Persistence of Listing Day Abnormal Returns on Stocks in Indian Stock Market – An Analysis

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ABSTRACT

IPOs have attracted investors considerably in India. Since IPO stocks are new in the market without past data for analysis, their performance in the market is crucial for the investors, company as well as to the economy at large. This study aims at understanding whether the IPOs that have taken place in the Indian market over the years have earned better returns than the market on the day of listing and if so whether it has sustained for a considerable duration of time and thereby understands whether an IPO investment is suitable for long term holding period. The study, with a sample of 50 IPO stocks, finds that generally the IPO stocks enjoy positive market adjusted abnormal returns in the initial day of listing but it does not persist for considerable duration of time which is not healthy for investors, company and economy at large.

Introduction: The different aspects of the stock market in an economy, its growth, volume of transactions and fluctuations in the market, its prospects and their ramifications are widely discussed by academicians and investors. This is a reflection of the growing stock market awareness and stock habit among the public and enhanced importance of the stock market and its activities in the economy for both corporate bodies and investors. The shares or the stocks of public limited joint stock companies play a dual role. While they gather capital for the companies, they act as the instruments of investment for the individuals with savings or surplus funds that they can invest for earning additional income. The traded price (market price) of stocks and volume of transactions in them in the stock market are, therefore, important for the companies as well as for the investors.

The public offering of shares by the joint stock companies, when a company issues shares to the public for the first time in its existence for subscription by the public is technically called Initial Public Offering (IPO), form the source of stocks for the investors and for the stock market when such shares are listed in the stock market for the transactions in them.

The shares offered by the companies are subscribed to by the individual investors with a view to hold them for a long time, as long term investments, or to sell them, as is often the case, in the stock market in a short period of time once they are listed and opened for secondary transactions in stock market with a view to make a short term capital gain.

Since it is a popular practice to make the IPOs at a premium, the premium sometimes being a high multiple of the face value of the share, the possibility of earning a capital gain depends on the price of the stock that is arrived at in the stock market, which is dependent on various factors, on the listing of the shares for the secondary transactions in them in the stock market. The investor gains (capital gain) if the market price is higher than the price at which the IPO was subscribed by him and the investor suffers a capital loss if the market price happens to be lower than the offer price.

The performance of the IPO stocks in the stock market, whether they gain value or lose, is, therefore, crucial for the investors. An analysis of this aspect of the IPO stocks, their performance in the stock market after they are listed for secondary transactions in them in the stock market, technically termed 'Post IPO Performance of Stocks', is the aspect that is being addressed by this paper.

This study aims at understanding whether the IPOs that have taken place in the Indian market over the years have earned better returns than the market on the day of listing and if so whether it has sustained for a considerable duration of time and thereby understands whether an IPO investment is suitable for long term holding period.

The Sample: A sample of 50 companies was selected for the study on a random basis from among the companies which made IPOs between July 2, 2001 and September 26, 2006 – during which period there have been a number of IPOs in the Indian stock market.

It is a popular practice to issue shares at a premium, ranging from 10 to 50 times or even more of the face value of the share. Price is one of the most important consideration in the investors' decision making process but it is observed that majority of the issues, though at a very high premium, were oversubscribed by the investors. 36 companies (72%) out of the total 50 companies in the sample have issued their shares in a range between one and 50 times the face value of the respective shares. Twelve per cent of the companies (six companies) have issued in the range 50 to 100 times the face value, 5 companies making 10 per cent of the sample size have issued their shares in the range 100 – 150 times the face value. The remaining three companies have issued their shares at 175, 350 and 850 times respectively of the model range of the premium at which shares are issued is found to be below 50 times the face value of the share.

The Methodology of Study:

The returns to the investors from IPO investment is analyzed by computing the market adjusted returns from the IPOs on the listing day and for twelve months following the listing day on the basis of closing values of the stocks, considered in the sample, in the NSE. The formulae used for the calculations are detailed below:

The total return on stock i in period t is calculated as in Equation (1)

$$R_{it} = \frac{P_{it}}{P_{i0}} - 1 \quad \text{-------------------- (1)}$$

Where,

P_{it} = the price of stock i at time t

P_{i0} = the price of stock i at time 0 or the issue price

The return on the market index (S&P CNX NIFTY) for the corresponding period is calculated as in Equation (2). The market value at time t is P_{mt}, and the market index value corresponding to issue price computed by averaging the closing values of the market index during period in which IPO was open for subscription is P_{m0}:

$$R_{mt} = \frac{P_{mt}}{P_{m0}} - 1 \quad \text{-------------------- (2)}$$

The market adjusted abnormal return for each IPO on day t is computed as:

$$AR_{it} = R_{it} + R_{mt} \quad \text{--------------------- (3)}$$

Listing Day Market Adjusted Returns: The Market adjusted Returns for the sample companies is computed for the listing day

and for the holding period on a monthly basis for a period of one year using the formula (3) shown above. Table-1 presents the distribution of sample companies on the basis of market adjusted returns on the listing day and for a period of one year on a monthly basis following the day of listing.

The data contained in the Table-1 shows that out of the 50 sample companies 40 companies had positive market adjusted returns on the listing day. But these companies did not continue to earn positive market adjusted returns continuously and by the end of one year of listing the number of companies that had positive market adjusted returns had gradually declined to 27.

Ten out of the 50 companies in the sample had negative market adjusted returns initially and the number of companies having negative market adjusted returns over a period of one year had gradually increased to 23 by the end of the one year period of study.

Table 1

Holding Period (in Months)	0	1	2	3	4	5	6	7	8	9	10	11	12
1. IPOs with Positive Market Adjusted Abnormal Returns	40	39	35	33	33	33	32	32	28	29	30	30	27
of which IPOs with persistent positive market adjusted abnormal returns for rest of the year	21	0	1	1	0	1	0	1	0	1	1	0	0
total IPOs with persistent positive market adjusted abnormal returns	21	21	22	23	23	24	24	25	25	26	27	27	27
2. IPOs with Negative Market Adjusted Abnormal Returns	10	11	15	17	17	17	18	18	22	21	20	20	23
of which IPOs with persistent negative market adjusted abnormal returns for rest of the year	6	2	3	2	0	1	1	1	1	2	0	1	3
total IPOs with persistent negative market adjusted abnormal returns	6	8	11	13	13	14	15	16	17	19	19	20	23
3. Total (1+2)	50	50	50	50	50	50	50	50	50	50	50	50	50

Distribution of Sample Companies on the basis of Market Adjusted Abnormal Returns
Source: Computed using sample data.

The Results: The results show that majority of the IPOs had initial positive market adjusted returns but the number of companies having positive market adjusted returns declined gradually. It is generally held that the companies that have positive market adjusted returns have issued their shares at a lower price, known as underpricing of IPOs. But the number of companies that have positive market adjusted returns on the listing day did not continue to have positive market adjusted returns during the subsequent months. These results do not support the conclusion on underpricing of IPOs and indicate that the initial market adjusted returns could be due to factors other than underpricing of IPOs. One major factor that may be influencing the prices of IPO stocks could be the short term investment habits of investors and temporary overvaluation of companies' shares by the investors.
The above empirical results lead to the following two hypotheses regarding the returns from the IPOs.

Hypothesis 1:
H_0: There is no significant difference between the listing day market adjusted abnormal returns from IPOs and the corresponding market returns.

H_1: There is significant difference between the listing day market adjusted abnormal returns from IPOs and the corresponding market returns

Hypothesis 2:
H_0: The rate of initial market adjusted abnormal returns on the IPOs does not persist during the subsequent periods and generally tends to decline

H_1: The rate of initial market adjusted abnormal returns on the IPOs persists during the subsequent periods and generally tends to decline

Testing of Hypothesis 1:
The hypothesis one above namely "there is no significant difference between the listing day market adjusted abnormal returns from IPOs and the corresponding market returns" is tested using the paired sample t-test, since each set of values contains a pair of two values namely market adjusted returns from IPO and the corresponding market returns, by adopting the following null and alternative hypotheses regarding the means of market adjusted listing returns from IPOs with the corresponding market returns. Hence,

H_0: $\mu_m = \mu_{IPO}$

H_1: $\mu_m \neq \mu_{IPO}$

The result obtained using paired sample t-test for mean is presented in Table – 2.

Table 2
Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	99% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Market - IPO	-35.55	47.31	6.69	-53.48	-17.62	-5.313	49	.000

The result obtained at 1% level of significance shows that the result is highly significant. The null hypothesis that there is no significant difference between the listing day market adjusted returns from IPOs and the corresponding market returns is rejected and it is concluded that there is significant difference between the listing day market adjusted returns from IPOs and the corresponding market returns, the returns from IPOs being significantly higher than the market returns. The result suggests that the listing day returns from IPOs are very attractive and hence could be the major factor influencing investor decision making process in subscribing for an IPO even if it is offered at a high premium.

Testing of Hypothesis 2:
The hypothesis two above namely, "the rate of initial market adjusted abnormal returns on the IPOs does not remain during the subsequent periods and generally tends to decline" is tested by fitting a linear trend of the form

Y=a+bX

Where

Y = Market adjusted abnormal returns from IPOs based on month-end values corresponding to different points of time

X = Time, varying from zero to 12, where 0 is the listing day and subsequent 1, 2, 3 … 12 are months following the day of listing

a = Intercept

b = Slope

The test is run for the 50 companies individually and the results obtained are summarized below in Table-3.

Table 3
Distribution of Sample Companies on the Basis of their Market Adjusted Abnormal Returns

Level of Significance	Companies with initial positive market adjusted returns		Companies with initial negative market adjusted returns		Total		Total
	Positive trend	Negative Trend	Positive trend	Negative Trend	Positive trend	Negative Trend	
1%	10	14	2	6	12	20	32
5%	2	3	0	0	2	3	5
10%	1	0	0	1	1	1	2
Total	13	17	2	7	15	24	39
Insignificant	7	3	0	1	7	4	11
Total	20	20	2	8	22	28	50

Source: Computed using sample data.

The data presented in Table-3 show that 22 companies out of the total of 50 companies in the sample had a positive trend in market adjusted returns, the trends being significant at 1% level in the case of 12 companies, at 5% level in the case of 2 companies, at 10% level in the case of 1 company and the trend being insignificant in the case of 7 companies. Twenty eight companies out of the 50 companies in the sample had a negative trend in the market adjusted returns, the trends being significant at 1% level in the case of 20 companies, at 5% level in the case of 3 companies, at 10% level in the case of 1 company and insignificant in the case of 4 companies.

It is enlightening to note that of the 40 companies that had positive market adjusted returns initially 20 showed a positive trend and an equal number showed negative trend, indicating that 50% of the companies did not persist to have initial abnormal returns over the first year in the market.

Implications: The above result has an important implication to the investors and their decisions. If the objective of inves-
tors in subscribing an IPO is to make capital gains early rather than wait for some time with the anticipation of higher price and earning dividends, then they should dispose of the stocks at the earliest opportunity – preferably on the listing day – since holding them for a prolonged period may not result in capital appreciation to them as only 50% of the companies which had a positive initial market adjusted returns maintained a positive trend in the returns for the one-year period used in the analysis. Hence, the probability of capital appreciation is only 50%.

The data show that of the 10 companies that had negative initial market adjusted returns, only two companies showed a positive trend thereby indicating a progressive decline in their negative returns, and 8 companies showed negative trend in returns thereby further eroding the investors' net worth. This result indicates that the probability of an IPO stock gaining value after negative listing day abnormal returns is very less, at least for a period of one year. Hence, the investors will have to book loss immediately or may have to wait for a very long period to gain value from their investment.

The results, generally, imply that it is advisable for the investors to dispose of their IPO stocks on the listing day or at the earliest opportunity whether it earns positive market adjusted returns or it earns negative market adjusted returns if the objective is to earn early capital gain or to avoid further erosion in capital value.

Conclusion: The results presented above and the subsequent discussions indicate that generally the IPO stocks enjoy positive market adjusted abnormal returns in the initial day of listing but it does not persist for considerable duration of time. The one year period considered for the analysis found that of 40 companies in the sample that had positive abnormal returns only 27 persisted to have similar returns and only 13 had significant positive trend over the one year period. These results clearly indicate that IPO investments are best suitable for the investors with short term investment objectives. This is not a healthy sign and is harmful for the growth and development of the stock market in the country and also will affect adversely both the investors as well as the companies that are issuing shares to the public. Measures need to be taken to control the pricing of IPO of shares and investor awareness needs to be built.

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