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Short-Run Performance of IPO Market in India

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Abstract

The main objective of this research paper is to examine the short run performance of IPOs by taking one-month performance. There exists a notion that the performance of IPO stocks has improved in the short run after going public. In this study, the data for short run analysis are taken for 30 days. We try to test the empirically the short run performance for a sample of 89 IPO firms that approached the market during the period 2006-09. We have calculated listing gain, short run gain, short run excess gain and Index growth.

We have used a logistic regression model to test the basic hypothesis, with the help of data on 89 IPOs, from the Indian stock market. The study uses pre-listing information on which IPO pricing is based.

In this paper we have seen that many of the IPOs have significant returns on the day of listing but thereafter they do not give much return in the short-run, it shows that market overreacts to the initial public offers.

Keywords: Listing Gain, Short Run Gain, Determinants of Short Run Gain

Introduction

The recent financial crisis as well as corporate scandals have resulted in substantial losses to number of investors and also discouraged a considerable number of them to invest in the stock markets. Indian capital market began its transformation path since 1991 after the introduction of new economic reforms. India, due to its improved economic fundamentals, skilled labour force, enhanced technology and greater integration with the world economy has resulted in major investment and financial hub by the global investors. Indian capital market still has to undergo a paradigm shift, implying that further reforms are needed to make India a world class financial market.

We all know the stock market is highly unpredictable. Whenever the market is in bullish phase, large number of investors line up to invest in Initial public offerings. Initial public offering is the selling of securities to the public in the primary stock market. It is a process many business owners go through in the hope of becoming extremely wealthy. IPO marks the beginning of a process, not the end.

In the IPO market, some investors invest for the short term gain or listing gains, while a few may have plans to hold it for long. Whenever the market approaches historical highs, many investors perceive the IPO market to be irresistible. They believe that IPO market is a gamble; you subscribe to the issue and sell the shares when the company gets listed. Such type of strategy makes investor rich within few weeks. However this is a wrong notion that investors build up in their minds and often it proves costly to them.

Investment in IPO market is not an easy task and it is not different from investing in stock market. Investor has to check the fundamental of the IPO Company before investing in it. Fundamentals include looking at the financials, the industry in which the company operates, how it is placed within the industry, the promoters, and merchant bankers already present in the company. They should also read the prospectus of the company which

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will give all necessary details including the business, the management and the future plans.

Rationale of the Paper

The present paper evaluates the short run performance of IPOs by taking one-month performance. There exists a notion that the performance of IPO stocks have improved in the short run after going public.

H_0: The IPO market has not performed well in short run.

Data and Methodology

We have taken data on share prices of 89 IPOs quoted in National Stock Exchange. In this study, the data for short run analysis are taken for 30 days. We try to test empirically the short run performance for a sample of 89 IPO firms that approached the market during the period 2006-09. We have calculated listing gain, short run gain, short run excess gain and Index growth.

Other studies which are based on short run analysis have defined short run return as the first-day stock price return, that is, the difference between the first-day closing price and the offer price. Initial underpricing is widely researched and almost all studies show a positive average first-day return. Ljungqvist and Wilhelm (2003) found average initial return of 35.7% in a sample of American IPOs issued between 1996 and 2000; Chen *et al.* (2004) identified average initial underpricing of 29.8% in Chinese offerings between 1992 and 1997; Günther and Rummer (2006) had similar results researching German IPOs and found short run return of 45.8% in the first trading day.

Description of Variables

1. **Issue Price (Ispr):** Issue price is a price at which a new share is offered to general public.
2. **High Price (Hipr):** It is the maximum price of the share on the day of listing.
3. **Closing Price (Clpr):** It is the last quoted price on the day of listing.
4. **Issue size (Issiz):** Issue size is measured as gross proceeds (in Rs lakhs) from an issue.
5. **Oversubscription (Ovsc):** This is pre-listing *ex-ante* information. This measures the number of times an IPO has been subscribed.

$$\text{Oversubscription} = \frac{\text{Number of shares applied by investors}}{\text{Number of shares offered by IPO}}$$

6. **Industry (Ind):** Different industries have been taken for the study. The difference between industries may exhibit difference in returns of IPO firms.
7. **Age of the Company** (**Ageco):** Age of company is measured in years, in terms of difference between the years of incorporation of a firm and the years of going public.
8. **No. of Shares Traded** (**Nosh):** It explains the volume of shares traded on the day of listing.
9. **Turnover in Lakhs (Turn):** It explains the total amount of money being traded on the day of listing.
10. **Dominant Lead Manager (Domlm):** Lead managers are independent financial institutions appointed by the company going public to manage the IPO. They are the main body responsible for most of the IPO processing.
11. **No. of Members (Nomem):** It represents the members who are involved in accepting the bid cum application form of the IPO firm in different centres. Syndicate members are commercial or investment banks responsible for underwriting IPO's. Syndicate members are usually registered with SEBI or registered as brokers with BSE / NSE Stock Exchanges.
12. **No. of Bidding Centres (Nobid):** A centre for acceptance of the Bid-cum-Application Form.
13. **Ratshish (Ratshis):** It is the number of share traded on the day of listing /Issue size.
14. **Public or Govt. Company (Pub):** It explains that whether an IPO launch by a company is Public Sector Company or Government Company. If it is a public sector company then we assume 1 as variable otherwise it is 0.

Measuring Gain

1. **Listing Gain (Lg):** Listing day gain is defined as:

   Lg = ((Listing Day High Price – Issue Price (Prev. Close)/Issue Price (Prev. Close))*100
2. **Short-run Gain (Srg):** This is post launch information in the IPO market. Short run gain is defined as:

   If and only if:

SRg = (Daily Average Price (Post-listing) (MINUS) Listing Day (Closing Price[1])) >0

It measures the post listing gain of a short-run investor, who buys an IPO share on listing and sells it at on an opportune day within a month. This is *ex-post* information.

3. **Market Gain (Mg):** It is the opportunity loss. It is given by:

   ((Event Day Market Index – Listing Day Market Index)/ Listing Day Market Index))*100

4. **Short run Excess Gain (SrExg)** is defined as:

   SrExg = [((Event Day Average Price – Listing Day Average Price)/ Listing Day Average Price)*100 - ((Event Day Market Index – Listing Day Market Index)/ Listing Day Market Index))*100]

Measuring Growth

There are two types of trends in growth after listing. First the market index grows. Secondly the price of the listed share grows.

1. **Index Growth Rate (Idxgrw)**

   For studying the trend of price we have used the following semi-log equation:

   Ln Pt = a + b*Time + Ut

   Here,

   Ln stands for Log to base 'e'.

   b = daily compound growth rate

   Ut = error term

2. **Event Day:** When the investor chooses the minimum standard deviation of the stock price, it corresponds to the sample mean that is the most efficient estimate of the underlying price trend. Since it has the lowest volatility it represents a point where there is maximum agreement amongst short-run investors. In the absence of any other reliable information and because of the distortion in the IPO market the investor decides that this is the best day to sell the share that had been bought on the day of listing. We have termed this day as the 'Event Day'. Our hypothesis and understanding is that in a 30 day period the 'Event day' will be unique. There would not be two 'Event days'. We have tested for this in further analysis. In this sense the 'Event day' is a clear-cut guideline for the short-run investor to sell.

3. **Indices of Gain**

   (i) Index of Listing Gain (in Rs.): ILG = 100(+/-)Lg

   (ii) Index of Abnormal Gain (in Rs.): IAbG = 100(+/-)SrExg

The purpose of these indices is to gauge and compare the two gains, across of different scripts and periods. The concept is that an investor invests Rs. 100/- and gets losses or gains at a certain percentage. When added/ subtracted from 100, the index gives the net payback in Rupees.

Pre- Listing Information

1. **Return on net worth (RONW):** This is pre-listing *ex-ante* information contained in the red herring prospectus. The ratio is a profitability ratio. It measures how profitably the owner's funds have been utilized by the firm.

$$\text{Return on Net worth (\%)} = \frac{\text{Net profit after tax, as restated}}{\text{Net worth as at the end of the year / period}}$$

   (Net worth means Equity Share Capital + Reserves and Surplus)

2. **Earnings per Share (EPS):** This is pre-listing *ex-ante* information contained in the red herring prospectus. It is defined as EPS = (Net profit attributable to equity shareholders)/ (weighted average number of equity shares outstanding during the year or period)

3. **Debt Equity (De):** This is also prelisting ex-*ante* information contained in the red herring prospectus. It is defined as

$$\text{Debt / Equity Ratio} = \frac{\text{Long – term Debt + Short Term Debt}}{\text{Equity Share Capital + Reserves and Surplus}}$$

4. **Dummy Variable:** Some of the variables are quantitative in nature. We have converted them into qualitative variable.

5. **No. of Members** (**NomemD):** Dummy variable; if the average of number of members is greater than number of members then we assume the value as one, otherwise it assumes value zero.

6. **No. of Bidding Centres (NobidD):** Dummy variable; if the average of number of bidding centres is

[1] We have considered closing price because that is the last opportunity for a short run investor to buy a newly listed share.

greater than number of number of bidding centres then we assumes value one, otherwise it assumes value zero.

7. **Issue Size (IssizD):** Dummy variable; if the average of Issue size is greater than issue size then we assume value one, otherwise it assumes value zero.
8. **Listing Gain (lgD)**: Dummy variable; which assumes value one if the listing gain is positive, otherwise it assumes value zero.
9. **Short-run Gain (srgD)**: Dummy variable; which assumes value one if short run gain is positive, otherwise it assumes value zero.
10. **Market Gain** (**mrgD**): Dummy variable; which assumes value one if market gain is positive, otherwise it assumes value zero.
11. **Short-run Excess Gain (srxgD):** Dummy variable; which assumes value one if short run excess gain is positive, otherwise it assumes value zero.
12. **Index Growth Rate (IdxgrwD):** Dummy variable; which assumes value one if Index growth rate is positive, otherwise it assumes value zero.

Research Methodology

The study has been done with the help of secondary data obtained from various sources like official websites of BSE, NSE, SEBI, RBI, and Money Control. The data have been taken for 89 IPOs from the year 2006 to 2009. SPSS version 16 has been used for processing the data. A large number of empirical exercises have been done to study the short-run performance.

To measure and analyse:

(i) Listing gain – by taking the 'high' quote.

(ii) Price trends:

- To study the trends of average price of the share - post listing.
- To study the trend in the index (Nifty).

(iii) Standard deviation of stock price.

(iv) Identify the 'event day' – when the short run investor sells the share.

(v) Abnormal gain – as difference between 'short-run gain' and 'market gain'.

(vi) Index of listing gain and index of abnormal gain.

(vii) To evaluate the operating performance of the IPOs of different companies, we have computed pre listing accounting ratios of last three years. We have calculated Return on net worth ratio, Earning per share ratio and Debt equity ratio.

The main model which we have used in this study is **logit model** .

Logistic Regression Model

Logistic regression is used to predict a dichotomous variable from a set of independent variables. Unlike ordinary least squares method of estimation where change is calculated in the dependent itself, logistic regression calculates the change in the log of odds of the dependent variable. The dependent variable is a dichotomous variable thus it takes the value of 0 and 1. Logistic regression predicts the log odds of the dependent.

$$Zi = In[Pi/1-Pi] = b_0+b_1X_1+b_2X_2+---+b_n X_n$$

where

Zi = log of the odds ratio for the dependent variable

'b' terms are the logistic regression coefficients

'b_0' is the constant term and there are n numbers of independents

$$Pi = 1/1+e^{-z}$$

$1-Pi = e^{-z}/1+e^{-z}$ such that

$Pi/1-Pi = e^{z} = Exp(z)$

Omnibus tests of model coefficients suggest that if the chi-square is significant, the independent variables are considered to be significant predictor in the equation. A well fitted model is significant at 0.05 level.

The **Cox and Snell's R square** and **Nagelkerke's R square,** as shown in Table 3, are the alternative measures of OLS R square which states the strength of association.

The **classification table** (Table 1) classifies the total number of cases on the basis of the probability of event. The results of the binary logistic regression are interpreted from the *'variable in the equation'* table. Exp(b) = 1 represents odds ratio of 1corresponds to an independent variable which does not affect the dependent variable. Exp(b)> 1 means independent variable increases the logit

and Exp(b)< 1 means that independent variable decreases the logit. The odds ratio is considered to be significant at p<= 0.05.

In logistic regression, the parameters of the model are estimated using the maximum-likelihood method, that is, the coefficients that make the observed results are selected or the probability of the observed results given the parameter estimates is known as likelihood. Since the likelihood is a small number less than 1, it is customary to use -2 times the log likelihood (-2LL) as an estimate of how well the model fits the data. A good model is one that results in a high likelihood of observed results. This translates into a small value for -2LL (if a model fits perfectly the likelihood =1 and -2LL = 0). The logistic regression model has been used where we take IPO grading as dependent variable and short run gain, oversubscription and earning per share as independent variable. The independent variables consist of pre-listing ex-ante information, as well as, post-listing ex-post information.

In this study we have done three types of analysis:

1. The first one, where listing gain is an dependent variable and short-run gain, dominant lead manager, high price and market gain are independent variables. Here the companies who have got listing gain are positive whereas the companies who have got listing loss are negative. We used logit model where those IPO companies who have listing gain are assigned 1 and those IPO companies who have listing loss are assigned 0.

Listing gain = f (short-run gain, dominant lead manager, high price, market gain)

2. The second one, where short run gain is an dependent variable whereas high price, oversubscription, listing gain and index growth are independent variables. Those companies who have got short run gain are positive whereas the companies who have got short run loss are negative. Short run is defined as in a 30 day period following by a listing of an issue. The short run gain is taken as 1 or if there is short run loss then assigned as 0.

Short run gain=fx (high price, oversubscription, listing gain Index growth)

3. The third one, where short-run excess gain is dependent variable whereas high price, oversubscription, listing gain and return on net worth are independent variables.

Those companies who have got short run excess gain are positive whereas short run excess losses are negative. Short run excess gain is 1 or if there is short run excess loss then assigned as 0.

Short run excess gain=fx (high price, oversubscription, listing gain, return on net worth)

Review of Literature

Aktas, Karan & Aydogan (2003) analyzed the short run performance of IPOs in India. The short term underpricing of initial public offerings (IPOs) is a well-documented phenomenon. Previous research on IPOs has identified several factors or issue characteristics that play a role in the level of short term underpricing. Some of those issue features are the firm size, market trend, size of the offer, investment banker reputation, method of intermediation, stock price range and investor type. The objective of this study is to develop a model based on these features to forecast the short term performance of IPOs in the Istanbul Stock Exchange. To this end they divided the sample period into a model building subperiod and a testing subperiod. After identifying 9 issue features that are related to IPO short term pricing, they estimated the models using multiple regression, multiple discriminant and log it methods. The estimated models are then tested against the IPO data in the subsequent period between 1997-2000. The overall predictive ability of the forecasting models can be described as mediocre. In terms of actual abnormal returns obtained from investment strategies based on model predictions, only the logit models beat the outcome of naive strategies, albeit only marginally.

Ranjan and Madhusoodanan (2004) studied the pricing of IPOs in the Indian context. He examined whether the introduction of book building has an impact on IPO pricing. For the purpose of analysis, the dataset consist of 92 IPOs listed on the NSE and BSE in the period January 1999-November 2003. BSE and NSE together cover at least 93% of the IPOs in value terms listed during the period. The dataset contains offer opening date, method of pricing the IPO and daily closing prices for first 60 days of trading for these companies as well as the market capital-weighted index NIFTY (a 50-stock index) closing value for the study period.

The results suggest that IPOs are underpriced. The results also suggest that book-built IPOs show less underpricing than fixed price issues. A more detailed study suggests that this has to do more with the size of the issue than the issue process. A model describing the IPO process in the presence of asymmetric information and heterogeneous beliefs is presented. This model suggests that IPO underpricing can be avoided in the presence of selectively informed investors. The model includes the choices on signalling cost, homogenous and heterogeneous beliefs among the investors, entrepreneur holding dilution and issue size that exist for a firm while coming for an IPO. A larger amount of money is left on the table if the entrepreneur holds a lesser amount with herself post IPO. Despite asymmetric information, the high value firm can place an issue without leaving money on the table. Thus IPO underpricing is unavoidable in a market with information asymmetry and homogenous beliefs among investors. The models predict that underpricing is more severe in the case of smaller issue sizes.

Sasi, Kumar & Vikkraman (2008) aimed to find out the fundamental risk and return involved in investment of IPOs and the performance of initial public offers for the last five years. The performance of the IPOs during the last five years has been studied with the help of secondary data collected from NSE, BSE and other relevant data sources. The researchers assume that the investments in IPOs are very safe, risk free, and make good returns. The performance of IPOs has been evaluated by taking a dataset of IPOs issued in India between 2004-2008. During the period there were 275 IPO issues. The study includes sample of 71 new equity issues offered during the study period. The data has been collected from NSE web site (www.nseindia.com). The study examined the performance of the IPOs both in the short-run as well as in the long-run, where short-run means the behaviour of initial returns up on listing. Short term performance has been studied by examining offer-to-open returns, offer to high ,offer to low and offer to average price, which will give us a clear idea of how much the IPO gained or lost up on opening trades and an intra-day return on the listing day. The second day returns also examined in a similar manner with reference to the issue price. IPOs long run performance is measured by examining the returns beyond the second day of their listing at monthly intervals till 2008 subject to a maximum of 60 months i.e. returns on the day of listing and the next day, three months, six months, 12 months, 24months, 36months, 48 months and 60 months.

The results show that returns out of IPOs during the short period are very promising. In the recent past several large equity offerings including those from reputable business houses have failed to reach their price targets. Out of the 285 companies that raised Rs.99, 218 crore money from investors in India through IPO, many are quoting below their issue price. The stock market performance of majority of IPOs that came during the five-year-long bull-run (March 2003-January 2008) was disappointing. Out of the 275 IPOs between 2004 and June 2009, 193 are trading below their issue prices. The public sector IPO s is doing better than private sector IPOs. Out of 13 public sector undertaking (PSU) IPOs that came between 2004 and June 2009, 12 are trading above their issue prices. On the other hand, out of 265 private sector IPOs during the same period, 189 are trading below their issue prices. Out of 71 IPO studied only 8 are listed below the issue price and 17 issues went below the issue price during the trading day.

S.S.S. Kumar (2008) investigated the short run as well as long run underpricing of Initial Public Offerings in the Indian Capital markets by looking at the different factors affecting them. As the underwriters do not have discretionary power in Indian IPOs, some of the theoretical models like Rock's (1986) and costly information acquisition hypothesis (1989), which involves the extent of informed as well as uninformed investors can be tested more robustly in Indian Capital markets. Therefore a model is proposed taking these oversubscription variables along with age and issue size to explain the underpricing. Since different sectors have different level of private and public information, it is interesting to perform industry wise analysis and has been taken up here. The period for study was 22 months (Jan 2006- Oct 2007) considering 116 IPOs. It was found that both short and long run return of IPOs are positive for this period. The short run underpricing was 18% and long run underpricing was 11.5%. Oversubscription variables, namely, total oversubscription, informed (institutional investors) and uninformed investors (retail investors) oversubscription, were found to be the main determinants of underpricing in the Indian IPOs. Higher subscription implied higher underpricing. However, informed investor's oversubscription was higher in companies giving more return in the long run. Further Indian Capital markets

were found to follow industry specific waves. Upon doing sector wise underpricing analysis, the high performing sectors were more underpriced in the short run as well as performing better in the long run than low performing sectors. Infrastructure, financial and entertainment sectors with positive long run return fell under this category for the period of study. On the contrary, IT sector gave higher initial return but negative return in the long run.

Results

Listing Gain = f (short-run gain, dominant lead manager, high price, market gain)

In the Classification table (Table 1), the classification of the observed IPOs is done on the basis that listing gain is assigned one and listing loss is assigned zero. The proportion of correct classification is 95.5%. It clearly shows that behaviour of IPOs which experience listing gain is distinguishable from those who experience listing loss.

In the Omnibus table (Table 2) and in the model summary table (Table 3), the statistic Chi-square (4, N=89) =7.405, p>.05 has shown the insignificant difference which has not improved the predictable capacity of the model reducing the value of -2 Log likelihood ratio which stands at 18.832. The difference is explained by the regression to the extent of .08 indicated by the Cox and Snell R square shows lower explanatory power whereas .313 indicated by the Nagelkerke R square shows moderate explanatory power.

Table 4 gives the actual estimates of the parameters where the listing gain is taken as dependent variable whereas short run gain, dominant lead manager, high price, market gain are independent variables.

(a) In the equation, market gain is insignificant which means that there is no relationship between market gain and listing gain. If a company has earned listing gain, it is not due to market conditions.

(b) The short run gain is significant at 5% level of significance which means that those companies who have earned listing gain, also got short run gain.

(c) In the equation, the dominant lead manager is also significant at 6% level of significance. Those companies who have got listing gain are the companies which have launched their IPO by particular dominant lead manager who could have manipulated the listing price. Post listing behaviour of IPO companies is different. These companies after listing may not able to protect even their issue price. This issue price is greater than the market price (post listing)

Table 1: Classification Table for Listing Gain and Listing Loss

	Observed		*Predicted*		
			lgD		*Percentage Correct*
			0	1	
Step 1	lgD	0	0	3	0
		1	1	85	98.8
	Overall Percentage				95.5
a. The cut value is .500					

Table 2: Omnibus Tests of Model Coefficients

		Chi-square	*df*	*Sig.*
Step 1	Step	7.405	4	0.116
	Block	7.405	4	0.116
	Model	7.405	4	0.116

Table 3: Model Summary

Step	*-2 Log likelihood*	*Cox & Snell R Square*	*Nagelkerke R Square*
1	18.832	0.08	0.313

Table 4: Parameter Estimates

	Variable	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1a	mrgD	0.5	1.462	0.117	1	0.732	1.649
	srgD	3.14	1.561	4.048	1	0.044	23.11
	Domlm	2.761	1.479	3.485	1	0.062	15.811
	Hipr	-0.003	0.002	1.469	1	0.225	0.997
	Constant	1.115	1.287	0.75	1	0.386	3.049

a. Variable(s) entered on step 1: mrgD, srgD, Domlm, Hipr.

Table 5: Classification Table for Short-run Gain and Short-run Loss

	Observed		Predicted srgD		Percentage Correct
			0	1	
Step 1	srgD	0	3	19	13.6
		1	3	64	95.5
	Overall Percentage				75.3
a. The cut value is .500					

which means that company is not fundamentally strong and not able to provide good return to the investor in the short run. The dominant lead manager plays a role in pushing up the issue price that gives some listing gain. This shows that the IPO market is manipulated by the syndicate.

(d) In Table 4, for high price, the sign is negative and it is not statistically significant. This shows those companies which do not have a listing gain had a high price. It implies that issue price is high enough and the company has not left any money on the table for the investor. Those companies who have listing gain, underpriced the issue price. That is why for such companies in spite of high price (because the high price was not so high), the investor has made listing gain. However it may be noted that this underpricing is defined as per conventional definition. It does not match our definition of underpricing where issue price is less than true price, even this underpricing is more than the true price. Exponential coefficient beta is closed to 1 (.997). It is not highly significant (.225), therefore we cannot say with certainty the above pattern holds good always. On the other hand, this clearly shows that in terms of ex-post pricing, the high price does not cause listing gain.

Finally, it clearly shows that there is some collusion between dominant lead manager and those IPOs company which are making listing gain. The job of a lead manager is to make the IPO succeed but in fact, ex-post price is not necessarily high. This means that lead managers have suppressed the issue price.

Short-run Gain=fx (high price, oversubscription, listing gain Index growth)

In the Classification table (Table 5), the classification of the observed IPOs is done on the basis that short-run gain is assigned one and short-run loss is assigned zero. The proportion of correct classification is 75.3%. It clearly shows that behaviour of IPO which experience short run gain is distinguishable from those who experience short run loss.

In the Omnibus table (Table 6) and in the model summary table(Table 7), the significant difference is shown in the table by the statistic Chi-square (4, N=89) =9.502, p<001 is showing a significant difference which has improved the predictable capacity of the model reducing the value of -2 Log likelihood ratio which stands at 90.041. The difference is explained by the regression to the extent of .101 indicated by the cox and snell R and .15 indicated by the Nagelkerke R square both shows moderate explanatory power.

Table 8: Parameter Estimates

	Variable	*B*	*S.E.*	*Wald*	*df*	*Sig.*	*Exp(B)*
Step 1a	Hipr	0.003	0.001	5.174	1	0.023	1.003
	Ovsc	-0.017	0.009	3.179	1	0.075	0.983
	lgD(1)	-2.764	1.355	4.16	1	0.041	0.063
	IdxgrwD	-0.082	0.526	0.024	1	0.877	0.922
	Constant	0.803	0.497	2.611	1	0.106	2.233

a. Variable(s) entered on step 1: Hipr, Ovsc, lgD, IdxgrwD.

Table 9: Classification Table for Short-run Excess Gain or Loss

	Observed		*Predicted* *srxgD*		*Percentage Correct*
			0	1	
Step 1	srxgD	0	2	19	9.5
		1	1	67	98.5
	Overall Percentage				77.5
a. The cut value is .500					

Table 6: Omnibus Tests of Model Coefficients

		Chi-square	*df*	*Sig.*
Step 1	Step	9.502	4	0.05
	Block	9.502	4	0.05
	Model	9.502	4	0.05

Table 7: Model Summary

Step	*-2 Log likelihood*	*Cox & Snell R Square*	*Nagelkerke R Square*
1	90.041	0.101	0.15

Table 8 gives the actual estimates of the parameters where the short run gain is dependent variable and the high price, oversubscription, listing gain, Index growth are independent variables.

(a) In the equation, the high price is significant and it has a positive sign. It means that when there is a short run gain, the price is high. In our sample, the number of IPOs which have got short run gain is less. Many of the IPOs have earned short-run loss, where as their listing gain is high. It means these companies have done mispricing of IPO with the help of dominant lead manager. These companies have given listing gain at the time of listing of IPO but after that they are not able to provide a short-run gain to the investor. But some companies who have set high price, they give good listing gain to the investor and also give short-run gain. These companies are not under the influence of the dominant lead manager. Therefore companies who have set high price are the companies which have strong fundamentals and the strong balance sheet and good projects in their hand.

(b) In the equation, the oversubscription is significant at 7.5% level of significance. But the sign is negative, showing a negative relationship between short run gain and oversubscription. Where short run gain is high, oversubscription is less and vice versa. This is an anomaly; the performance of a good IPO should give high subscription.

(c) In Table 8, the relationship between index growth and the short run gain is negative, though the relationship is insignificant. It means that those IPOs who are not getting short run gain, the index growth is positive. In other words, when bullish phase is going, there is no short run gain.

(d) The relationship between index growth and the listing gain is negative and highly significant. It means that for those IPOs where listing gain is high, there is no short run gain and where listing gain is less, there is a high short run gain. This proves that poor listing IPO performance in the short run.

Short-run Excess Gain = fx (High Price, Oversubscription, Listing Gain, Return on net worth)

In the Classification table (Table 9), those companies which have got short run excess gain are positive whereas those who have got short run excess loss are negative. The proportion of correct classification is 77.5%. It clearly shows that behaviour of IPO which experience short-run excess gain is distinguishable from those who experience short run loss.

In the Omnibus table (Table 10) and in the model summary table (Table 11), the statistic Chi-square (4, N=89) =6.829,p>.05 is showing insignificant difference which has not improved the predictable capacity of the model reducing the value of -2 Log likelihood ratio which stands at 90.426. The difference is explained by the regression to the extent of .074 indicated by the Cox and Snell R but it shows lower explanatory power and 0.111 indicated by the Nagelkerke R square both shows moderate explanatory power.

Table 10: Omnibus Tests of Model Coefficients

		Chi-square	*df*	*Sig.*
Step 1	Step	6.829	4	0.15
	Block	6.829	4	0.15
	Model	6.829	4	0.15

Table 11: Model Summary

Step	*-2 Log likelihood*	*Cox & Snell R Square*	*Nagelkerke R Square*
1	90.426	0.074	0.111

Table 12: Parameter Estimates

	Variable	*B*	*S.E.*	*Wald*	*df*	*Sig.*	*Exp(B)*
Step 1a	Hipr	0.003	0	4.56	1	**0.03**	1.003
	Ovsc	-0.018	0.01	3.5	1	**0.06**	0.982
	lgD(1)	-1.419	1.35	1.11	1	0.29	0.242
	RONW3	-0.024	0.02	1.74	1	0.19	0.976
	Constant	1.33	0.54	6.05	1	**0.01**	3.783

a. Variable(s) entered on step 1: Hipr, Ovsc, lgD, RONW3.

Table 13: Correlation Matrix of short-run Variables

		lg	*srg*	*mrg*	*srxg*	*Idxgrw*
Lg	Pearson Correlation	1	-.082	.086	-.121	.011
	Sig. (2-tailed)		.446	.423	.260	.918
	N	89	89	89	89	89
Srg	Pearson Correlation	-.082	1	.242*	.904**	.252*
	Sig. (2-tailed)	.446		.022	.000	.017
	N	89	89	89	89	89
Mrg	Pearson Correlation	.086	.242*	1	-.196	.622**
	Sig. (2-tailed)	.423	.022		.066	.000
	N	89	89	89	89	89
Srxg	Pearson Correlation	-.121	.904**	-.196	1	-.019
	Sig. (2-tailed)	.260	.000	.066		.857
	N	89	89	89	89	89
Idxgrw	Pearson Correlation	.011	.252*	.622**	-.019	1
	Sig. (2-tailed)	.918	.017	.000	.857	
	N	89	89	89	89	89

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

In Table 12 gives the actual estimates of the parameters, where short run excess gain is dependent variable and the high price, oversubscription, listing gain, Return on net worth are independent variables.

(a) In Table 12, the relationship between short run excess gain and the high price is positive and also significant at 5% level of significance. It shows that where short excess run gain is there, the price is high. In our sample, the IPOs who have got short run excess gain are less and many of the IPOs have earned short run excess loss.

(b) The relationship between short run excess gain and oversubscription is negative and significant. It means those companies which have got short run excess gain, they have less oversubscription. It means again dominant lead managers have got huge money by subscribing the issue but after listing they have not given a return to the investor.

(c) The relationship between listing gain and short-run excess gain is negative. In other words, market price is *ex-post* price. It should be efficient price. Initially, upon listing those companies which had lower listing gain could get short-run excess gain.

(d) The relationship between short-run excess gain and return on net worth is negative though insignificant. The return on net worth is *ex-ante* information for the investor at the time of filing of issue. It is pre-listing information. On the basis of this, investors generally try to find real worth of the company. If RONW is high; it means company has good fundamentals but our results show that the companies who have high RONW have not given short-run excess gain. This means that in fact, those companies which did not have good fundamentals performed better in the short run post listing.

Correlation Matrix of Short-run Performance of IPO

(a) The correlation between listing gain and the short run gain and the correlation between listing gain and short-run excess gain is negative, though not significant. It shows that those IPOs who get listing gain, are not sure to give short-run gain and short-run excess gain to the investors. However the correlation between listing gain and market gain, and the correlation between listing gain and the index growth is positive, though the results are not much significant. This proves two things: First that the listing gain takes advantage of rising trend in the market. This may imply that the company is able to perceive the general market conditions and they launch the IPO at such a time when they expect listing gain because of the market conditions. On the other hand since listing gain is negatively related to short run gain and short run excess gain, this shows that after listing, the share price declines and gravitates towards true price. This reflects upon the inefficiency in the IPO process and it confirms the trend of informational inefficiency.

(b) The correlation between short-run gain and short run excess gain and the correlation between short-run gain and market gain is positive as well as significant. However in our study period, both the short-run gain and the market gain are declining, therefore it reflects the trend of declining market during the period under study and points out towards the failure of the market. Ultimately it shows that the issue of shares was overpriced and the market was inefficient. However the short-run gain is positively and significantly related to the index growth.

(c) The listing gain, short-run gain and the market gain all are positively and significantly related to index growth but the short-run excess gain is negatively related to index growth. This also reflects that the markets are doing well, but these IPOs are not performing well. And therefore the markets are not efficient.

Conclusion

The available evidence and some findings of this paper show that the price performance of IPO stocks and quality of issuers deteriorated in the years after going public. In this paper we have seen that many of the IPOs have significant returns on the day of listing but thereafter they do not give much return in the short-run, it shows that market overreacts to the initial public offers. Further we will analyse the performance of IPOs in the long run also and their comparison with listing gain and short run gain so as to establish a relationship amongst all that whether the IPOs which give listing gain will also give long run gain or not.

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