Research Paper Management

A Study on Comparison of Indian IPOs (2004:2008) Under pricing Based on Issue Size, Ownership Structure, Sector, Activity Time Period and Year of Issuance

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ABSTRACT

Many studies have documented that Initial Public Offerings (IPOs) of equity are substantially underpriced. This paper provides evidence on comparison of under pricing in India with the help of the whole population of firms that went public between 2004 and 2008. Since the Indian economy was liberalized in the early '90s, India has seen a tremendous growth of its capital markets with close to 5,000 Initial Public Offerings (IPOs), second only to the United States of America. It is found that a significant number of companies earn large positive returns on the first day of listing. It is reported that on an average the Indian IPOs are underpriced to the tune of 32.30 per cent on the listing day. It has been found that the positive initial return persists for 72.92 per cent of the total IPOs. Descriptive Statistics like Mean, Median and Standard deviation and interferential test like Kruskal Wallis and Mann Whitney U test have been used for comparison of IPOs based on their IPOs issue size, based on their sector, based on type of ownership, based on type of activity period and based on year of issuance. Evidence is found that, underperformance is not influenced by offer size, sector, ownership and timing of issue. Whereas, under performance is influenced by Year of issuance.

Keywords : Indian IPO, Under pricing, Issue Size, Ownership Structure

I. INTRODUCTION

An Initial Public Offering (IPO) is the sale of a company's stock to the public for the first time. The primary objective of an IPO is generally to raise capital. Some other motivations and considerations also influence a firm's decision to go public. Generally IPO is considered as a very convenient way to obtain finance but there are many costs related to it.

Since the Indian economy was liberalized in the early '90s, India has seen a tremendous growth of its capital markets with close to 5,000 Initial Public Offerings, second only to the USA In India, during last two years total 167 IPOs are issued out of which 148 are from private sector where as the value is Rs. 6.17 lakh million and for public sector it is Rs. 6.36 lakh. About 97% of the resource mobilization was through public issues which show remarkable growth in Indian IPO segment which indicate recovery of economy after global slowdown.

Many studies have documented that Initial Public Offerings (IPOs) of equity are substantially underpriced. That means that an investor who purchases new issues at the offering price and sells them at the closing price on the first day of listing can, on average, make relatively large returns.

As research on the comparison of initial return of IPOs issued in the Indian market has remained a relatively unexplored area, one of the objectives is to study the initial return i.e., return from offer day to the listing day. Besides, this research compares the under pricing based on different issue size, based on different ownership structure, based on year of issuance, based on activity time period of IPOs and based on different sector of companies.

II REVIEW OF LITERATURE:

S. K. Bundoo (2007), An Analysis Of IPOs Under pricing In Mauritius This paper provides evidence on a significant number of companies earn large positive returns on the first day of listing in Mauritius that went public between 1989 and 2005. Over a 7-day interval positive initial return was found persists for fifty per cent of the companies. The largest companies are the most underpriced, in agreement with the signaling hypothesis.

Krishnamurti Chandrasekhar and Pradeep Kumar (2002), The Initial Listing Performance of Indian IPOs. Evidence is found regarding the widespread under pricing of Indian IPOs and their relationship for potential factors. Principal among them are: the lack of a formal mechanism for gauging the extent of demand from potential investors, the regulatory restrictions on pricing of new firms without a track record, and the large delay between the approval date and the actual opening date of the public issue.

Saurabh Ghosh (2005), The post-offering performance of IPOs in the Indian banking industry The performance evaluation on the basis of stock returns did not find significant evidences of underperformance for the IPOs from the banking sector. Moreover, this studies, based on key accounting parameters, found improvement in the performance of the banks in the post listing period.

Seshadev Sahoo and Prabina Rajib (2010), After Market Pricing Performance of Initial Public Offerings (IPOs): Indian IPO Market 2002-2006. The paper presents fresh evidence on IPO performance, i.e., short-run under pricing and long-run underperformance for 92 Indian IPOs issued during the period 2002-2006 up to period of 36 month.. It is reported that on an average the Indian IPOs are underpriced to the tune of 46.55 percent on the listing day compared to the market index.

Several studies on initial public offering (Ritter 1991; Welch and Ritter 2002) report that the initial public offerings in the U.S. are underpriced. Levis (1993), with a sample of 712 IPOs in the UK in 1980-1988, Ljungqvist (1997) for the German market, Wong and Chiang (1986) for the Singapore market, Krishnamurti and Kumar (2002) in Indian and Yong and Isa (2003) provide evidence on under pricing of IPOs in the Asian markets. Several researchers have also examined the determinants of IPO underperformance (Hensler, Rutherford and Springer (1997); Jain and Kini (1994), Bhabra and Pettway (2003); and Jaskiewicz et al (2005)). From that detail analysis, this study suggests certain research gaps. First, the recent dataset calendar year covering 2004-2008 has been used. Second, no prior studies have compared under pricing for different categories of IPOs. Third, research gap of the study is that NSE Mid-Cap 50 Index has been adopted for classification of IPOs based on different issue size.

RESEARCH METHODOLOGY:
Problem Statement: "Comparison of Indian IPOs (2004: 2008) Under-pricing based on Issue Size, Ownership Structure, Sector, Activity time Period and Year of Issuance."

Research Questions:
- What is the initial return (return from offer price to listing price) of the Initial Public Offerings issued in India during 2004 to 2008?
- What is the difference in under pricing of the initial public offerings in India based on issue size (small, medium and large Size)?
- What is the difference in under pricing of the initial public offerings in India based on sector (Public and Private)?
- What is the difference in under pricing of the initial public offerings in India based on type of ownership (Grouped and Non Grouped Companies)?
- What is the difference in under pricing of the initial public offerings in India based on type of Activity Period (Low and high)?
- What is the difference in under pricing of the initial public offerings in India based on year of issuance (2004, 2005, 2006, 2007 and 2008)?

Research Objectives
- To measure the initial return (return from offer price to listing price) of the Initial Public Offerings issued in India during 2004 to 2008.
- To compare the under pricing of Initial Public Offering in India based on their issue size i.e. small, medium and large size
- To compare the under pricing of Initial Public Offering in India based on their Sector i.e. Public and Private Sector Companies
- To compare the under pricing of Initial Public Offering in India based on type of ownership i.e. Groped and Non grouped Companies
- To compare the under pricing of Initial Public Offering in India based on their type of Activity Period i.e. High activity and Low Activity Period.
- To compare the under pricing of Initial Public Offering in India based on year of issuance i.e. 2004, 2005, 2006, 2007 and 2008.

Significance of the study:
In recent years RBI is continuously targeting interest rate for decreasing inflation in India, so IPO is the best option for firms to raise capital for financing various activities. Many firms are coming with IPO for the first time and certain listed firms are also coming with IPO. Government is also using IPO as a means to raise capital for Public Sector Company. The issue size is also growing as many companies in India are now coming with IPO having issue size more than 10000crore. The public issues managed to generate euphoria among the investors, which can be seen from the fact that around 42% of the issues were subscribed more than five times in year 2009-10 and 2010-11 as compared to 17% in 2008–2009. Therefore, this study is conducted to compare under pricing of Initial Public Offerings (IPOs) for public and private companies, grouped and non-grouped companies, high and low activity time period and different issue size , different year of issuance for year 2004-2008. The paper presents fresh evidence on IPO performance, i.e. under pricing for 325 Indian IPOs issued during the period 2004-2008. It is reported that on an average the Indian IPOs are underpriced to the tune of 32.30 per cent on the listing day.

Variables
- Initial Return i.e. simple return from offer price to listing price
- Offer Price i.e. price at which IPO is offered
- Listing price i.e. price at which IPO is listed on stock market
- Issue size i.e. small, medium and large issue size
- Ownership structure of the company i.e. private and private sector companies
- Activity period of issue i.e. high and low activity time period
- Year of issuance i.e. IPOs issued in calendar year 2004, 2005, 2006, 2007 and 2008

Research Design:
Descriptive research seeks to depict what already exists in a group or population. The present study is Descriptive Research in nature.

Data collection:
Secondary data was collected and used for background information of the list of IPOs and share price from websites www.nseindia.com, www.bseindia.com, www.sebi.gov.in, and www.capitaline.com and CMIE Prowess.

Sampling Design-
The sampling frame is companies who had issued IPOs (equity only) during calendar year 2004 to 2008 in India. The current study involves an empirical investigation of the return from offer price to listing price of Indian IPOs. A sum total of 338 IPOs are issued during the period 2004-2008. From this sample, 13 IPOs has been excluded due to missing after-market price data, attributes to reduced sample to 325 new issues, which represents 96.15 per cent of the population.

Table 1: Description of the Sample of IPOs and Sample Selection Criterion

Total number of IPOs offered during year 2004 to 2008	338
Exclusion number of IPOs missing after-market price data	13
Final Total number of IPOs of the study	325

Note: percentage of eligible companies in the sample is 96.15%

Hypothesis
- H01: There is no significant difference in the mean rank of IPOs Initial returns among different types of offer size. i.e. small, medium and large size.
- H02: There is no significant difference in the mean rank of IPOs Initial returns between Public sector companies and Private sector companies.
- H03: There is no significant difference in the mean rank of IPOs Initial returns between Grouped and Non-grouped companies.
- H04: There is no significant difference in the mean rank of IPOs Initial returns between IPO issued during High activity period and Low activity period
- H05: There is no significant difference in the mean rank of IPOs Initial returns among Year of issuance of IPO.

Data Analysis Tools
The main statistical tools used mean, median and standard deviation. Normality test, Mann Whitney U Test, , Kruskal Wallis Test have been applied by spss 16.00

Scope and Benefits of the study
- The study has been undertaken with a view point of benefiting a significant section of the society. The researcher has thus focused on very concerning issue of initial return of IPOs.
- The result will be of interest to the investors, advisors, financial planners, advisory body of companies.
- The study would stimulate further researches and grab attention of researchers towards comparison of IPOs under pricing in India.The findings from the study are considered to be useful in finding out the difference between initial return for different category of IPOs.

Limitations of the study

- The sample includes all the IPos from 2004-2008 where 17 public and 308 private sector IPOs were issued, so totally 325 IPOs were included.
- The limitations of the average that is being impacted by the extreme values cannot be avoided in return calculation while examining the performance for annualized returns.
- The non-availability of data of prices for 13 companies which could not be considered for this analysis purpose.
- The volatility and the changing market conditions, which do have an impact on the prices of the shares and thus the returns generated thereof, could not be avoided.

DATA ANALYSIS

The main statistical tools used to get under pricing level are mean, median and standard deviation. To compare the under pricing level of IPOs based on issue size, sector, ownership, activity period and year of issuance all descriptive data and interferential were calculated.

Table 2 Initial Return of IPOs based on different categories.

Category of IPOs	Underpriced IPO	Overpriced IPO	Total IPOS	Mean	Median	Std Dev	Sig. level
All IPOS From 2004 to 2008	237	88	325	32.30	18.64	55.56	0.00
Based on Offer Price							
1) Small Offer Size IPOs	219	86	305	32.63	18.79	55.65	0.248
2) Medium Offer Size IPOs	15	0	15	34.79	18.64	36.49	
3) Large Offer Size IPOs	3	2	5	4.81	0.47	23.10	
Based on ownership of Company							
1)Grouped Companies IPOs	65	16	81	31.24	18.72	51.63	0.671
2)Non Grouped Companies IPOs	172	72	244	32.66	18.63	56.81	
Based on Sector of the Companies							
1) Public Sector IPOs	16	1	17	33.35	15.43	45.00	0.552
2) Private Sector IPOs	221	87	308	32.25	18.75	56.15	
Based on Activity Period							
1) High Activity Period IPOs	226	84	310	32.76	18.63	56.14	0.891
2)Low Activity Period IPOs	11	4	15	23.86	25.53	43.54	
Based year of issuance							
1) IPOs issued in 2004	21	3	24	58.46	55.77	55.78	0.000
2) IPOs issued in 2005	66	5	71	46.52	35.11	57.51	
3) IPOs issued in 2006	65	26	91	26.34	9.78	51.69	
4) IPOs issued in 2007	66	36	102	31.38	13.01	58.50	
5) IPOs issued in 2008	19	18	37	5.69	0.08	38.05	

- Above Table 2 demonstrates descriptive as well interferential statictics of IPOs as per different category. Categories of IPOs is been shown in first column. Second column gives number of underpriced (positive initial return) IPOs. Third column gives number of overpriced (negative initial return) IPOs. Fourth column is Total IPOs is sum of IPOs , for descriptive analysis, mean (Column 5) and median (column 6) and Standard deviation(Column 7) have been used to compare different categories of IPOs. Column 8 shows the significance value for Interferential statistics for normality, Mann-Whitney U and Kruskal Wallis Test performed in SPSS 16.00.
- Out of total 325 IPOs was issued during that time period, 237 IPOs has given positive return from offer price to listing price i.e. underpriced IPOs and rest 88 IPOs has given negative Return from offer price to listing price i.e. Overpriced IPOs. Mean is 32.30 per cent, Median value is 18.64 per and Standard deviation is found to be 55.56 per cent. Hence it can be concluded that if investors buy shares during IPO offer period, they will get a positive initial return. Significance value (column 8) 0.000 indicates that data are not normally distributed therefore comparison for different IPOs has been done by non-parametric test.

- **Based on Offer size**
- If IPOs offer size is less than 1000 crores is treated as Small offer size, between 1000 to 5000 crores is treated as Medium Offer Size and more than 5000 crores is treated as Large Offer Size.

Small offer size	< 1000 crores	305
Medium Offer Size	1000 – 5000 cores	5
Large Offer Size	> 5000crores	5

- Out of 305 IPOs with Small issue size, 219 IPOs are underpriced and 86 IPOs are overpriced. These data indicates that 71.80 percent of total small offer size IPOs has given positive return. 100 percent of total Medium Issue size IPOs and 60 per cent of large issue size IPOs are underpriced. Mean Return from offer price to listing price for small offer size IPOs is 32.63 per cent, for medium offer size IPOs 34.79 per cent while for large offer size IPOs 4.81 per cent. From mean return and number of IPOs with positive return, it can be interpreted that investors who acquire stocks of Medium offer size are able to earn excess returns compared to small offer size and large offer size investors. It can be concluded that if investors buy shares of Medium Offer Size, they will get a return higher with lowest standard deviation as well.
- From Kruskal Wallis Test (column 8) it can be interpreted that the difference between Small Offer Size, Medium Offer Size and Large Offer Size is not statistically significant for mean rank from offer price to listing price returns. Hence IPO performance is same for small, medium and large offer size as per interferential statistics.

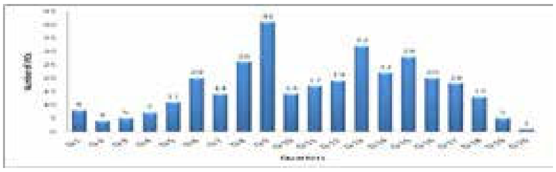
- **Based on Ownership Structure:**
- The observation of Table 2 demonstrates that there are 81 IPOs of grouped Companies and 244 IPOs of Non grouped Company in this study. Positive return from offer price to list price is 80.25 per cent for grouped company where as 70.49 per cent for non-grouped companies. From mean return and number of IPOs with positive return, it can be interpreted that investors who acquire stocks of Group are able to earn excess returns compared to Non-group investors.
- From Mann Whitney U test, it can be concluded that there is no significant difference in the mean rank of returns for grouped and non-grouped companies. This suggests that under pricing does not have any association with type of ownership structure of the company.

- **Based on Sector**
- The observation of Table 2 demonstrates that there are 17 IPOs of public sector Companies and 308 IPOs of Private Sector Companies in this study. Positive return from offer price to listing price is 94.12 per cent for public sector Companies where as 71.75 per cent for Private Sector Companies. From mean return and number of IPOs with positive return, it can be interpreted that investors who acquire stocks of Public Sector are able to earn excess returns compared to Private Sector investors. It can be concluded that if investors buy shares of Public Sector, they will get a return higher with lowest standard deviation as well.
- Mann Whitney U test (Column 8) suggests that there is no significant difference in the mean rank of IPOs for Public sector Companies and private sector companies.

- **Based on Activity time period:**
- To investigate whether the IPOs Performance differs with the different activity period or not, entire sample data has been divided into 2 categories, i.e. If in the quarter, more than 5 IPOs have been issued, then it is treated as High Activity Period and a quarter with less than or equal to 5 issues is treated as Low Activity Period. (Seshadev Sahoo and Prabina Rajib(2010) and Helwage and Liang (2004). Chart 1 indicates period of study (2004-2008) is divided in 20 quarters. Quarter 2, 3, 19 and 20 have less than 5 IPOs, so total 15 IPOs issued in low activity period

and rest 310 IPOs issued in high activity period.

- Chart 1 Frequency of IPO as per quarter:



- From mean return and positive return number of IPOs, it can be concluded that if investors buy shares in Low Activity Period, they will get a return with lowest standard deviation as well. From Mann Whitney U test, it was observed that the difference between Low Activity Time Period and High activity time period is not statistically significant for mean rank of returns relative to list price and offer price.

- **Based on Issuance of year:**
- The observation of Table 2 demonstrates that there are 24 IPOs issued in 2004, 71 IPOs issued in 2005, 91 IPOs issued in 2006, 102 IPOs issued in 2007 and 37 IPOs issued in 2008. Positive return from offer price to list price is 87.5 per cent for IPOs issued in 2004, 92.96 per cent for IPOs issued in 2005, 71.43 per cent for IPOs issued in 2006, 64.71 per cent for IPOs issued in 2007 and 51.35 per cent for IPOs issued in 2008. Mean return is 58.45 per cent for IPOs issued in year 2004, 46.51 per cent for 2005, 26.34 per cent for year 2006, 31.38 per cent for year 2007 and 5.69 per cent for year 2008. From mean return and number of IPOs with positive return, it can be interpreted that investors who acquire stocks in year 2004 and 2005 are able to earn excess returns compared to 2006, 2007 and 2008 investors.
- From Kruskal Wallis test, it can be stated that there is significant difference in the mean rank Initial public offerings in India based on Year of Issuance. IPO issued in calendar year 2004, 2005, 2006, 2007 and 2008 have not given same return from offer price to listing price.

Table 3 Summary of Interferential Test

Variables	Test	Result	Conclusion
Normality Test	Shapiro Wilk Test	No significant	Apply Non-parametric test
Issue size	Kruskal Wallis Test	No Significant	performance is same
Sector	Mann Whitney U Test	No Significant	performance is same
Ownership structure	Mann Whitney U Test	No Significant	performance is same
Activity time period	Mann Whitney U Test	No Significant	performance is same
Issuance of year	Kruskal Wallis Test	Significant	performance is not same

CONCLUSION AND SUGGESTIONS:

It is to be suggested to the investors to invest in IPO at offer price as the possibility to get positive return is higher in this case. It also supports the view of Seshadev sahoo and Prabina Rajib (2010). From descriptive statistics, it is concluded in former part of the report that, Medium Issue size IPOs have given higher number of IPOs having positive initial return so it is to be suggested to the investors to invest in IPO with medium size as the possibility of getting positive return is higher in this case, Public sector Companies is better than Private Sector Companies, Group companies may have possibility of earning higher return, Low activity time period IPOs have given higher number of IPOs.

Whereas from inferential statistics table 3 it is concluded that there is no significant difference in the mean rank of returns for different types of IPO offer size (contrast the view of Brav and Gompaers (1997) and Seshadev sahoo and Prabina Rajib (2010). IPO performance is same for Public Sector Companies and private Sector Companies and for grouped company and non grouped company. IPO performance is same for Low Activity Time Period IPOs and High activity time period IPOs. It also supports to the view of Hensler (1997). There is a significant difference in the mean rank Initial public offerings in India based on Year of Issuance. IPO issued in calendar year 2004, 2005, 2006, 2007 and 2008 have not given same return. Evidence is found that, underperformance is not influenced by offer size, sector, ownership and timing of issue. Whereas, under performance is influenced by Year of issuance. For future research, it is suggested the extension of this analysis to get possible explanations for underperformance for Indian IPOs, age of IPO firm, rate of subscription , promoter groups retention and price-to-book value can be considered.

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