

An Empirical Investigation of Short-Run Performance of IPOs in India

Himanshu Puri

Abstract

Initial Public Offering (IPO), is a way for companies to go public and meet its financing needs. IPOs are known to provide the initial abnormal returns to its investors. Therefore, this present paper is analyzing the short-run market adjusted performance of 100 IPOs listed on National Stock Exchange (NSE) from the period April 2008 to March 2011(3 years). This study found that Indian IPO market provides positive abnormal return to investors on short-run basis (1st and 7th day) like as observed in past literature. The returns diminished at the end of 30th day showing the negative return. The average market adjusted return for the 1st, 7th and 30th day is 7.23%, 2.09%, and -8.58% respectively. T-Statistic has been used to know the significance of these market adjusted returns. The wealth relative model has also been applied for analyzing the short run performance of IPOs, which provided the same results. The wealth relative index is 1.07, 1.02 and .91 for 1st, 7th and 30th day respectively. The performance of IPOs on yearly basis has also been presented. The results confirm that year 2009-10 showed exceptional performance; that investors can earn 7.03%, 6.44% and 4.21% average return if they sell these stocks at the end of 1st, 7th and 30th day respectively.

Keywords: IPO, NSE, Market Adjusted Return, Short-run Performance, Under-pricing.

1. Introduction

Many companies go from being private to public when they intend to expand. The changeover is facilitated through offering the fresh shares in the market and thus raising finance. The whole process is called Initial Public Offering (IPO). An initial public offering is the offering of shares of company for sale to general public for the first time in the market. IPO provides an opportunity to shareholders to receive the rewards of the growth of the firm. After IPO, if the firm again raises funds from the market by issuing more shares to general public then that process is known as Further Public Offering (FPO). It has been seen that generally many of the IPOs are underpriced but there were also cases where IPO were overpriced. Many studies have already been conducted to evaluate the IPO's performance in short run by looking at the abnormal returns provided by the IPOs. It has been seen that in almost every country the IPOs are generally underpriced. Investors' can easily make speedy returns with such under-pricing in IPOs. The returns on the first day could move to either positive or negative side but many IPOs have provided very high returns on the first day. Due to such incentives, investors are inclined to measure the short term performances of IPOs (usually within one month of issue), as mostly seen that the investors acquire the shares at a low initial offering price and sell it with in a month when the price increases to gain out of it. This paper intends to throw some light on market adjusted short-run performance of initial public offering with respect to one of the known stock exchanges in the world, i.e. National Stock Exchange (NSE) of India. This research is not just the post mortem done to the historical data to investigate

about returns of IPOs on short-run basis, but its more than that where it will provide a foundation for the investors to take a decision that after how much time he/she should sell to gain the highest return.

2. Literature Review

There has been many studies investigating the short run performance of the IPOs and they all clearly indicates that on average investors outperform and earns abnormal returns on short run basis. In very less number of studies it was seen that IPOs were over-priced. IPO short-run performance (under-pricing) has always been one of the continual and significant areas of research. Past literature on the same topic is as follows:

Reilly and Hatfield (1969), studied the IPOs in US market during the period 1963-65 and concluded that there was under-pricing to the extent of 11%.

Rock (1986), stated that under-pricing is essential to exert a pull on uninformed investors when several investors have more information than other investors. Otherwise, uninformed investors will face the "winner's curse" and will not go for buying stocks in IPOs, which might make over or even fair priced IPOs to see negative response from the market. The second category of information asymmetry based models considers under-pricing as reward to informed investors for disclosing their information on the value of the IPO firm to the underwriter.

Loughran, Ritter and Rydqvist (1994), investigated 25 countries and reported high number of IPO under-pricing in developing markets, with the exception of Japan. They also concluded that market-adjusted three-year abnormal performance after an IPO was always small and mostly negative in the countries selected for study.

Shah (1995), studied 2056 IPOs during the period Jan' 91 to May' 95 and stated 105.6% excess return above the initial offer price.

Madhusoodanan and Thiripalraju (1997), analyzed the Indian IPOs for knowing the extent of under-pricing both in the short term as well as long term. They also examined the impact of the issue size on the under pricing and the performance of the merchant bankers in pricing these issues. The study pointed out that, in general, the short run under pricing in the Indian IPO market is higher in comparison to other countries. In the long run too, the returns were high of Indian offerings as compared to

the returns from other countries, which were negative. The paper also reports that none of the merchant banker showed good pricing capabilities.

Kakati (1999), analyzed 500 IPOs and focused on knowing their performance both in short run and long run. The paper considered the IPOs which were offered during Jan' 93 to Mar' 96 and found out that short run under-pricing to the extent of 36.6% and in the long-run the overpricing to the extent of 40.8% was there.

Jones, Megginson, Nash & Netter (1999), compared under-pricing in privatization IPOs (PIPOs) with their private sector counterparts and concluded that privatization IPOs (PIPOs) are more underpriced than their private sector counterparts because of the political motives. The paper also judged the long-run performance of privatization IPOs.

Liu & Li (2000), examined 781 IPOs using 9 years secondary data and found that on average MASRP (return) was 139.4%. They revealed that in the years 1991, 1992 & 1993, the first day initial return was very high in comparison to other years. MASRP (return) for 1st, 5th, 10th and 20th trading days of Shenzhen stock exchange were also higher than those of Shanghai stock exchange.

Gounopoulos (2003), in his study analyzed the Greek IPOs and found out that the under-pricing was there to the extent of 63.92% and 30 IPOs (13.3%) to be overpriced. The initial under-pricing was 67.14% for industrial firms, 54.55% for finance firms and 56.19% for other firms. In the analysis of sub-sectors, the highest return was seen in IT sector and the lowest return was seen in Telecom sector. The author also concluded that the Greek IPOs market was good for large offerings and market condition, demand multiple, cold-hot issue periods, and offer price independence are significant determinants of under-pricing.

Purnanadam and Swaminathan (2004), came out with an empirical study proving the overvaluation of IPOs at their offer price. The comparison was made between the offer price and the intrinsic value and found that IPO offer prices are 14% to 50% above values based on industry peer price multiples.

Kumar (2007), examined the under pricing in Mauritius. He took the data of all the firms that came out with IPOs between 1989 and 2005. It was found that a large number of investors earn the initial abnormal returns. The author

also analyzed the daily return over a 7-day interval and found that the positive initial return were there for almost 50% of the companies. It was concluded that large companies are mostly under-priced. However, small companies also exhibited high under-pricing.

Hasan and Quayes (2008), analyzed under pricing of initial public offerings in Bangladesh. They took 90 IPOs issued during the mid of 90’s when stock market was on boom. They reported that the under-pricing was negatively affected by the increased ownership stake and foreign participation. They compared the mean percentage under-pricing on first day between ‘premium’ and ‘par’ issues and founded out that IPOs issued at premium were less under-priced than the IPOs issued at par.

Singh and Kumar (2008), investigated short and long run under pricing of 116 IPOs in the Indian IPO markets and also evaluated different factors affecting the under-pricing. They used a model of under pricing taking oversubscription variables along with age and issue size and performed industry wise analysis for the period of Jan’ 06 – Oct’ 06. The results revealed that Indian IPO market follows industry specific waves. The sectors which were performing well were more underpriced in short run as well as perform well in long run.

Sohail and Raheman (2010), studied the performance of 73 IPOs (initial public offerings) listed on Karachi Stock Exchange. The period of study was from the year 2000 to 2009. The performance check was done under different state of economy: Normal, Boom & Recession. The study discovered that Pakistani IPO also earns abnormal initial returns for their investors in short run basis market. The average market adjusted initial return were found to be 42.17%, 40.99%, 37.35%, 38.13% and 39.38% on the close of 1st, 5th, 10th, 15th & 20th day respectively under general state of economy. The wealth relative model was also applied which gave the similar results with market adjusted model. For further analysis, the sector-wise and year wise analysis has also been done.

3. Objective of the Study

The study intends to find the short run performance of Indian IPOs listed and traded on NSE based on the returns generated on 1st, 7th and 30th day after listing date. The main objectives of the study are:

- To measure the IPOs performance on first, seventh and thirtieth trading day to confirm that whether in-

vestors can earn positive return on the close of these trading days.

- To use market adjusted short run returns, wealth relative index and other descriptive statistics to get an in-depth knowledge about the IPOs performance.
- To measure overall performance of these IPOs on year wise basis.

4. Sample and Data Collection

The sample consists of 100 IPOs issued by companies in the Indian market during the period from April 2008 to March 2011. The sample considers the Indian domestic companies listed and trading on “The National Stock Exchange of India”. All IPO’s whose Listing date or opening and closing date falling between 1st April 2008-31st March 2011 (3 years) were taken. S&P CNX Nifty has been used as a market index and daily closing values of it along with daily closing prices for stocks were used. The companies whose issues were withdrawn were excluded. The study is based on the secondary data. The data has been collected from the official website of the national stock exchange of India WWW.NSEINDIA.COM. The returns were computed from the issue price of the shares for all respective days (1st, 7th and 30th). The study takes into account the data of those companies who fulfils the following criteria:

1. The IPOs which are listed on the National Stock Exchange and has been trading for short run analysis.
2. Data relating to offer price, listing date, issue price and the closing prices which were required was available.

5. Research Methodology

The methodology for investigating the short-run performance of IPOs has been kept simple and is based on the methodology used by many of such past researchers.

Returns for (1st, 7th and 30th Day) for stocks and market

The logarithmic returns for stock “i” at the end of the dth day is calculated as:

$$R_{i,d} = \text{Ln}(P_1) - \text{Ln}(P_0) \quad (1)$$

Where,

R_{i,d} is the return on “i” at the end of the d_{th} day,

P_1 is the closing price of the stock i at the d_{th} day and P_0 is its issue price

The logarithmic return on the market index during the same time period is:

$$R_{m,d} = \ln(I_1) - \ln(I_0) \quad (2)$$

Where,

$R_{m,d}$ is the return on index at the end of the d_{th} day,

I_1 is the closing S&P CNX Nifty value at the d_{th} day and I_0 is the closing S&P CNX Nifty value on the offering day of the stock.

Market-adjusted Short Run Performance

Using these two returns, the market-adjusted short run performance for each IPO on d_{th} day of trading is computed as:

$$MASRP_{i,d} = \{ [(1 + R_{i,d}) / (1 + R_{m,d})] - 1 \} \quad (3)$$

This model measures the initial trading returns adjusted with the market returns. This sort of measurement form which have been commonly used in many past studies of short run performance of IPOs for risk adjustment assumes the systematic risk of the newly listed stock to be 1.

The average of market adjusted short run performance return for the d_{th} trading day represented in the formula by $MASRP_d$, is then determined which is a performance index and stand for the return, in excess of the market return, on investment divided equally among n new:

$$MASRP_d = \frac{1}{N} \sum MASRP_{i,d} \quad (4)$$

To test the hypothesis that $MASRP$ equals zero, I computed the associated t statistic:

$$t = (MASRP_d) / (S/\sqrt{N}) \quad (5)$$

Where,

S is the standard deviation of $MASRP_{i,d}$ across the companies and N is the no. of sample.

Wealth Relative Model

The wealth relative model has also been applied to measure the short run performance for group of IPO.

$$WR_d = (1 + \frac{1}{N} \sum R_{i,d}) / (1 + \frac{1}{N} \sum R_{m,d}) \quad (6)$$

Where WR_d is the Wealth Relative for the d_{th} trading day and n is the total number of IPOs in the sample. A wealth

relative more than one means that the IPOs has performed better than market during the period of study. Wealth relative index less than one indicates poor performance in comparison to market.

6. Analysis and Results

Table I shows statistics like mean return, minimum return, maximum return and standard deviation on the stock and index value on the various odd days (1st, 7th and 30th Day). On an average, the stock return were 7.09%, ranging from -74.6% to 83.07% with standard deviation of 27.2% after first trading day. For the similar 1st trading day, Index return on average remains -0.1%, while it ranges from -5.7% to 3.2% with standard deviation of 0.1%. On 7th trading day average stock return were 2.3%, ranging from -96.7% to 89.8% with standard deviation of 32.3%. For the similar 7th trading day, Index return on average remains 0.2% and it ranges from -9.06% to 7.4% with standard deviation of 3.1%. The stock return on average remains -7.4%, ranging from -111.6% to 93.7% with standard deviation of 41.09% for thirtieth trading day. For the similar 30th trading day, Index return on average remains 1.02%, while it ranges from -27.7% to 14.9% with standard deviation of 7.1%. This implies that the stock return on the first trading day of IPOs is higher that the returns on 7th and 30th day. Moreover, 30th day stock mean return is negative. The IPOs returns are outperforming the index return on 1st and 7th trading day.

Table I Descriptive Statistics

	Mean Return	Std. Dev.	Max. Return	Min. Return
1st day IPO return	0.07092	0.27210	0.83073	-0.74659
7th day IPO return	0.02308	0.32364	0.89889	-0.96732
30th day IPO return	-0.07461	0.41091	0.93719	-1.11696
1st day Index return	-0.00127	0.01335	0.03268	-0.05796
7th day Index return	0.00278	0.03136	0.07498	-0.09069
30th day Index return	0.01029	0.07114	0.14970	-0.27737

(Source: Self-constructed)

Table II shows the market adjusted initial returns, standard deviation and wealth relative index along with t-statistic. The market adjusted short run performance for the 1st, 7th and 30th day are 7.23%, 2.09% and -8.53% respectively

which simply means that the abnormal returns are falling near the end of the month drastically and near to first week the investor can earn a decent return. The similar result is being shown by the wealth relative index which is 1.07, 1.02 and 0.91 for respective odd days. The return on 1st trading day is significant as seen by the t-statistic and on 7th and 30th trading day they are not.

Table II Market Adjusted Short-run Performance and Wealth Relative Index

Trading Day	MASRP	Std. Dev.	T-statistic	Wealth Relative
First	0.07238	0.27378	2.64384	1.07229
Seventh	0.02099	0.32810	0.63961	1.02025
Thirtieth	-0.08538	0.40685	-2.09867	0.91597

(Source: Self-constructed)

Table III shows the year-wise number of IPOs, IPOs return, Index return for the selected odd days. The number of IPOs for the year 08-09, 09-10 and 10-11 are 49, 35 and 16 respectively which were selected as per the criteria mentioned earlier. In the year 08-09, only 1st trading day mean return is positive at 5.6%. Thereafter, returns for 7th and 30th trading day fell drastically to -23.1%. During the same year the index returns are negative with minute values. In the year 09-10, the scenario for IPOs investors was at best among these three years of study. The mean returns on stock for 1st trading day is 7.03% and felled to 4.2% at the end of 30th day outperforming the index returns. In the year 10-11, the 1st trading day stock mean return is negative at -3.1% with 2.09% mean return on the end of 7th trading day and lastly reaching at -10.6% at the end of month.

Table III Year-wise Average Returns

	2008-2009	2009-2010	2010-2011
No. of IPO's	49	35	16
1st day IPO return	0.05647	0.07036	-0.03134
7th day IPO return	-0.23140	0.06444	0.02098
30th day IPO return	-0.23140	0.04218	-0.10682
1st day Index return	-0.00758	0.00156	-0.00124
7th day Index return	-0.00513	0.01086	-0.00042
30th day Index return	-0.00769	0.02224	0.00762

(Source: Self-constructed)

7. Conclusion

The study was focusing on determining the short run performance of IPOs in Indian stock market so that investors and researcher could get to know the extent of under-pricing prevailing for the IPO market. Upon listing the IPOs on an average offered positive returns (after adjusting for market movements) to investors. The IPOs offered positive returns on 1st and 7th trading day but subsequently they underperform the market at the end of 30th trading day. These results are found to be in tandem with the past literature; that, investors can make significant positive returns if they go for IPOs and sell them within a period of less than one month. The results show that the IPOs give market adjusted returns of 7.2%, 2.09%, and -8.5% to the investors on the close of 1st, 7th & 30th day respectively. The wealth relative model has also produced similar results with the market adjusted model on short-run basis, narrating that Indian IPOs provides investor with positive abnormal return with in one month. The year-wise analysis show that the year 09-10 was good for the short run IPOs investors giving better return in comparison to other years under study. In a nutshell, on an average the IPOs are providing initial returns but it starts diminishing as the time passes.

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