belonging to various industries related to the manufacturing, finance, insurance, construction, real estate, IT sector, etc. Considering 16 years of buyback data with employing the event study methodology, the study concluded that significant abnormal returns were observed only in the manufacturing sector and not in other sectors, and abnormal returns were observed only in the short run and in the long run, significant returns were not observed. Buyback reduces the number of outstanding shares in the market, and results in an increase in the EPS of the firm and thus making the stock attractive for the investors. Further, Chatterjee and Mukherjee (2015) investigated the impact of buyback on the share price of 63 BSElisted companies between 2008 and 2012 using an event window of +30 and -30. Their study observed that the negative abnormal returns persisted during the event period and did not benefit the shareholders in terms of an increase in the share price. The study also revealed that most small and unknown companies opted for buybacks compared to large firms and concluded that a firm could not revive its share prices through share repurchase. Arora (2022) examines the motives of share buyback announcements and finds that primarily it is because of the undervaluation of its shares. The study has shown a 60 percent return after the announcement of the share buyback. Seal and Matharu (2018) examined the post announcement

effect of buyback and confirms over performance of the firm. However, the study fails to confirm whether the overperformance is because of some company and industry-specific factors. Ahluwalia and Mahendru (2019) verified the company specific factors such as change in the board of management and key personnel of firm and its role in the buyback decisions, and confirm it is highly probable that internal change in positions may influence the decisions. Grullon and Michaely (2004) document that repurchases are more successful among companies that are overinvested, and it helps in reducing their systematic risk.

An exhaustive review of some of the prominent studies in the past with regard to share buyback announcements and their effects provides an understanding that open market buyback is quite common among firms. Also, its signalling impact and market efficiency around the announcement period are quite clear to all. However, tender offer buyback and its relationship with short- or longrun stock price movements remain unexplored areas of research, especially in a large emerging market like India. Further, it also raises the question: "Is the buyback announcement effect the same during regular market times and under turmoil periods?" Only a handful of studies in the past attempted to examine the buyback effect in different countries. Still, none were conducted during a massive turmoil such as the recent COVID-19 pandemic. Institutional and individual investors must understand these relationships, particularly during periods of turmoil. Furthermore, with the increasing number of buybacks, it is essential to comprehend the market reaction to the buyback announcements and ascertain whether the market reactions were the same before and after the pandemic outbreak. Therefore, this study attempts to fill the gap by examining the effect of buyback announcements in Indian stock markets made through tender offers on the stock prices and their returns during the pre- and post-COV-ID-19 periods.

## 2. METHODOLOGY

This study examines companies that were listed on the National Stock Exchange (NSE) and had conducted share buybacks under the ten-

der offer mode before and after the onset of the COVID-19 pandemic. Here, the pre-pandemic period is considered between April 2016 and February 2020, whereas the post-pandemic period spanned from March 2020 to March 2022. The determination of the pre- and post-pandemic periods was based on the official lockdown dates announced by the Government of India. Despite the presence of COVID-19 cases in India during the early months of 2020, the first official lockdown was declared on March 24, 2020. During the pre-pandemic period, 75 firms announced share buybacks, whereas 43 firms did so during the post-pandemic period. Data on buyback announcements were gathered from the SEBI website, while daily stock closing prices were sourced from the NSE website. The study utilized the NIFTY 50 index as a benchmark for calculating market returns.

Further, the event study methodology under the market and BHAR models were employed to examine if any abnormal returns existed around the event window. Market and BHAR models are the standard and established approaches employed to study the market reactions to various corporate events and actions such as buybacks, dividends, bonus shares, stock splits, rights issues announcements, etc. This study constructed an event window of 43 days and 101 days of estimation period window. The preevent window consists of (-21) days before the buyback announcement day, and this window provides information regarding the presence of any abnormal returns. During this period if abnormal returns are observed, it is evident that there was information leakage due to information asymmetry which creates abnormal returns. Announcement Day (AD0) is the day on which a buyback announcement has been made by the firm and is considered as "AD" or Day "0". On this day if abnormal returns are observed, it can be stated that the market reacted positively. The post-event window consisted of (+21) days after the announcement day. This window also gives information regarding the presence of abnormal returns. If abnormal returns are observed during this period, it can be interpreted that the market reacted positively and creates returns for shareholders.

# 2.1. Market model of event study methodology

To assess the impact of a company's share buyback announcement, Abnormal Returns (AR) and Cumulative Average Abnormal Returns (CAAR) are calculated for a period of  $\pm 21$  days surrounding the event. This is in line with the standard practice used in most similar studies. The estimation window for these calculations is AD-21 to AD-101 days. By examining the forecast errors over the event window of  $\pm 21$  to  $\pm 21$ , one can gauge the abnormal performance of returns associated with the event. Using the market model approach the AR is expressed as follows:

$$AR_{i,t} = R_{i,t} - \left(\alpha_1 + \beta_i R_{m,t}\right). \tag{1}$$

The Nifty 50 index is a commonly used benchmark for the stock market (Rm,t). To estimate the alpha and coefficients, the period from AD-21 days to AD-101 is used. The ordinary least square method is used to calculate these coefficients during the estimation window. The cross-sectional Average Abnormal Return (AAR) is computed with the following equation:

$$AAR_{t} = \frac{1}{n} \sum_{i=1}^{n} AR_{i,t}.$$
 (2)

To evaluate the impact on price, Cumulative Abnormal Returns (CAR) and Cumulative Average Abnormal Returns (CAAR) were calculated for 42 days centered on the announcement dates. The use of CAAR is a standard approach. The CAAR for the event day's time period from  $t_1$  to  $t_2$ , was calculated in the following manner:

$$CAR_{(t_1,t_2)} = \sum_{t=1}^{t_2} AR_{i,t}.$$
 (3)

$$CAAR = \frac{1}{N} \sum_{t=1}^{t_2} CAR_{(t_1, t_2)}.$$
(4)

The cross-sectional t-test, as proposed by Brown and Warner (1985) is used in this study. It is a statistical method that accounts for cross-sectional correlation by utilizing cross-sectional variance. This method is useful in analyzing data sets where the variables are measured across different samples at a single point in time. It is computed as follows:

$$t_i = \frac{AAR_i}{\frac{S^2}{\sqrt{N}}}.$$
(5)

## 2.2. Buy and Hold Abnormal Returns (BHARs) model of event study methodology

For the robustness of the results, one also tested for the Buy and Hold Abnormal Returns (BHARs), which is computed using the following equation:

$$BHAR_{i,(t_1-T)} = \pi_{t=T_1}^{T_2} \left(1 + R_{i,t}\right) - \pi_{t=T_1}^{T_2} \left(1 + R_{m,t}\right),$$
(6)

where  $BHAR_{i,(t_1-T)}$  is the buy-and-hold return of buyback firm *i* during  $t_1$  and *T*.  $R_{i,t}$  is the stock return at time *t*.  $R_{m,t}$  is the benchmark return:

$$ABHAR = \frac{1}{N} \sum_{i=1}^{N} BHAR_i.$$
 (7)

The average *BHAR* (*ABHAR*) is computed using the above formula.

## 3. EMPIRICAL RESULTS

#### 3.1. Pre-COVID period analysis

The study investigated the pre-COVID period stock price reaction for tender offer buyback announcements for a sample of 75 firms in Indian markets. Table 1 depicts that there is no significant CAR for a very short window of -1+1 and -3+3. However, the study documents a significant CAR for the -5+5, -10+10, and -21+21 windows, confirming that there was an information asymmetric effect and semi-strong form of market efficiency for this event. Similar results are noticed under the BHAR model also confirming significant abnormal returns for a longer window of 21 days. This confirms that there are no immediate effects of the buyback announcement. Further, we observe the Cumulative AAR for -3+3, -5+5, -10+10, and -21+21 days window and significant ABHAR for -5+5, -10+10, and -21+21 days window. Traces of abnormal returns confirm a strong form of market efficiency for buyback events and

Source: Author, \*significance at 0.05 percent.

Event window	CAR	t-test	BHAR	t-BHAR	CAAR	t-test	ABHAR	t-test
(-1+1)	-0.145	-0.5457	-0.2313	-0.5693	-0.1932	-1.1141	-0.347	-0.8542
(-3+3)	-0.440	-1.6762	-0.6484	-1.2278	-0.5860	-2.5996*	-0.842	-1.5939
(-5+5)	-1.041	-3.9629*	-0.8256	-1.9279	-1.3878	-7.5910*	-0.942	-2.1985*
(-10+10)	-0.754	-2.9082*	-0.8740	-1.9211	-1.0060	-5.1794*	-0.973	-2.1377*
(21+21)	-1.152	-4.4940*	-0.9315	-2.7257*	-1.5359	-10.5269*	-0.989	-2.8936*

Table 1. CAAR and BHAR for pre-COVID-19 period

thus lay an opportunity for earning additional returns around the buyback announcement.

Table 2 shows the pre- and event-day Day Cumulative Average Abnormal Return and Buy and Hold Average Abnormal for pre-COVID period sample firms. It is documented that on the day of the announcement, there is evidence of cumulative AAR and average BHAR, and it is statistically insignificant. However, there is statistically significant cumulative AAR in the pre-event window (-21) and post-event window (+21). Contradictorily, ABHAR was found insignificant for the same period. Traces of CAAR in the pre-event window show information leakage and an opportunity for those who have access to information to make abnormal returns, and traces of CAAR in post-event window negative returns confirm the profit booking and portfolio adjustments.

#### Table 2. Pre-and-post event day CAAR and BHAR

			Sou	irce: Author
Event window	CAAR	t-test	ABHAR	t-test
Event day	0.3009	0.705	0.0030	1.336
Pre-event window	3.6075	8.450 <sup>*</sup>	0.158	0.865
Post-event window	-5.4442	-12.753*	-0.010	-0.055

Note: \*significance at the 0.05 percent.

#### 3.2. Post-COVID-19 period analysis

This study verified stock price reaction to tender offer buyback announcements for 43 firms in the Indian markets during the post-COVID-19 peri-

Table 3. CAAR and BHAR for post-COVID-19 period

cant cumulative abnormal return (CAR) within a very short window of -3 to +3 days. However, it is observed an insignificant CAR for other windows such as -1 to +1, -5 to +5, -10 to +10, and -21 to +21 days, indicating an information asymmetry and semi-strong form of market efficiency for this event. When using the BHAR model, results didn't find any significant abnormal return, suggesting that there was no effect. Additionally, the study looked at the cumulative Average Abnormal Return (AAR) for various windows and found significant AAR for -1 to +1, -3 to +3, -10 to +10, and -21 to +21 days. These abnormal returns indicate a strong form of market efficiency for buyback events, presenting an opportunity for earning additional returns around the buyback announcement.

od. In Table 3, it is found that there was a signifi-

Table 4 presents data on the pre- and post-event day CAAR and BHAR for pre-COVID period sample firms. The study findings indicate that there is evidence of Cumulative AAR and Average BHAR on the day of the announcement, but it is statistically insignificant. However, statistically significant cumulative AAR was found in the preevent window (–21) and post-event window (+21). On the other hand, insignificant ABHAR was found for the post-event window and significant ABHAR was found for the pre-event window. The traces of CAAR in the pre-event window suggest information leakage and an opportunity for those with access to information to make abnormal re-

Event window	CAR	t-test	BHAR	t-test	CAAR	t-test	ABHAR	t-test
(-1+1)	-0.3600	-1.4099	-0.3382	0.1684	-0.0171	-2.0138*	-0.0171	-2.008*
(-3+3)	-0.3499	-2.4542*	-0.3386	0.1732	-0.0167	-1.9576*	-0.0166	-1.956*
(-5+5)	-0.0089	-0.0147	-0.1653	1.7506	-0.0004	-0.0500	-0.0008	-0.094
(-10+10)	-0.2997	-0.3646	-0.4772	0.2726	-0.0143	-1.6768*	-0.0149	-1.750*
(-21+21)	-0.5068	-0.4790	-0.6588	0.2237	-0.0241	-2.8355*	-0.0251	-2.944*

Note: \*significance at the 0.05 percent.

Source: Author

turns. The traces of CAAR in the post-event window show negative returns traces, confirming profit booking and portfolio adjustments.

			300	arce. Author
Event window	CAAR	t-test	ABHAR	t-test
Event day	0.001	0.062	0.001	0.069
Pre-event window	0.028	3.329*	0.028	4.135*
Post-event window	-0.053	-6.227*	-0.011	-1.306

Table 4. Pre- and post-event day CAAR and BHAR

Note: \*significance at the 0.05 percent.

### 3.3. Paired sample t-test

A paired-sample t-test was conducted on abnormal returns to determine if there was a difference in returns before and after the announcement.

Table 5 presents the statistics of paired sample ttests for average abnormal returns during pre- and post-COVID periods. The results show that during the post-announcement period of the buyback window, the significance value in the paired sample ttest is lower than the significance level (p < 0.05) for pre-post COVID 21 and pre-post COVID 10. This confirms that the announcement effect of buyback on stock returns differed during the pre-and post-COVID periods, indicating that the pandemic has impacted market behavior for 10 to 21 days. In the pre-announcement window of the buyback, it is observed that pre-post COVID 21 has a significance value in paired sample t-test lower than the significance level (p < 0.05). Thus, this confirms that the buyback announcement effect on stock returns was different during the pre-and post-COVID period. However, the differences are insignificant for shorter windows of 1, 3, and 5 days, and the abnormal returns during pre-and post-COVID periods were not statistically significant.

# 4. **DISCUSSION**

The results of this study are related to the price reactions of tender buyback announcements before and after the pandemic. As shown in Table 1, in the pre-pandemic period, the buyback announcement does not lead to abnormal returns in the short-term windows, such as -1 to +1 and -3 to +3. However, the study provides strong evidence of abnormal returns for the -5 to +5, -10 to +10, and -21 to +21 windows. This confirms the information asymmetry effect and the semistrong form of market efficiency during this event around the COVID period. When verified using the BHAR model, the same long-term reactions are confirmed, clearly signalling shareholders seeking abnormal gains to continue holding for the long term. Further, with regard to the preannouncement window, the study documents abnormal gains under both the market and BHAR models. Based on the data, it is evident that the abnormal returns lacked statistical significance except for the 21-day period, suggesting minimal information leakage in the pre-announcement window, aside from the 21-day window. Similar findings were confirmed on the event day as well. CAAR trends before an event can signal potential information leaks, enabling certain individuals to make unusually high returns. Following the event,

Table 5. Paired t-test results for pre- and post-COVID-19 period Average Abnormal Returns

Source: Author

Friend and		Paired differences					
	Event window	Mean	SD	SE mean	- τ	ar	Sig. (2-tailed)
		Post-ann	ounceme	nt day	·		
Pair 1	Pre- and post-COVID 21	132	.201	.043	-3.074	21	.006*
Pair 2	Pre- and post-COVID 10	236	.213	.064	-3.672	10	.004*
Pair 3	Pre- and post-COVID 5	149	.205	.084	-1.780	5	.135
Pair 4	Pre- and post-COVID 3	235	.200	.100	-2.344	3	.101
Pair 5	Pre- and post-COVID 1	122	.146	.103	-1.187	1	.446
		Pre-anno	ouncemer	nt day			
Pair 6	Pre- and post-COVID 21	.173	.209	.045	3.877	21	.001*
Pair 7	Pre- and post-COVID 10	.085	.157	.044	1.963	12	.073
Pair 8	Pre- and post-COVID 5	.022	.192	.078	.277	5	.793
Pair 9	Pre- and post-COVID 3	017	.213	.107	160	3	.883
Pair 10	Pre- and post-COVID 1	032	.352	.249	127	1	.920

Note: \*significance at the 0.05 percent.

Source: Author

negative CAAR trends may indicate profit-taking and adjustments to the investment portfolio.

The post-pandemic results document evidence of abnormal returns for 10 to +10 and -21 to +21 days, indicating an information asymmetry and semi-strong form of market efficiency for this event. However, it was not confirmed while using the BHAR model. The data in Table 4 show evidence of Cumulative AAR and Average BHAR on the announcement day. The study found statistically significant Cumulative AAR in both pre-event and post-event windows, suggesting potential information leakage. There were also significant ABHAR in the pre-event window, indicating profit booking and portfolio adjustments, while the post-event window showed insignificant ABHAR. Table 5 presents the results of paired sample t-tests for average abnormal returns before and after the COVID-19 pandemic. The findings show that the impact of buyback announcements on stock returns differed during the pre and post-COVID periods for 10- and 21-day windows. However, the differences were not significant for shorter periods of 1, 3, and 5 days. The findings present valuable insights for traders and fund houses, empowering them to make well-informed portfolio adjustments during periods of market turbulence surrounding buyback announcements.

# CONCLUSION

This study aimed to verify the impact of the tender mode of share buyback in India as a signalling mechanism, especially during turbulent periods such as the COVID-19 pandemic. In this regard, a structured event study methodology was carried out on the stock price data of Indian listed companies that announced buybacks before and after the pandemic period. Further, the data were analyzed using standard market and BHAR models.

The results indicated that out of 12 cases, excess returns were statistically significant, with most results being insignificant. Nevertheless, these findings align with earlier research indicating that buyback returns are typically short-term and lack statistical significance. The existence of positive returns before the buyback announcement indicates possible information leakage and market inefficiency. This type of market is considered semi-strong, allowing only informed investors to benefit and realize excess returns. Subsequent to the announcement period, negative returns were observed to be higher, and the paired t-test confirmed a disparity in abnormal returns pre- and post-announcement. The positive response of the CAAR and AAR to the announcement suggests that the market indeed reflects the announcement information. The noteworthy aspect of negative and significant average returns following the buyback illustrates that shareholders' interest is primarily short-term, and any positive returns are transient.

It is essential to verify how findings differ based on the method of buyback followed by the companies in India. This study focused on buybacks through tender offers only and included companies from across the industries. Further, this study considered only market price reaction and excluded the effect of trade volume at the time of buyback. Future research can be conducted using open market buyback methods with a focus on industry-specific factors and their price and volume reactions during turmoil periods. Overall, the insights from the findings facilitate traders and fund houses, equipping them to make informed portfolio adjustments during market turbulence related to buyback announcements.

# **AUTHOR CONTRIBUTIONS**

Conceptualization: Suresha B, Kavitha Desai, Rejoice Thomas. Data curation: Suresha B, Kavitha Desai, Rejoice Thomas, Nijumon K John, Elizabeth Renju Koshy. Formal analysis: Suresha B, Nijumon K John, Elizabeth Renju Koshy. Funding acquisition: Suresha B. Investigation: Suresha B. Methodology: Suresha B, Rejoice Thomas, Nijumon K John, Elizabeth Renju Koshy. Project administration: Suresha B, Kavitha Desai, Rejoice Thomas. Resources: Suresha B, Kavitha Desai, Nijumon K John, Elizabeth Renju Koshy. Supervision: Suresha B, Kavitha Desai, Nijumon K John, Elizabeth Renju Koshy. Validation: Suresha B, Kavitha Desai, Rejoice Thomas, Nijumon K John, Elizabeth Renju Koshy. Visualization: Rejoice Thomas, Elizabeth Renju Koshy. Writing – original draft: Suresha B, Kavitha Desai. Writing – review & editing: Rejoice Thomas, Nijumon K John, Elizabeth Renju Koshy.

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# REFERENCES

- Ahluwalia, J., & Mahendru, M. (2019). TCS Share Buyback. South Asian Journal of Business and Management Cases, 8(1), 58-69. https:// doi.org/10.1177/2277977918803466
- Albaity, M., & Said, D. S. (2016). Impact of Open-Market Share Repurchases on Long-Term Stock Returns: Evidence From the Malaysian Market. SAGE Open, 6(4). https:// doi.org/10.1177/2158244016670199
- Arora, R. K. (2022). Why Do Indian Companies Repurchase Their Shares? *Global Business Review*, 23(1), 205-217. https://doi. org/10.1177/0972150919854935
- Chatterjee, C., & Dutta, P. (2015). Anomalous Price Behaviour around Open Market Stock Repurchase Announcements in India. Vikalpa, 40(4), 435-443. https://doi. org/10.1177/0256090915611773
- Chatterjee, C., & Mukherjee, P. (2015). Price Behaviour around Share Buyback in the Indian Equity Market. *Global Business Review*, 16(3), 425-438. https://doi. org/10.1177/0972150915569931
- Gupta, M. (2017). Share Buyback and Announcement Effects: An Industry Wise Analysis. *FIIB Busi*ness Review, 6(2), 43-50. https://doi. org/10.1177/2455265820170207
- Gupta, V. (2018). Open Market Repurchases and Signaling Hypothesis. *Theoretical Economics Letters*, 08(03), 592-608. https://doi.org/10.4236/ tel.2018.83041

- Grullon, G., & Michaely, R. (2004). The information content of share repurchase programs. *The Journal of Finance*, *59*(2), 651-680. https://doi.org/10.1111/j.1540-6261.2004.00645.x
- Hung, J. H., & Chen, Y. P. (2010). Equity undervaluation and signaling power of share repurchases with legal restrictions. *Emerging Markets Finance and Trade*, 46(2), 101-115. https://doi.org/10.2753/REE1540-496X460207
- 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. https://doi. org/10.1108/17439130710824343
- Kim, K. S., & Park, Y. W. (2021). Long-term performance following share repurchase, signaling costs and accounting transparency: Korean evidence. *Review of Accounting and Finance*, 20(2), 143-166. https:// doi.org/10.1108/RAF-07-2020-0191
- Lin, L.-H., Chiu, Y.-, & Liu, A. (2011). Stock Repurchase Announcements and Stock Prices Evidence From Taiwan. *The International Journal of Business and Finance Research*, 5(1), 1-12. Retrieved from http://ssrn.com/ abstract=1875980
- Mishra, A. K. (2005). An empirical analysis of share buybacks in India. *The ICFAI Journal of Applied Finance, 25.* Retrieved from https:// ideas.repec.org/p/wpa/wuwpfi/0507001.html

- Nguyen, T. T., Sutton, N. K., & Pham, D. (2015). The post-repurchase announcement drift: an anomaly in disguise? *Managerial Finance*, 41(2), 205-224. https://doi. org/10.1108/MF-02-2014-0038
- 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. https://doi.org/10.21511/ imfi.17(2).2020.14
- Pettit, J. (2001). Is a share buyback right for your company? *Harvard Business Review*, 79(4), 141-147. Retrieved from https://hbr. org/2001/04/is-a-share-buybackright-for-your-company
- Seal, J. K., & Matharu, J. S. (2018). Long-term performance of buybacks in India. *Global Business Review*, 19(6), 1554-1566. https:// doi.org/10.1177/0972150918794737
- Segara, R., & Yang, J. Y. (2022). Firm, institutional and short sellers' trading behavior around share repurchases. *Managerial Finance*, 48(2), 201-221. https://doi.org/10.1108/ MF-05-2021-0219
- Steenkamp, G., & Wesson, N. (2020). Post-recession share repurchase behaviour by JSE-listed companies: transparent or not? *Journal of Accounting in Emerging Economies*, 10(3), 465-486. https:// doi.org/10.1108/JAEE-02-2020-0040

- 20. Vermaelen, T. (1984). Repurchase Tender Offers, Signaling, and Managerial Incentives. *The Journal* of Financial and Quantitative Analysis, 19(2), 163-181.https://doi. org/10.2307/2330896
- 21. Wrońska-Bukalska, E., & Kaźmierska-Jóźwiak, B. (2017). Signaling hypotheses of share repurchase

 Life cycle approach. The case of Polish listed companies. *Equilibrium*. *Quarterly Journal of Economics and Economic Policy*, 12(2), 245-257. https://doi.org/10.24136/eq.v12i2.13

 Yarram, S. R. (2014). Factors influencing on-market share repurchase decisions in Australia. *Studies in Economics and Finance*, 31(3), 255271. https://doi.org/10.1108/SEF-02-2013-0021

 Yook, K. C., & Gangopadhyay, P. (2014). The wealth effects of accelerated stock repurchases. *Managerial Finance*, 40(5), 434-453. https://doi. org/10.1108/MF-07-2013-0192