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Effects of share buybacks in India: Signaling and undervaluation hypothesis

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Abstract
The article aims to give insights on share buybacks in India by using event research technique to determine the influence of share buybacks on stock price. During 2021-2022, we discovered negative abnormal returns previous to the buyback announcement, indicating undervaluation of shares, and positive abnormal returns after the announcement, showing a signaling impact of share buybacks. The findings are comparable to those of a study of buybacks on the open market in developed nations. The publication will also act as a reference point for future buyback research.

Keywords: Event study, signalling, share buyback, undervaluation

Introduction
In India, stock repurchase, also known as buyback of shares, refers to a firm purchasing its own stock. In the developed market, financial literature reveals an excessive return following a stock repurchase programme. In India, there are three types of share buybacks: repurchase tender offers, open market buybacks, and targeted buybacks. Tender offer is a public notice of the purchase of certain shares at a specific price for a limited time. The ability to capture personal tax savings, preserve financial flexibility, correct stock market undervaluation, reduce the likelihood of an unwanted takeover, bolster reported earnings per share, and save on transaction costs are all factors that encourage managers to substitute stock repurchase for dividend. The reasons for open-market buybacks have been thoroughly researched. The signaling of undervaluation is one of the most commonly recognized motivations found by these analyses. Management surveys back up the observations, with managers citing stock price undervaluation as one of the most important factors to consider when considering whether to buy back shares (see, for example, Brav *et al.* 2005 [6] in the United States). Most studies also show negative abnormal returns before to stock repurchase programme announcements and positive abnormal returns thereafter, implying that managers manipulate the market to take advantage of possible undervaluation when making the announcements. The traditional theories of signaling (Bhattacharya 1979) [5] do not consider management statements – that the firm is undervalued – as credible signals and judge them as 'cheap talk' as pointed out by Peyer and Vermaelen (2009). According to these theories, for the signal to be credible it should be costly. (Akyol, 2013) [1]. The most recognized hypotheses are the personal tax hypothesis, the exchange option hypothesis, the straddle hypothesis, the agency cost hypothesis, the leverage hypothesis, the signaling hypothesis and the under reaction hypothesis.
There has not been much research in India as compared to developed countries with respect to the stock Buybacks and its impact, since companies in developed countries are commonly involved in buy back of shares, whereas in India, stock buybacks have been allowed in 1998. Till now, companies are not actively involved in the buyback of shares in India. But recent changes introduced by SEBI, is expected to usher the growth of stock buybacks.

Objective of the study
The study's goal is to gain a thorough understanding of the short-term impact of share buybacks on stock prices. As a result, the general objectives are as follows:
1. Determine if there is a negative anomalous return prior to the announcement of a share buyback (undervaluation hypothesis H1).

2. To see if there is a positive reaction to the stock repurchase announcement, as evidenced by a positive abnormal return after the announcement (signaling hypothesis H2).

Literature Review

Punwasi and Brijlal (2016) [23] discovered a positive anomalous return in relation with the announcement of UK Buy-back offers. Stock repurchase announcements in China have had a beneficial market effect throughout the event window, sending a good signal to investors. (Gan *et al.* 2017) [11], Liano *et al.* (2003) [14] discovered that the pre-announcement returns (days -20 to -3) are negative and significant, while the announcement period returns (days -2 to +2) are positive and significant, with a 3% excess return over the five-day announcement window for the entire sample of firms announcing open-market stock Buybacks from 1982 to 1997. For French, German, Italian, and British companies, Lee *et al.* (2010) [15] investigate the share price impacts and drivers of share repurchase schemes. They find that, like US companies, share buybacks in Germany and Italy are welcomed with a favorable and considerable share price response. However, abnormal returns for British repurchase announcements are insignificantly different from zero, and abnormal returns for French share buybacks are insignificantly different from zero, both of which are substantially different from the results of US.

Axelsson *et al.* (2011) [2] short horizon event study show significant negative cumulative abnormal returns (-4.17%) the days before a share repurchase announcement, which supports the hypothesis that management time the announcement to periods of undervaluation. The announcement day shows significant positive abnormal return (1.96%), which supports the hypothesis that the market trusts the undervaluation message that the company signals. Moreover, the days subsequent to the announcement show positive Abnormal Returns, however not significant on conventional levels. Dann (1981) [7] and Vermaelen (1981)] [22], short-term results support the signaling hypothesis, as firms announcing stock Buybacks earn significant excess returns of approximately 3 percent during the announcement period. Firth 2010 *et al.* reports the event study results for share repurchase, the pre-event period abnormal return ($-10 \leq t \leq -1$) is negative and significant at the 0.1 level. This result is consistent with previous studies in the US (Vermaelen, 1984 [21]; Raad and Wu, 1995) [18] and indicates that firms buy their shares when they are at low prices. The positive and significant cumulative abnormal returns in the post-event periods (from period $+10 \leq t \leq +60$ onwards) indicate that the "Repurchase" action corrects the previous undervaluation, but does so slowly. The rather slow market response to share Buybacks is also observed in other corporate announcements such as earnings (Dechow and Schrand).

Bagwell and Shoven (1989) [4] paper provide evidence about growth in non-cash dividend payments. They founded that real dividend grew by 61.3% whereas real cash acquisition grew by 9 times and share Buybacks up by 824%. Bagwell (1989) [4] considers whether, in the presence of costs of making transactions, the form of distribution differentially affects the likelihood of takeovers. She finds that in the presence of an upward sloping supply curve for shares, the cost to the bidding firms of acquiring control of the target will be larger if the potential target distributes a fixed amount of cash through share Buybacks rather than through dividends. Brav, *et al.* (2005) [6] conducted survey and field interview on 384 financial executives determine the factors that drive dividend and share Buybacks decision. They found that managers do not view dividends and Buybacks as substitutes. Managers were reluctant to shift from repurchase to dividends because a switch in this direction is not upturned except under extraordinary circumstances. Managers value the flexibility of Buybacks and dislike the rigidity of dividends.

Descriptive Statistics

Buybacks in India has started from 2000. Most of the share buybacks is form IT software and consultancy and pharmaceuticals. We have analyzed the impact of share repurchase of 42 companies from April 2021 to March 2022. The following are the statistics available for these 42 companies. High standard deviation shows that there is high variation in the size of these companies.

Table 1: Profit after Tax, Market capitalization, and Price Book Value ratio companies announcing buyback

	Y-2	Y-1	Y0	Standard Deviation
PAT	8122.35	5675.266	5995.65	30562.33467
P/B Ratio	2.459019608	2.111372549	1.740196078	3.836368635

Y is the year of share buyback (Data in Crore)
Compiled by authors

Research Methodology

To test under valuation and signaling hypothesis, standard event study methodology has been conducted on a database of 42 companies from 2021 to 2022 of share buyback by all listed companies has been constructed, which finally reduced to 36 observations after implementation of the below mention criterion. All share buybacks is considered for the present study. The data on selected companies on stock prices and dates of announcement are collected from moneycontrol.com and yahoo finance.

In order to make our small sample result more reliable, the following condition has been imposed.

1. The companies are having data on event day/ announcement day.
2. The companies are having data for event estimation period.

Event study methodology is used to measure the abnormal returns and 43 day event window and 9 day event window has been used in the present study. The independent variable is defined as the time surrounding the share Buybacks announcement date. A regression is estimated using the returns on stock j and the return of a stock market index m. In this study, BSE-SENSEX is used as the benchmark index for measuring the market return. The slope coefficient β is the beta value and α is the y-intercept of the regression equation, which is calculated by using daily returns of company as well as BSE- SENSEX in MS-Excel. Assuming a constant beta value for a given stock j, the estimated return of stock j is calculated in the event window by using Sharpe Single Index Model which is defined as $E(Rj) = \alpha + \beta * Rmt + e$ Where E is the expected return of company j at time t, while α and β are parameters of the regression equation. β is the stock beta value and Rmt is the daily return on a stock market index m (BSE - SENSEX) at time t. First of all, daily

returns are calculated by using -250 to days concerning different event window for the selected companies and market index individually by using the following formula: Rit= ln(Pjt/Pjt-1)Where, Pjt= daily price for the share of a company j at time t and Pjt-1= daily price for the share of a company j at time t-1 and Rmt = ln(It/It–1). Where, It = daily value for the market index at time t and It–1= daily value for the market index at time t-1.The abnormal return is defined as the difference between the actual return on a stock j and its expected return E. Therefore, the abnormal return of a stock j at time t is calculated by the equation: ARjt = Rjt - E(R)jt. The average abnormal return at time t, AAR is the arithmetic mean of n stocks. The ARs of each company are averaged for each day surrounding the event day by using the following equation: (AARt) = ARit/N. The cumulative abnormal return for security j is the sum of average abnormal return in a given time period is calculated as: (CAARt) = ∑AAR. The t-test is used for testing the statistical significance of results arrived at by analyzing the data related to Buybacks announcement. The t-statistics for AARs for each day during the event window is calculated as: t=AARs/σ (AARs) Where, AARs= Average Abnormal Returns, σ = Standard error of Average Abnormal Returns. The t statistic for CAARs for each day during the event window is calculated as followst = CAARs/ σ (CAARs) Where, CAARs = Cumulative Average Abnormal Returns. The standard error is calculated by using formula: S.E. = σ /√n

Empirical Results

In table 3 we present the AARs and CAARs for each of 43 days of the event window, that is 21 days prior to the announcement day (-21 days to day 0) till 21 days after the announcement (day 0 to +21 days) of share buybacks as time period 0. It shows that CAAR found to be -0.4% during that period which shows we should consider a narrow window. If we take the event window as (-4, 4) then CAAR is found to be 3.75% of positive abnormal returns. In this way, we can say that the announcement of share repurchases gives positive signals to the market. Also, on the announcement day, there is a positive abnormal return of 3.55% which is highest and significant during any day. It shows that market believes the announcement of share buybacks. These AAR are found to be significant on day -17, -6, -4, -3, 0, 3, 6, 13, 14, 20 days. If we consider the event window of (-21, 0) CAAR is found to be -3.7% which means the period preceding share repurchase shows negative abnormal return giving insight to undervaluation of shares. The reason for taking 21 days before dividend announcement was to test the hypothesis of undervaluation of shares.

Table 2: Daily Average abnormal Returns (AARs) and Cumulative Average Abnormal Return (CAARs) Around the Announcement of Share Buybacks

Days	AAR	CAAR	T-Value
-21	-0.0022	-0.0022	-0.47684
-20	-0.0046	-0.0069	-0.91283
-19	-0.005	-0.0122	-1.35716
-18	-0.0048	-0.0171	-1.23650
-17	-0.0055*	-0.022	-1.7134
-16	-0.0054	-0.0283	-0.99280
-15	0.00245	-0.0258	0.509183
-14	-0.0019	-0.0278	-0.48699
-13	-0.0014	-0.0292	-0.3883
-12	-0.0044	-0.0337	-1.05887
-11	-0.0045	-0.0383	-1.07323
-10	-0.0022	-0.0405	-0.38464
-9	0.00388	-0.036	1.136813
-8	-0.00303	-0.0397	-0.65358
-7	-0.0075	-0.0473	-1.60333
-6	0.01128*	-0.0360	1.907744
-5	-0.0054	-0.0415	-0.64888
-4	-0.0150*	-0.0566	-2.3247
-3	-0.012*	-0.0690	-2.42752
-2	-0.0007	-0.0697	-0.14784
-1	-0.0023	-0.072	-0.52093
0	0.0354*	-0.0366	3.939896
1	0.0096	-0.0270	1.508443

Significant at 10%,
Compiled by authors

Figure 1 plots the AARs and CAARs during the event window period of 43 days. The CAAR is found to be lowest for (-21, -1) day window and AAR found to be low on 4 day before the announcement which denote the fact that shares has been undervalued before share Buybacks We rejected second null hypothesis only for few days.

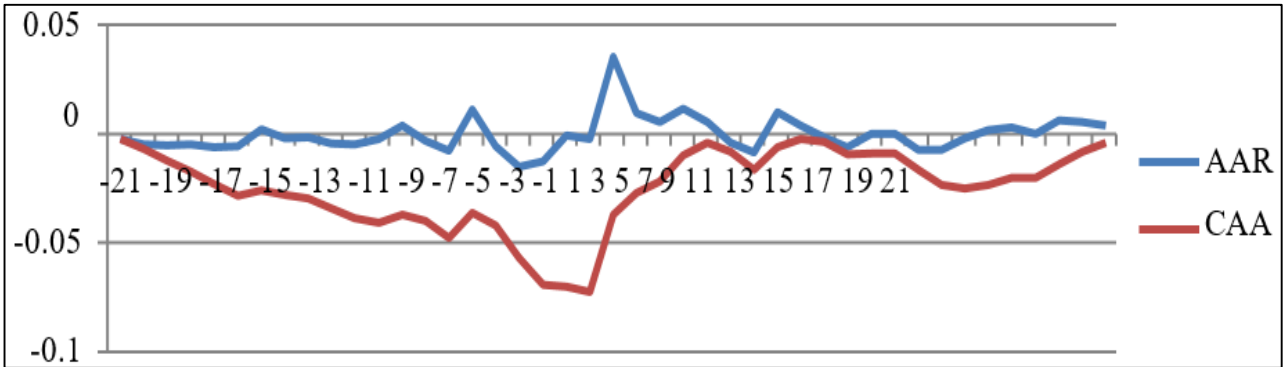

Fig 1: Graphical presentation of AAR and CAAR

Conclusion and Implication

Before the announcement of share buyback schemes, we discover that shares are significantly undervalued. Furthermore, positive anomalous returns following the announcement of share repurchases show that the market reacts favorably to the news of share buybacks. These findings support both the undervaluation and signaling hypotheses. It's also worth remembering that SEBI issued a directive requiring corporations to repurchase a minimum of 50% of the overall planned amount. We anticipate more

market trust and confidence in company repurchase schemes. Repurchasing shares will become a more powerful signaling instrument. It will result in an increase in the buyback program including tender offer.

Future scholar can take the data pre and post COVID period to find out that whether share repurchase signals has become stronger. Besides also under reaction hypothesis can be tested by taking long run horizon into consideration.

References

1. Akyol AC, Foo CC. Share Repurchase Reasons and the Market Reaction to Actual Share Buybacks: Evidence from Australia. International Review of Finance. 2013;13:1–37. DOI: 10.1111/j.1468-2443.2012.01159.x
2. Axelsson, *et al.* "An event study strengthening the under reaction hypothesis and the signaling hypothesis", Department of Real Estate and Construction Management, 2011.
3. Bagwell, Laurie Simon, Kenneth L Judd. "Transaction Costs and Corporate control", Northwestern University and the Hoover Institution, unpublished manuscript, 1988.
4. Bagwell LS, B Shoven J. Cash Distributions to Shareholders. The Journal of Economic Perspectives. 1989;3(3):129-140.
5. Bhattacharya S. 'Imperfect information, dividend policy, and the 'bird in the hand' fallacy'. Bell Journal of Economics and Management Science. 1979;10:259–270.
6. Brav A, *et al.* 'Payout policy in the 21st century'. Journal of Financial Economics. 2005;77:483–528.
7. Dann LY. "Common Stock Buybacks: An analysis of returns to bondholders and stockholders", Journal of Financial Economics, June 1981, 113-1 38.
8. Dechow PM, Schrand CM. Earnings Quality. CFA Institute, Charlottesville, VA, 2004.
9. Deangelo, *et al.* Corporate Payout Policy. Foundations and Trends® in Finance. 2007;3(2):95-287.
10. Firth, *et al.* "Double signals or single signal? An investigation of insider trading around share Buybacks" Journal of International Financial Markets, Institutions & Money, 2010, 376-388
11. Gan C, Bian C, Wu D, Cohen DA. Determinants of share returns following repurchase announcements in China. Investment Management and Financial Innovations. 2017;14:4-18.
12. Haw, *at al.* "The contribution of stock Buybacks to the value of the firm and cash holdings around the world", Journal of Corporate Finance, 2011, 152-166.
13. Hatakeda T, Isagawa N. Stock price behavior surrounding stock repurchase announcements: Evidence from Japan, Pacific - Basin Finance Journal. 2004;12:271-290.
14. Liano, *et al.* "Market reaction to open market stock buybacks and industry affiliation", Quarterly Journal of Business and Economics, 2003, 97-120.
15. Lee, *et al.* 'An empirical analysis of European stock Buybacks", Journal of Multinational Financial Management, 2010, 114-125.
16. Peyer U, Vermaelen T. The many facets of privately negotiated share Buybacks, Journal of Financial Economics. 2005;75:361-395.
17. Madura J, Viet E. Introduction to financial management. New York: West Publishing Company, 1988.
18. Raad E, Wu HK. Insider trading effects on stock returns around open-market stock repurchase announcements: An empirical study. Journal of Financial Research. 1995;18:45–57.
19. Rasbrant. "The price impact of open market share Buybacks", KTH Royal Institute of Technology, 2011.
20. The Economic Times. SEBI notifies buyback norms; COS must repurchase at least 50%, 2013. [Online] Available at: http://articles.economictimes.indiatimes.com/2013-08-08/news/41202112_1_buyback-tender-offer-open-market-purchases [Accessed: 13 Oct 2013].
21. Vermaelen T. Repurchase tender offers, signaling and managerial incentives. Journal of Financial and Quantitative Analysis, 1984, 163–181.
22. Vermaelen T. "Common Stock Buybacks and Market Signaling: An Empirical Study", Journal of Financial Economics, 1981, 139-183.
23. Punvasi K, Brijlal P. The market reactions to share repurchase announcements on the JSE: An Event Study. Investment management and financial innovations. 2016;13(1):191-205.