Indian IPOs: Under-Pricing and Market Efficiency

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Abstract

Initial public offer is considered as an investment tool for the stock market investors. Many investors believe that IPO earn excess returns on the first day of the listing as compared to market returns.Contradictory views are recorded in the literature as few researchers argue that many IPOs are over-priced in the market. We assume that the price of an IPO is based on demand and a supply forces which is achieved through book building process. On this backdrop researcher wants to evaluate the pricing efficiency of Indian IPOs. This study examines whether Indian IPOs are overpriced, under-priced or fairly priced. It was found that market was not efficient in the period of study. Most of the IPOs were under-priced. Strong relation was found within market condition and return on IPOs. Oversubscribed shares and IPO return also show positive relation.

Keywords: IPO price efficiency, under-pricing, overpricing

Introduction

Companies raised capital for new projects, expansion and diversification. Initial public offerings (IPOs) are the one of the popular way to raise capital through primary market. Many investors believe that IPO earn excess returns on the first day of the listing as compared to market returns.Contradictory views are recorded in the literature as few researchers argue that many IPOs are over-priced in the market. We assume that the price of an IPO is based on demand and supply force which is achieved through book building process. On this backdrop researchers want to evaluate the pricing efficiency of Indian IPOs. This study examines whether Indian IPOs are underpriced, overpriced or appropriately priced. Whether Indian markets are efficient or investors are able to earn abnormal returns on listing day? The study also analyse the number of the times the IPO is oversubscribed and the underpricing phenomenon.

Many researchers argue that the pricing of the IPO is based on the behavior factor rather than fundaments. The purpose of this study is to test some theoretical arguments using sample Indian IPOs in terms of under pricing or over pricing. Neither underpricing nor overpricing is advisable. Underpricing may also be caused by investor over-reaction causing increased price and huge gain on the day of listing the issue. In such case company will not receive proper funds but attracts investors. Overpricing generates more funds to company but on listing day investor will erode their wealth.

When firms go public, companies incur huge flotation cost like legal fees, underwriting fees, banker's commission and other processing cost to the regulator. If the issue is underpriced then company has to bear indirect cost for the IPO. It is believed that when the market is in boom under-pricing is generally much higher.

The price of the equity share is the present value of future earnings as dividend streams and the expected price when you sell the stock. The future expected price is based on the fundamentals of the company and the industry in which the company operates. Price also gets affected by the behavior of the investors while investing in the market and macroeconomic factors such as interest rates inflation or exchange rates. The prevailing price decided by in IPO does not spontaneously change the minute the stock begins trading. Many companies are not having past data to analyse fundamentalsand yet the IPO earns huge profits on the listing day.In such cases the IPO pricing is based on the perception/ behavior of the investor rather than the fundamentals.

Literature Review

A great amount of research had been carried out in India as well as internationally to evaluate the underpricing phenomenon of IPOs.IPOs earn 40% in excess of returns on the market index in the first 200 trading days. These sharp excess returns are mostly reversed in the even-shorter period of the following six calendar months(Shah 1995). During initial period, and especially during the first five trading days, mispriced assets are likely to exist(Garg A., Arora P., SinglaR 2008)also supports that IPOs earn medium to high listing gains. Researchers proved empirically that under pricing exists in Indian Stock market and the effect of various market conditions on level of underpricing.

(Arosio R, GiudiciG.,Paleari S)discussed the determinants of IPO performance and argued that pricing strategies influences the IPOs initial return: if the offering is preceded by book building, the underpricing is significantly lower as compared to fixed-price offerings.

Researcher had investigated empirically the differences in IPO underpricing between different countries and the influence of investor protection on the underpricing of IPOs. On average, a country with stronger minority protection has a lower level of underpricing. There is also a negative correlation between level of underpricing and quality of the general legal system and the quality and effectiveness of legal enforcement. The level of under pricing decreases with stronger investor protection (Peter-Jan Engelen&Marc van Essen 2007)

Generally it is believed thatIPO underpricing has increased over the time.The increase can be attributed to the changing composition of the universe of firms going public. Most of the increase, however, is not attributable to changes in the risk of firms going public. Underwriters wish toget the issue fully subscribed that leads to greater underpricing. This accounts for most of the increase in under pricing over time (Loughran&Ritter2002). Conflicts of interest between issuers and underwriters are necessary, but not sufficient, condition for severe underpricing to exist.

World market scenario does affect the IPO returns. A classic example is quoted in literature where Reliance power, an IPO from Indian capital market recorded overpriced On Monday 20th January 2008 the first day of trading of R power. R power shares along with BSE SENSEX goes done by 17 % of issued price of Rs.450 to Rs.372.50.

IPO can be a risky investment. For the individual investor, it is tough to predict what the stock will do on its initial day of trading and in the near future since there is often little historical data with which to analyze the company. Few researchers analyze the under pricing, overpricing phenomenon in the bubble phase and in the bear phase of the stock market to know effect of IPO under pricing on market conditions. As far as market efficiency is concerned; the market was not efficient enough in the period of study as people who could not invest at time of offer also earned profit by investing on the first day of listing. In the period of downturn, pessimism, and slump shows no underpricing, instead, it shows symbol of overpricing (Gupta K 2011).

The Initial Listing Performance of Indian IPOs is empirically invested by many researchers in India. The phenomenon of under pricing which is prevalent in most other countries is observed in India too. Risky (par-value) issues are underpriced more. Issues with smaller offer prices are also underpriced. Under pricing served to compensate investors for bearing additional risk. The other interesting finding is that underpricing is related to the level of subscription. This fact indicates that it would be useful to incorporate a mechanism for gauging the potential demand before pricing the issue. Other reasons behind the large observed initial returns include the large time delay between offer approval date and the actual opening date of public issue (Krishnamurti C., Pradeep K. 2002).

Researchers measured the IPOs performance on first trading day to verify that investors can earn positive return or not on the close of first trading day as documented in literature. In the Karachi stock market, the investors outperform through buying stocks at subscription prices in the primary market and selling them on first trading day in stock market. Like other countries, the under-pricing was also found in Pakistani IPOs (MuhmadS, Rehman A,)

On this backdrop researchers want to evaluate the pricing efficiency of Indian IPOs. This study examines whether Indian IPOs are overpriced, under-priced or fairly priced immediate after the financial crises. And whether book building process leads to efficiency in Indian IPO pricing.

Objectives

- To study IPO underpricing for Indian IPO's
- To find out whether relation exists between the market condition and the under pricing
- To test whether a capital markets are efficient and under pricing is taken away by the end of the day
- To test whether demand for IPOs leads to IPO under pricing

Methodology

To study IPO under pricing for Indian IPO's

In all 98Indian IPOs were taken as a sample, out of which 26 IPOs were from 2008, 17 were from 2009 and 55 from 2010. The data were taken fromNSE(National Stock Exchange) to analyze the trend for the last three years. Case study approach is followed.

For 08, 09, and 10 offer price, open price and close price of the sample IPOs were obtained. The closing data of the benchmark sensex for open day and offer day was obtained to evaluate the underpricing of an IPO, 1st day return vis a vis market return.

First day performance of IPO listing was measured by taking the difference between the closing market price of the IPO on the first trading day and the company's offer price.To find the undervalued shares for the 1st trading day following formula was used

UPi_P = (P1i-P0i)/P0i

UPi_P =underpricing of share

P1i =closing price of security i on first trading day

P0i= offer price of security i

The formula is used to find out whether the security is issued at discount or appropriately priced or overpriced.

If UPi_P is positive = underpriced

UPi_P is negative = overpriced

UPi_P is zero = appropriately priced

To find out whether relation exists between the market condition and the under pricing

It may happen that IPO is giving high return on the listing day because the overall market is in increasing trend. To control this overall increase in market effect, the use of MAAR(market adjusted abnormal return) is calculated.

MAARi = Ri –Rm

Ri = return on the security i.e. UPi_P

Rm = return on market i.e.(closing sensex on first day – closing sensex on offer day)/ closing sensex on offer day

Relationship between Ri and Rm is established to find out whether the underpricing follows a random walk.

To test whether a market are efficient and underpricing is taken away by the end of the day

The efficiency of the market is examined by studying the relation between the share prices from offer to open and open to close. If the market is efficient then the offer price will be equal to the open price as the process of arbitrage would eliminate any risk free profits. Absolute prediction error is calculated as,

Absolute prediction error = (OPM - OP)/ OP

OPM =opening market price on listing

OP = offer price of security i

If Absolute prediction error is zero then valuation method is accurate, otherwise investor can earn extraordinary profits.Relative return of offer to close, offer to open, and open to close was calculated for the analysis.

To test whether demand for IPOs leads to IPO under pricing

Study has been carried out for the IPOs which were oversubscribed. The relation was established between the number of times IPO is oversubscribed and MAAR.

Findings

Underpricing inyears 2008, 2009 &2010: From year 2008-2010 there were 61 securities which were underpriced form 98 securities issued

Table-1
IPO underpricing

	No. of issue	Underpriced
2008	26	14
2009	17	12
2010	55	35

Statistics for measuring under-pricing
Table- 2
2.1

2008					
	Abbreviations	Mean	median	Max	min
offer price per share	OP	213.192	176	765	14
open market price per share	OPM	228.165	175.025	1044	14.7
closing market price per share	CPM	238.815	172.475	908.2	9.2
under-pricing per share	UP	25.6231	3.675	254.35	-77.5
up ratio	UP/OP	0.07312	0.023168	0.942037	-0.39455
up based on market adjusted return	MAAR	0.12632	0.035027	0.981433	-0.36598

Table- 2.2

2009					
	Abbreviations	Mean	median	Max	min
offer price per share	OP	212.647	120	1050	36
open market price per share	OPM	214.097	110	1019	39
closing market price per share	CPM	231.085	119.3	1140.55	36.7
under-pricing per share	UP	18.4382	1.9	96.05	-31.9
up ratio	UP/OP	0.04532	0.023171	0.3144	-0.29067
up based on market adjusted return	MAAR	0.02271	0.030125	0.337397	-0.31532

Table- 2.3

2010					
	Abbreviations	Mean	median	Max	min
offer price per share	OP	212.891	135	1310	11
open market price per share	OPM	241.118	146.1	1655	12.35
closing market price per share	CPM	253.051	180.8	1709.4	11.25
under-pricing per share	UP	40.1605	10.55	399.4	-96.75
up ratio	UP/OP	0.14227	0.086	1.039839	-0.37212
up based on market adjusted return	MAAR	0.13915	0.087164	1.012764	-0.39974

Above tables show that the IPOs in year 2008 were on an average underpriced by Rs.25 per share or 7% if it is seen as an unadjusted underpricing & if market adjusted abnormal returns are used,underpricing reduces to 1%. For IPOs in year 2009 were on an average underpriced by Rs.18 per share or 4% if it is seen as an unadjusted underpricing & if market adjusted abnormal returns are used, underpricing reduces to 2%. & for IPOs in year 2010 were on an average underpriced by Rs.40 per share or 14% if it is seen as an unadjusted underpricing & if market adjusted abnormal returns are used, underpricing reduces to 13%.

Table- 3
Absolute under-pricing

Under-priced/ Overpriced	Positive	Negative	Total
2008	14	12	26
%	53.84615	46.15385	
2009	12	5	17
%	70.58824	29.41176	
2010	35	20	55
%	63.63636	36.36364	

No IPO was accurately priced. Both overpricing and underpricing are harmful from the promoter's point of view. If shares are overpriced, people will lose the faith in the company, as the initial investment of the investor is eroded. And if the shares are underpriced, promoters will lose the issue proceeds & net worth of the organization. In all Indian IPOs are underpriced. As the market recovered in 2009 and 2010 under pricing increased.

To test whether a market are efficient and under pricing is taken away by the end of the day

Table- 4
Relative return of offer to close, offer to open and open to close

		2008		2009		2010	
	Formula	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**
Offer to close	(Offer-close)/offer	-7.31%	-2.32%	-4.53%	-2.32%	-14.23%	-8.60%
Offer to open	(offer-open)/open	-1.58%	-0.42%	-1.00%	-3.92%	-7.94%	-7.21%
Open to close	(close-open)/open	5.49%	0.17%	3.76%	-1.23%	3.07%	0.72%

Fair pricing of Initial Public Offerings (IPOs) is a pre-condition for overall allocation efficiency of the financial system. Thereforeone can say that market is highly inefficient investors who are taking risk and buying IPO at offer price are getting negative returns while investors who are buying from secondary market are getting good returns. We can say that investors who couldn't take advantage of original subscription could have gained advantage by buying the shares at the list price & holding the shares by end of the day.

To test whether demand for IPOs leads to IPO under pricing

Table- 5
Relation between oversubscription and MAAR

Oversubscription	2008	MAAR avg.	2009	MAAR avg.	2010	MAAR avg.
Sample	26		17		55	
Less than 5 times	21	11%	10	-2%	23	1%
5 to 10 times	1	26%	2	-2%	8	23%
10 to 20 times	1	19%	0	0%	10	12%
20 to 50 times	1	22%	5	-1%	11	36%
More than 50 times	2	11%	0	0%	3	22%

Oversubscription has a smaller but significant effect for IPOs. Public information affects the issue price to the extent that it is reflected in the bids. The book building is designed to extract information

from investors (Banerjee R 2009). In the depressed market IPOs were not much oversubscribed and increased in return with increase in oversubscription was not observed. In 2009 investors were not much willing to invest in the market due to the world market slowdown. In 2008 and 2010 investors are getting positive returns as the issue oversubscribed.

Only 5 companies IPOs oversubscribed out of 26 IPOs during 2008 as the market was uncertain due to global recession still it shows the underpricing phenomenon as the market adjusted abnormalreturn is positive.

In year 2009 investor were not still confident about the market and only 7 issues out of 17 oversubscribed. In this year no evidence was found where MAAR is positive. Oversubscription increases when IPO is subscribed more no of times. The underpricing increases as the oversubscriptionis increase. Investors will buy undervalued shares and thus increase in the demand of the IPO. In 2009 underpricing is not evident; on the contrary oversubscription is evident.

Again when market is recovered in 2010 no of oversubscription increased and evidence of underpricing is observed. Hence the study supports the argument that demand for IPOs leads to IPO under pricing.

Conclusion

Thepaper evaluates the underpricing of Indian IPOs for three years (i.e. 2008, 2009 & 2010). The study was undertaken to find out the trend of under pricing of Indian IPOs, relation between the market condition and the under pricing, market efficiency and under pricing and demand for IPOs and under pricing. Under pricing of the IPOs were exist in Indian market. Market was not efficient as investors who were not able to invest at the time of IPO issue earned on the first day of the listing. The results show that Indian IPOs give excess abnormal return in the sample period and for the selected companies even if overall market factor is controlled.

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