POST LISTING BEHAVIOUR OF THE IPO ON THE INDIAN STOCK MARKET

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Abstract *There has been phenomenal growth in Initial Public Offering (IPO) post SEBI regime in India. This growth has been further fostered due to the liberalization of economy giving the corporate sector a boost. The requirement of fund has driven the companies to go to the capital market. The investors feel that investing in IPO is lucrative as it gives them lower price and higher return. This phenomenon, known as under pricing has been a matter of study for quite some time in the financial literature. The moot question here is, whether, the investors really do get a higher return or are they lured by an elusive return paradise. Studies have revealed that, IPO which are under priced do get higher return but do not speak about the period through which it happens. The current study try to observe the return of the IPO through first day, first week, first month, first quarter and first year post listing of the IPO. The study reveals that the pattern of growth in return (average and actual) falls in the first day and first week, followed by a high return thereafter. It also observed that there is a strong relation between under pricing and the individual return pattern for the periods mentioned earlier. This gives vent to a practical tip that investors should not go for short term gain post IPO listing and wait for higher return through a period of time.*

Keywords: *IPO, Periodic Return, Under Pricing*

INTRODUCTION

Some investors feel that IPOs are low execution fruits. If investors were to get allocations in IPOs and were to turn over these shares on the day of the listing of the firm, then on an average they would be able to get returns higher than the market. There is however an element of risk here. The risk is in blocking one's money in IPOs and getting no allocations.

Rock (1986) proved that retail uninformed investors might suffer from a "winner's curse" dilemma. They might get all the allocations that they have asked for in IPOs which are going to earn very low returns on the day of listing but may be rationed out in IPOs which will give very high returns on listing date, because of the high demand that such issues will generate. Thus retail uninformed investors might not be able to utilize the under pricing inherent in IPOs to their gain. Besides this, uninformed investors might not be able to fully understand the risk factors which are outlined in the offer documents of the IPOs.

The Indian Market's behaviour in respect to IPO listing would be interesting to observe. Since the large number of the investor would fall in line with the above mentioned process, there would be chances that, informed investors do exist. Few recent IPO including the Reliance Power may be taken as a case in point here. While previous studies on the Indian stock markets like Shah (1995) and Majumdar (1999) have restricted their study on the Bombay Stock Exchange (BSE), this study is carried out on all the IPOs listed in the National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) during the period 1999 to 2006. The National Stock Exchange (NSE) is India's first fully dematerialized stock exchange. It is also the major exchange in India in terms of volumes in both equity and derivatives segments. Therefore this study seek to recognize critical differences if any with the previous studies with regards to the under pricing of the IPOs. Since the ratings have only recently (May 5, 2007) been made mandatory, and the firms which have been rated are yet to get listed, this study studies the IPOs in a period prior to the ratings and hence does not study the effect of rating on pricing of IPO. It demonstrates that over the years, the degree of under pricing has decreased thereby pointing towards a development in the market in the valuation of new issues. It also demonstrates that in consonance with Benveniste & Spindt's (1989) model, the market views the final pricing of the issue in the offer band as a convincing signal of the premium that the issue makes on the first day of trading. Thus if in a book built band of {a, b} the final offer price fixed by the firm is nearer to "b" than it is to "a" then the aftermarket regards this as a credible signal to under price (give premium to) the issue on the day of listing. In this context it was felt that a study in knowing the post listing behaviour of IPO would be in place.

CONCEPT OF UNDER-PRICING

Under-pricing refers to price during the IPO is lower than the subsequent period price quoted in the market. It means that the IPO issue price is lower than the listing price and subsequent pricing in the market. This concept lead to two other phenomena that is neutral pricing where the return in IPO issue price to that of listing price is zero meaning and negative pricing where the issue price of IPO is more than the listing price. This has been studied by various researchers who have proved that investors fall prey to the greed of high return post listing of IPO and often fail to get so. This is known as the winners curse syndrome where the retail investors in particular do not get allocation in high return underpriced stock and get high allocation on low return underpriced stock due to lack of information. This paper has also studied the phenomena in discussion for the Indian capital market.

OBJECTIVE OF THE STUDY

The study intends to keep the following objectives.

i. To observe how the price behaves post listing through equal distance period of 1 day, 1st week, 1st month, 1st quarter and 1st year.
ii. To find whether there is any correlation between issue price and periodic return
iii. To find whether the change in this periods has any causal effect on the pricing (under pricing behaviour).
iv. To find whether over the period change that is day on week, week on month, month on quarter and quarter on year change in price is having a pattern with the issue price.
v. To evaluate the current study vies a vie other studies that were done earlier to find concurrence of finding.
vi. To suggest any managerial implication from the above findings.

METHODS OF THE STUDY

Sample Description

The number of IPO and the issue size for the study is given below: Of this 31 IPO were fairly prices (zero return on listing), 20 were negatively priced (negative retrun on listing and 199 were underpriced (positive return on listing)

Models Used

The paper uses three important steps to analyse the data. The return of IPO was calculated the Expressed market adjusted abnormal return by the formula

$$Er = \left[\frac{(1+R_{i1})}{(1+R_{mn})} - 1\right] \times 100$$

Where;

Er = Post issue expressed market adjusted abnormal return rate of the stock i on day 1 (or equivalent period)

Table 1.1: IPO's during the study period, the exchange in which listing was done and adherence to listing regulation

Name of stock exchange where listing took place	Number of IPOs taken	Adherence to listing regulation
NSE	174	Yes
BSE	77	Yes

Table 1.2: Distribution of IPOs on the basis of capital.

Rupees in Crore	Number	NSE	BSE
100 and above	3	2	1
70-99	10	6	4
50-69	6	2	4
20-49	16	9	7
10-19	169	123	46
Below 10	47	32	15
Total	251	174	77

R_{i1} = The percentage change in the listing price vise a vie the offer price or the previous price of the period

R_{mn} = Calculated percentage change of the market price of the stock at nth period of time

Subsequently it was averaged out using geometrical mean. The change on each set of return that is issue price to 1st day , 1st day to 1st week, 1st week to 1st month, 1st month to 1st quarter and 1st quarter to 1st year was calculated using the same formula as above. There after single index bivairiate correlation and regression was run using IBM-SPSS-20®. Significance was tested for the same. The paper also uses a single index multiple correlation between issue price and 1st day , 1st day to 1st week, 1st week to 1st month, 1st month to 1st quarter and 1st quarter to 1st year to know whether there is any significant causation between the change in the price post listing,

Limitation of the Study

The major limitation of the study was that data continuity form the source of NSE and BSE was not available hence, there were observed jerks despite smoothening of data through average was done.

SIGNIFICANT DEVELOPMENT IN THE IPO MARKET

The world financial markets (USA and UK) have come a long way. The US and UK IPO market has grown many fold in number as well as the volume. Since, NYSE and AMEX did not allow the small companies to trade, lead to the development of a separate trading market to foster their growth by NASD in the year 1971. This also triggered the demand for capital from high growth – high risk medium sized companies.

In UK, the "Big Bang (1985)" constituted a fundamental revolution for the LSE. Post Big Bang, the daily turnover in equities almost doubled in value and in volume. The average rates of commission came down for almost all clients and in particular the institutional investors, though for the small deals the small investors lost out. The Big bang bought with it fundamental changes on the securities market, changing every aspect of the market which include the participants, the transactions, the competition factors and of the profit in the whole trading.

The changes occurred over the world also effected the Indian capital market. The initiation of the process of reform in India since the early part of the 1990s could not have been possible without the change in the regulatory framework. The new economic policy (1991) led to a major change in the regulatory framework of the capital market of India too. The Capital Issues (Control) Act 1947 was repealed and the Office of the Controller of Capital Issue (CCI) was abolished. The Securities and Exchange Board of India (SEBI) was established since 1988 was armed with statutory powers in 1992. This eased the way for issuance of capital in Indian capital market.

Study by Madan (2003) shows that there is a significant fall in the initial excess return registered by IPO during the CCI regime and the SEBI regime. IPOs during the CCI period registered very high return on listing say about 202% as against 80.53% during the SEBI period. The level of under-pricing has been very high during CCI times in comparison to the SEBI regime.

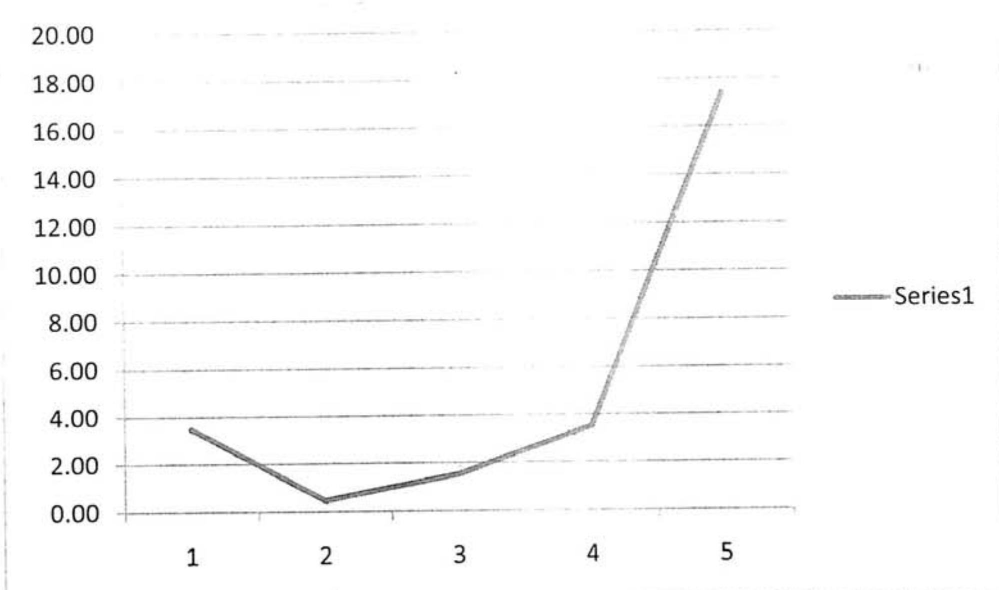
LITERATURE REVIEW

The abnormal first day price behaviour had been the matte of study under the name of "Winners Curse" since Long. In Rock's (1986) model the IPO market contains two investors' types, well informed investors, who have superior knowledge amount the true value of the issue and less informed investors who lacks the special knowledge to currently value the issues. This causes information asymmetry known as the "Lemon problem" where the uninformed investors are left with the less successful IPOs. In order to keep badly informed investors interested, issuing firms are required to sell at discount (Smith 1986). An explanatory factor directly derived from the winner's curse is the size of the issue. The larger the issue the more professionally it is likely to be managed and more information about its true value will be available. Keloharju (1993) and Michaeley and Shaw (1994) observed that this wider spread of information decreases the information asymmetry amongst investors. Hence, due to lesser information asymmetry, the IPOs have a lesser reason to be underpriced and are expected to show less initial outperformance.

A different reason to explain the abnormal price behaviour of IPO is the degree of debt financing. Smith and Watts (1992) argued that firms with high growth potential will rely less on debt financing. This low reliance on debt financing is caused by their high risk profiles, which makes the debt market less accessible. When these growth companies go back to the stock market during an IPO, the public will consider them more risky and will demand a higher risk premium in the form of under-pricing. Thus, it is expected an IPO with lowest debt ratio in any study will be associated with higher initial return.

Another issue related to the under-pricing of IPO is the amount of uncertainty concerning the true value of the company involved. Alli, Yau and Yung (1994) have examined this relationship by studying initial aftermarket price behaviour of financial institutions. They concluded that information

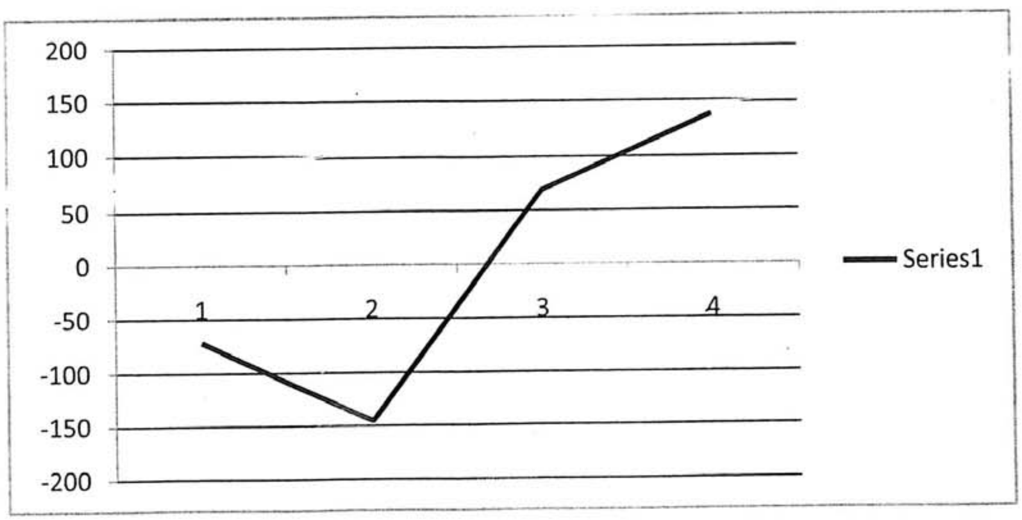
Fig 1.1 Graph showing increase and decrease in periodic return



Note: X axis =1-1st day return, 2-1st week return, 3-1st quarter return, 4-1st month return, 5-1st year return IPO under study. Y axis = the return plotted on an equal distance scale,

Source: Computed

Fig. 1.2 Graph showing day on week, week on quarter, quarter on month and month on year return of IPO under study



Note: X axis = Average 1-1st day return, 2-1st week return, 3-1st quarter return, 4-1st month return, 5-1st year return IPO under study. Y axis = the return plotted on an equal distance scale

Source: Computed

asymmetry in the case of financial institution is less as they are highly regulated and the chances of fair value emerging in the market is large.

Barua (2001) studied the regulatory framework for reforms in stock market crisis and came to a conclusion that a good regulatory framework acts towards proper information sharing in the market and keep the value of investment close to its fair value.

Bhat (2001) studied the causes of abnormal return in IPO and comments that this were largely manipulated by the firms whose IPO are placed and are deliberate under pricing in order to falsify the desired return in the market.

Madan (2003) studied the investment in IPO of Indian capital market and traced the reasons for under-pricing issue size, age of company, foreign equity participation and issue rating.

Sahoo and Rajiv (2010) evaluating the post listing performance of the IPO for 36 month provide evidence of short run under pricing and long run under pricing for 92 Indian IPO during 2002-06. They show that upto 12 months the price of the IPOs underperforms followed by over performance.

DATA INTERPRETATION AND ANALYSIS

The result of the paper are discussed below in terms of the objective of the study

The post listing price behaviour of the IPO across the two exchanges for the data set is given in the figure 1.1 above. It is clear from the graph that the IPO underperform in the first two set of period that is 1st day return, and 1st week return. Though there is a trend reversal from 1st quarter and 1st month yet the performance remain in the same zone. It is only in 1st year that the performance increases

Fig 1.2 indicates the average of period on period market adjusted return for the IPOs under study. The underperformance of the IPO in the first four period calculated shows clearly here in the graph. It is during the last period that is 1st quarter to 1st year that the IPO perform well.

Table 1.1: Correlation and regression of the 1st day return to issue price

Correlation results	Regression results
R = .04 Sig: .563 (2tail)	α= 197.26, β=.263 t=.579 r2 = .002

Source: Computed

The above Table 1.1 indicate that there is both low correlation and the strength of causation between 1st day return on issue price, proving the fact that the investor will not be able to get abnormal return and take advantage of under pricing of IPO.

Table 1.2: Correlation and regression of the 1st week return to issue price

Correlation results	Regression results
R =.048	α=198.69 , = .658
Sig: .499	t=.677
	r2 = .002

Source: Computed

The above table 1.2 indicate that 1st week return to issue price is also ill-defined in term of strength of correlation and regressive causation. This is indeed indicative that investors will not get superior return to the IPO issue price in the 1st week too.

Table 1.3: Correlation and regression of the 1st month return to issue price

Correlation results	Regression results
R =.086	α=198.63 , = .610
Sig: .224	t=.219
	r2 = .007

Source: Computed

From the table 1.3 above the poor regressive strength and the ill-defined correlation between 1st month return and the issue price shows that investors will not be able to get good performance from investing in the IPO and cannot take advantage of the underperformance of the stock.

Table 1.4: Correlation and regression of the 1st quarter return to issue price

Regression results	
R =.028	α=200.159 , = .095
Sig: .691	t=.398
	r2 = .001

Source: Computed

From the table 1.4 above a similar conclusion as drawn earlier can be made as the correlation and the regression equation show poor explanation.

Table 1.5: Correlation and regression of the 1st year return to issue price

Correlation results	Regression results
R =.031	α=200.587 , = .050
Sig: .663	t=.438
	r2 = .001

Source: Computed

It is interesting to observe that even during the 1st year the correlation between the issue price and the return is poor and the regression causation is even poorer. This contradicts our earlier graphical and eye observation showing that on a closer probe the investor will not be able to over-perform by taking advantage of the under pricing of the IPO.

Table 1.6: Multiple regression between issue prices of IPO to inter period change in return through 1st day to week through 1st quarter to 1st year

Criterion	Values	Significance at 5% level
Constant	207.381	
Beta for 1st day on 1st week	.017	Significant
Beta for 1st week on 1st month	0.00	Nil
Beta for 1st month on 1st quarter	-0.64	significant
Beta for 1st quarter on 1st Year	-0.07	significant
R2	0.57	significant
Dublin-Watson statistics	1.92	1.5 to 2.00 (no auto-correlation)

Source: Computed

The above table 1.6 is very indicative. It shows that period on period change to that of the issue price is very poorly explaining and in the last two cases that is 1st month on 1st quarter and 1st quarter on 1st Year is negative. In case of 1st week on 1st month it is nil. For the entire equation, R is about 50% explain the strength and is significant at 5% level. This proves that the causation is poor and not influencing. We can conclude from this that though there exist a relation between periods over period change in return and the issue price of the IPO, it is weak and to a greater extent negatively related. Hence, one can conclude that that issue price under pricing will not be able to fetch a higher return within a year's time of holding the stock for the investors.

It is quite surprising to see that despite our sample size being large and fairly distributed as discussed earlier in term of capital issuance, the return on the stock post listing do not show significant change or causative effect on the issue price, proving the under pricing theory and the concept of "winners curse" seem to be completely defeated.

Major Findings

The following were observed in the study:

It was found that the return decrease in the 1st day , 1st week and 1st month post listing of IPO across the sample and increase substantially in the 1st year. It was also observed that period on period return show a fall in the first three period and rise in the last period on period return.

However, statically it was found that issue price has no bearing on the 1st day return, 1st week return and the 1st month return , 1st quarter return and the 1st year return. This indicate that there is indeed no effect of under pricing on the return of IPO and more so, the investors expectation that they will get higher return by investing in IPO specially underpriced IPO is not tenable.

A multiple correlation analysis between periodic return and issue price (taken as depended variable show no significant relation and in fact shows negative relation for month on quarter change and quarter on yearly return change of IPO. This brings us safely to the conclusion, under-pricing and issuance price do not lead to any distinct advantage for the investors in a period of 1year time.

The current study vies a Vie other studies and their finding

Practical Implication of the Study

This study implies that there is no relation between the popular believe that the price of the IPO increases post listing due to the under pricing. Despite the fact that price

Table 1. 7: Comparison of the current study with other study taken in consideration

Other Study		Our study	
Factors	Finding	Factors	Finding
Issue price	Yes	Issue price	Yes
Issue size	Yes	Issue Size	Yes
Issued capital	Yes	Issued capital	Yes
Age of the company	Yes	Age of the company	No
Listing delay	Yes (negative-significant)	Listing delay	Yes (effect not studied)
Periodic performance on issue price	Yes (negative/low – significant)	Periodic performance on Issue price	Yes (negative/low and significant)
Period on period return	No	Period on period return	Yes (negative/low and significant)
Comparison to Index	Mostly no	Comparisons to Index	No
Proved IPO under pricing has effect on the return	Disproves the hypothesis	Proved IPO under pricing has effect on the return	Disproves through graphical and statistical parameters

Source: Compiled from various sources

in the end period of 1st period increases, there is actual fall in the 1st day, 1st month and the 1st quarter. This is in confirmation with the other studies that were referred for the study. This gives the important implication that investor should not fall prey to this idea that they will be able to increase their wealth by taking advantage of high return due to under-pricing of the IPO. It is therefore required that investors take part in the IPO and maintain their investment for a long holding period.

CONCLUSIONS

The growth in Initial Public Offering (IPO) post SEBI regime in India had been phenomenal. These have been further fostered due to the liberalization of economy giving the corporate sector a boost. The requirement of fund has driven the companies to go to the capital market. The investors feel that investing in IPO is lucrative it gives them lower price and higher return. This phenomenon, known as under pricing has been a matter of study for quite some time in the financial literature. The moot question here is, whether, the investors really do get a higher return or are they lured by a illusive return paradise. Studies have revealed that, IPO which are under priced do get higher return but do not speak about the period through which it happens. The current study try to observe the return of the IPO through first day, first week, first month, first quarter and first year post listing of the IPO. The study reveals that the pattern of growth in return (average and actual) falls in the first day and 1st week, followed by a high return thereafter. It also observed that there is a strong relation between under pricing and the individual return pattern for the periods mentioned earlier. This gives vent to a practical tip that investors should not go for short term gain post IPO listing and wait for higher return through a period of time.

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